CMA STUDENT E-Bulletin

VOL 10 | NO. 05 | MAY 2025

An Initiative of Directorate of Studies

ICMAI
THE INSTITUTE OF
COST ACCOUNTANTS OF INDIA
Statutory Body under an Act of Parliament
www.icmai.in

About the Institute

The Institute of Cost Accountants of India (ICMAI) is a statutory body set up under an Act of Parliament in the year 1959. The Institute as a part of its obligation, regulates the profession of Cost and Management Accountancy, enrols students for its courses, provides coaching facilities to the students, organizes professional development programmes for the members and undertakes research programmes in the field of Cost and Management Accountancy. The Institute pursues the vision of cost competitiveness, cost management, efficient use of resources and structured approach to cost accounting as the key drivers of the profession. In today's world, the profession of conventional accounting and auditing has taken a back seat and cost and management accountants increasingly contributing towards the management of scarce resources like funds, land and apply strategic decisions. This has opened up further scope and tremendous opportunities for cost accountants in India and abroad.

The Institute is headquartered in New Delhi having four Regional Councils at Kolkata, Delhi, Mumbai and Chennai, 117 Chapters in India and 11 Overseas Centres. The Institute is the largest Cost & Management Accounting body in the world with about 1,00,000 qualified CMAs and over 5,00,000 students pursuing the CMA Course. The Institute is a founder member of International Federation of Accountants (IFAC), Confederation of Asian and Pacific Accountants (CAPA) and South Asian Federation of Accountants (SAFA). The Institute is also an Associate Member of ASEAN Federation of Accountants (AFA) and member in the Council of International Integrated Reporting Council (IIRC), UK.

Vision Statement

"The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally."

Mission Statement

"The CMA Professionals would ethically drive enterprises globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting."

Institute Motto

असतोमा सद्गमय तमसोमा ज्योतिर् गमय मृत्योर्मामृतं गमय ॐ शान्ति शान्ति शान्तिः	From ignorance, lead me to truth From darkness, lead me to light From death, lead me to immortality Peace, Peace, Peace

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CHAIRMAN'S COMMUNIQUE

Dear CMA Students,

It gives me immense pleasure to connect with you through the May 2025 issue of the CMA Student E-Bulletin. As the Chairman of the Training & Educational Facilities Committee of ICMAI, I am excited to share the latest developments and initiatives that aim to enhance your learning experience and professional growth.

At ICMAI, our commitment to excellence in education and training remains unwavering. We continuously strive to provide you with the best resources, state-of-the-art facilities, and cutting-edge training programs that will prepare you to excel in the field of cost and management accounting. Your success is our primary motivation, and we are dedicated to supporting you every step of the way.

In today's digital age, leveraging technology to facilitate learning is paramount. We have introduced several innovative learning platforms to ensure that you have access to high-quality education regardless of your location. Our online classes, interactive webinars, and virtual workshops provide you with the flexibility to learn at your own pace while maintaining the highest standards of education.

In addition to theoretical knowledge, practical skills are crucial for your professional development. We have designed a variety of skill development programs that focus on real-world applications and industry-relevant practices. These programs include case studies, simulation exercises, and hands-on training sessions that bridge the gap between academic knowledge and practical implementation.

Our collaborations with leading organizations and industry experts provide you with invaluable insights and opportunities to apply your knowledge in real-world scenarios. Through internships, live projects, and guest lectures, you can gain practical experience and understand the nuances of the industry. These collaborations also open doors to networking opportunities that can be instrumental in your career growth.

At ICMAI, we believe in the holistic development of our students. Alongside academic excellence, we emphasize the importance of soft skills such as communication, leadership, and teamwork. Our comprehensive training programs include workshops and seminars focused on developing these essential skills, ensuring that you are well-rounded professionals ready to take on leadership roles.

I am confident that the initiatives and programs we have implemented will significantly enhance your learning experience and prepare you for a successful career. I encourage you to take full advantage of these opportunities and remain dedicated to your goals.

I extend my best wishes to all of you. Your hard work, determination, and passion are the driving forces behind our efforts. Let us continue to work together to achieve excellence and elevate the standards of the cost and management accounting profession.

Warm regards,

CMA Vinayranjan P.

Chairman, Training & Educational Facilities Committee, ICMAI

CMA FOUNDATION COURSE

Syllabus 2022

Topic

Fundamentals of Business Laws -

Module 3: Sale of Goods Act, 1930

Business Communication -

Module 5: Business Communication

FOUNDATION

Paper-1

Fundamentals of Business Laws and Business Communication (FBLC)

SECTION – A: FUNDAMENTALS OF BUSINESS LAWS

MULTIPLE CHOICE QUESTIONS (MCQ)

1. A ________is complete when the ownership is transferred from one.

   a) Contract

   b) Sale

   c) Agreement

   d) none of the above

2. The________ in contract of sale must be priced.

   a) Rules

   b) Consent

   c) Consideration

   d) None of the above

3. The subject matter of the contract must be:

   a) Sale

   b) Product

   c) Service

   d) None of the above

4. On which Year the Sale of Goods enforced?

   a) 1948

   b) 1930

   c) 1932

   d) 1951

5. As per Sale of Goods Act, this is not included:

   a) Growing crop

   b) Money

   c) Table

   d) Goodwill

6. The goods which form the subject of a contract of sale may be either _______ goods, owned or possessed by the seller, or future good

   a) existing

   b) unknown

   c) identified

   d) branded

7. The _____ in a contract of sale may be fixed by the contract or may be left to be fixed in way thereby agreed or may be determined by the course of dealing between the parties.

   a) Price

   b) Product

   c) Service

   d) Rate

8. A contract of sale is made by an offer to buy or sell goods for a price and the______of such offer.

   a) Terms

   b) Product

   c) Service

   d) Acceptance

9. A contract of sale of goods is a contract whereby the seller transfers or agrees to transfer the property in goods to the buyer for a _____

   a) Price

   b) Rate

   c) Service

   d) Condition

10. A contract of sale may be ____ or conditional

    a) Terminal

    b) Abstract

    c) Variable

    d) Absolute

11. Condition is a stipulation which is essential to the ______ purpose of the contract.

    a) Derived

    b) Abstract

    c) Secondary

    d) Main

12. The sale of goods Act only deals only with goods that are immovable in nature. This

    Statement is –

    a) True

    b) Partly true

    c) False

    d) Right

13. ______ is a stipulation which is collateral to the purpose of the contract.

    a) Contract

    b) Caveat Emptor

    c) Condition

    d) Warranty

14. Caveat Emptor is the concept of "let the _____ beware".

    a) Seller

    b) Producer

    c) Buyer

    d) Vendor

15. The subject matter of the contract under Sale of Goods Act must be _____.

    a) Service

    b) Product

    c) Goods

    d) Merchant

16. Sale under Sale of Goods Act is an executory contract. This Statement is –

    a) True

    b) Partly true

    c) False

    d) Right

17. Delivery of the keys of a godown where goods are kept amounts to:

    (a) Actual delivery

    (b) Symbolic delivery

    (c) Constructive delivery

    (d) All of these

18. There are ______ modes of delivery

    (a) Three

    (b) Two

    (c) Four

    (d) Five

19. The term "Unpaid Seller" includes Agent of the ______

    (a) Buyer

    (b) Seller

    (c) Carrier/Transporter

    (d) All of the above

20. The term "Unpaid Seller" includes —

    (a) Buyer's agent to whom the Bill of Lading is endorsed

    (b) Buyer's agent to whom the goods have been delivered

    (c) Seller's agent to whom the Bill of Lading is endorsed

    (d) Seller's agent to whom the goods have been delivered

21. Unpaid Seller can exercise his right of lien —

    (a) even when property in goods has passed to the Buyer

    (b) only when property in goods has not passed to the Buyer

    (c) either (a) or (b)

    (d) neither (a) nor (b)

22. Unpaid Seller can exercise his right of re-sale of goods—

    (a) even when property in goods has passed to the Buyer

    (b) only when property in goods has not passed to the Buyer

    (c) either (a) or (b)

    (d) neither (a) nor (b)

23. Unpaid Seller can exercise his right of withholding delivery of goods —

    (a) even when property in goods has passed to the Buyer

    (b) only when property in goods has not passed to the Buyer

    (c) either (a) or (b)

    (d) neither (a) nor (b)

24. A Share Certificate is a —

    (a) Document of Title to Goods

    (b) Bill of Exchange

    (c) Document Showing Title to Goods

    (d) Instrument of Transfer

SECTION – B: BUSINESS COMMUNICATION

25. Feedback is needed in which way communication?
    a) One-way
    b) Two-way
    c) Both a and b
    d) None of the above
26. Communication happens when a person arbitrarily chooses some persons to pass on the information which is of little interest but not important.
    a) Gossip Chain
    b) Cluster Chain
    c) Probability Chain
    d) None of the above
27. The communication starts when a person tells something to a group of people, and then they pass on the information to some more people and in this way the information is passed on to everyone.
    a) Gossip Chain
    b) Probability Chain
    c) Either (a) or (b)
    d) None of the above
28. Which of the following is not an advantage of formal communication?
    a) Reliable
    b) Fast
    c) Secrecy
    d) None of the above
29. At which stage the communicator focuses on correcting the grammar, spellings and punctuations?
    a) Proof Reading
    b) Revising and editing
    c) Either (a) or (b)
    d) None of the above
30. Study of ______language of a person is called Kinesics.
    a) body
    b) oral
    c) Written
    d) None of the above

Answer:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	c	a	b	b	a	a	d	a	d	d	c	d	c	c
16	17	18	19	20	21	22	23	24						
c	b	a	b	c	a	a	a	c						

25	26	27	28	29	30
b	c	a	c	b	a

Topic

Fundamentals of Financial Accounting -

Module 1: Accounting Fundamentals

Fundamentals of Cost Accounting -

Module 4: Fundamentals of Cost Accounting

FOUNDATION

Paper-2

Fundamentals of Financial and Cost Accounting (FFCA)

In the following MCQs, only one answer is correct. Find out the same.

1. General Reserve is debited to –
   a. Trading Account
   b. Profit & Loss Account
   c. Profit & Loss Appropriation Account
   d. Balance Sheet
2. Closing Stock is credited in –
   a. Trading Account
   b. Profit & Loss Account
   c. Sales Account
   d. Stock Account
3. The Only provision account having a Debit Balance is the Provision on -
   a. Assets
   b. Liabilities
   c. Expenses
   d. Incomes
4. Which Account is prepared to ascertain the 'cost of goods manufactured' ?
   a. Cost Sheet
   b. Trading Account
   c. Manufacturing Account
   d. Profit & Loss Account
5. Closing Stock included in Trial Balance will be shown in –
   a. Trading Account
   b. Profit & Loss Account
   c. Profit & Loss Appropriation Account
   d. Balance Sheet
6. Land , Building etc. are –
   a. Tangible Fixed Assets
   b. Intangible Fixed Assets
   c. Current Assets
   d. Fictitious Assets
7. Interest on Drawings is –
   a. Expense for the Business
   b. Loss for the Business
   c. Profit for the Business
   d. Income for the Business
8. When 'Suspense Account' appearing in Trial Balance, where it will be shown –
   a. Trading Account
   b. Profit & Loss Account
   c. Profit & Loss Appropriation Account
   d. Balance Sheet
9. Abnormal Loss of stock of goods destroyed by fire, cause
   a. Net Profit increase
   b. Net Profit decrease
   c. Gross Profit increase
   d. Liability increase
10. Preliminary Expenses paid are –
    a. Capital Expenditure
    b. Revenue Expenditure
    c. Deferred Revenue Expenditure
    d. None of the above
11. In which method, an asset easily convertible into cash is written first in the Balance Sheet ?
    a. Liquidity
    b. Permanence
    c. Mixed
    d. Bottom-up
12. Net Profit is-
    a. Asset of the Business
    b. Liability of the Business
    c. Income of the Business
    d. Expense of the Business
13. In case of Non-trading Organizations , receipts and payments account constitutes the –

a. Cash Book
b. Profit and Loss Account
c. Trading Account
d. Income and Expenditure Account

14. Donation received for purchase of Asset is a –
a. Capital Receipt
b. Revenue Receipt
c. Capital Expenses
d. Revenue Expenses

15. Receipts and Payments Account belongs to –
a. Real Account
b. Personal Account
c. Nominal Account
d. Capital Account

16. Which type of income and expenses are recorded in Income and Expenditure Account –
a. Cash revenue income and expenses
b. Cash capital income
c. Both cash and non-cash revenue income and expenses
d. Non-cash revenue income and expenses

17. Receipt and payment Account is based on –
a. Cash principle
b. Accrual principle
c. Credit principle
d. Cash and credit principle

18. What is the alternate name of accumulated fund -
a. Capital or General Fund
b. Specific Fund
c. Endowment Fund
d. Annuity Fund

19. Which of the following is a characteristic of an Income and Expenditure Account?
a. It is a real account
b. It is a nominal account
c. It is prepared for a specific project
d. It shows the financial position

20. What is the accounting treatment for depreciation in an Income and Expenditure Account?
a. It is added to the expenditure
b. It is subtracted from the income
c. It is shown as a separate item on the expenditure side
d. It is ignored

21. A Receipts and Payments Account typically shows:
a. Profit or loss for the period
b. Cash and bank balance at the beginning and end of the period
c. Assets and liabilities
d. Income and expenditure for the period

22. Which of the following is a fixed cost ?
a. Direct material cost
b. Direct labour cost
c. Rent
d. Electricity cost

23. What is the formula for calculating total cost?
a. Fixed cost + Variable cost
b. Direct cost + Indirect cost
c. Prime cost + Overheads
d. All of the above

24. Which of the following is an assumption of cost-volume-profit analysis?
a. Costs are non-linear
b. Selling price per unit is constant
c. Variable cost per unit is constant
d. Fixed costs change with volume

25. What is the formula for calculating cost per unit?
a. Total cost / Total units produced
b. Total cost / Total units sold
c. Fixed cost / Total units produced
d. Variable cost / Total units produced

26. Which cost is also known as supplementary cost?
a. Direct cost
b. Indirect cost
c. Fixed cost
d. Variable cost

27. Prime Cost ₹12,50,000 ; Works Cost ₹20,00,000 and Office Overheads are 30% of Factory Overheads. What is the Cost Of Production?

    a. ₹22,25,000
    b. ₹ 32,25,000
    c. ₹ 26,00,000
    d. ₹ 42,10,000

28. Nowhere Co. manufactures Product 'EVERSHINE'. Special Permit Charges of ₹12,00,000 paid for in every 4 years. How the amount will be treated in Cost Accounts.

    a. ₹ 3,00,000 chargeable in each year
    b. ₹12,00,000 will be capitalized
    c. ₹ 12,00,000 charged to Profit in the year of payment
    d. Declaration to be made in 'Cost Audit'

29. 500 Units are produced at a total cost of ₹800, normal loss is 10%, and scrap realises ₹12.50. If the output is 400 Units , find value of abnormal loss.

    a. ₹88.5
    b. ₹12.5
    c. ₹87.5
    d. ₹787.5

30. 1000 Units are introduced in a Process, where Normal Loss is 150 Units. If actual output is also 1000 Units, then there is –

    a. No abnormal loss or abnormal gain
    b. Abnormal loss
    c. Abnormal gain
    d. Calculation error

Answer:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
c	a	b	c	d	a	d	d	b	c	a	b	a	a	a
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
c	a	a	c	c	b	a	d	c	a	b	a	a	c	a

Topic

Fundamentals of Business Mathematics -

Module 2: Algebra

Fundamentals of Business Statistics

Module 8: Index Numbers and Time Series

FOUNDATION

Paper-3

Fundamentals of Business Mathematics and Statistics (FBMS)

In this issue we will carry out MCQs on Algebra and Index Numbers/Time Series – refer Module 2 and Module 8 of Study guide.

1. Compute $\frac{9! \times 4!}{10!}$

(a) 2.40

(b) 24.00

(c) 6.00

(d) 0.60

2. In how many ways can the below mentioned balls be arranged in a row,5 black balls, 4 white balls and 3 grey balls?

(a) 27720 ways.

(b) 27110 ways.

(c) 27000 ways.

(d) None of the Above

3. Find the value of $\frac{1}{4!} + \frac{1}{6!} + \frac{1}{5!}$

(a) 38 / 6!

(b) 36 / 6!

(c) 1 / 4!

(d) None of the Above

4. Find the value of $\frac{9}{10!} - \frac{2}{9!} + \frac{11}{10!}$

(a) 1 / 10!

(b) 2/ 10!

(c) 0

(d) None of the above

5. In how many different ways can first three prizes be declared when ten cyclists are participating in a race?

(a) 700 ways

(b) 680 ways

(c) 710 ways

(d) 720 ways

6. From among 20 members in a committee, one convener and one president needs to be appointed. In how many ways could this be done?

(a) 380

(b) 420

(c) 400

(d) 360

7. If product of roots is greater than sum of roots by 10, while ‘α’= 1. Form the quadratic equation.

(a) $x^2 + 11 = x$

(b) $x^2 + x + 11 = 0$

(c) $2(x^2 + x) = - 11$

(d) $x^2 = 11 + x$

8. If -5 is a root of the quadratic equation $2x^2 + px - 15 = 0$ then

(a) $p = 3$

(b) $p = 5$

(c) $p = 7$

(d) $p = 1$

9. If one root of the quadratic equation $2x^2 + kx - 6 = 0$ is 2, the value of k is

(a) 1

(b) -1

(c) 2

(d) -2

10. The quadratic equation whose roots are 1 and (-) $\frac{1}{2}$

(a) $2x^2 + x - 1 = 0$

(b) $2x^2 - x - 1 = 0$

(c) $2x^2 + x + 1 = 0$

(d) $2x^2 - x + 1 = 0$

11. If $\log_y \frac{1}{2} = \frac{1}{3}$, what will be the value of base?

(a) $\frac{1}{2}$

(b) $\frac{1}{4}$

(c) $\frac{1}{8}$

(d) $-\frac{1}{2}$

12. Express $4^3 = 64$ in logarithmic form.
(a) $\log_4 6 = 3$
(b) $\log_{64} 3 = 4$
(c) $\log_4 64 = 3$
(d) $\log_3 64 = 4$

13. Price index from the following information using simple aggregative method is

Commodities	Units	Price (₹) Year X20	Price (₹) Year X25
Butter	kg	20	23
Biscuit	kg	10	14
Eggs	Dozen	3.60	4.25
Vegetable oil	kg	8.00	10.75
Bread	400gms	0.70	0.95

(a) 125.177

(b) 190.898

(c) 132.456

(d) 141.654

14. Weighted aggregative index from the following information is

Commodities	Units	Price(₹) Year X20	Price(₹) Year X25
A	7	0.321	0.581
B	8	0.054	0.067
C	4	0.224	0.305

(a) 125.67

(b) 145.98

(c) 134

(d) 162.9

15. T limited sells three types of a product to the public. Company's record shows the prices and quantities sold of each type as follows:

Commodities	Year X20		Year X25	
	Price (₹)	Quantity Sold	Price (₹)	Quantity Sold
I	30	22	40	30
II	50	31	60	40
III	120	8	99	12

The weighted Laspeyres aggregate price index of X25 w.r.t X20 is

(a) 87.8

(b) 99.5

(c) 111.4

(d) 125.84

16. The index number of business activity from the following data is

Activity	Index	Weight
Industrial Production	250	36
Mineral Production	135	7
Internal trade	200	24
Financial activity	135	20
Exports and imports	325	7
Shipping activity	300	6

(a) 215.20

(b) 300

(c) 324.56

(d) 187.65

17. Straight line trend equation by the method of least square from the following information is

Year	1	2	3	4	5	6	7	8
Value	80	90	92	83	94	99	92	104

(a) Y = 100 + 2X

(b) Y = 91.75 + 1.25X

(c) Y = 80.72 + 2.24X

(d) Y = 150 + 3X

18. Using year X4 as the origin, the trend value of year X1 is

Year	X0	X2	X3	X4	X5	X6	X9
Value	140	144	160	152	168	176	180

(a) 167.78

(b) 143.34

(c) 140.64

(d) 145.85

19. Under additive model the observed value (Y) relating four components of a time series (Trend, Cyclical, Seasonal, and Irregular) is

(a) Y = T + C + SI

(b) Y = T + C + S + I

(c) Y = T - C - S - I

(d) Y = TC - SI

20. Which one of the following is correct?

(a) Under additive model of time series with four components Trend, Cyclical, Seasonal and Irregular, C, S and I are absolute quantitative deviations from trend;

(b) Under additive model of time series with four components Trend, Cyclical, Seasonal and Irregular, S and I are absolute quantitative deviations from trend;

(c) Under additive model of time series with four components Trend, Cyclical, Seasonal and Irregular, C, S and I are rates, percentages or index numbers;

(d) Under additive model of time series with four components Trend, Cyclical, Seasonal and Irregular S and I are rates, percentages or index numbers;

21. Which of the following is correct?

(a) Most of the time series relating to economic and business phenomena conform to the weighted additive model

(b) Most of the time series relating to economic and business phenomena conform to the hybrid model

(c) Most of the time series relating to economic and business phenomena conform to the additive model

(d) Most of the time series relating to economic and business phenomena conform to the multiplicative model

22. The trend value for 2001 from the following information we could calculate as:

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sales($m)	15.3	14.6	16.8	17.3	17.2	20.9	22.3	20	23.1	24.5

(a) 14.37 (b) 24.02 (c) 14.78 (d) 13.82

23. Using three year moving averages the short term fluctuations in 2011, from the following information is

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sales($m)	21	22	23	25	24	22	25	26	27	26

(a) 0 (b) -0.3 (c) 1 (d) 0.3

24. If 5 year's weighted moving total of production of a company is 5000MT, then for the company 5 year's weighted moving average of production is

(a) 5000MT

(b) 5500MT

(c) 4500MT

(d) 5850MT

25. Which one of the following is not a weighted method of finding Index number?

(a) Pearson's method

(b) Laspeyres' method

(c) Passchey's method

(d) Bowley's method

26. Quantity indexes measure changes in

(a) Volume characteristic compared to base period

(b) Price characteristic compared to base period

(c) Revenue characteristic compared to base period

(d) All the above

27. We are finding out 3 yearly moving average from following 3 yearly moving total -5.2, 5.9, 6.7, 8.5, 8.5, 12.3, 12.2, 15.4. The 5th component of 3yearly moving average series is

(a) 2.83

(b) 4.1

(c) 2.23

(d) 4.07

28. Weighted Arithmetic Average of Relative Index number of food grains production for the years 2020-2021 with base 2000-2001from the following data is

Food grains	Weight	Production (mt) 2000-2001	Production (mt) 2020-2021
Rice	34	42	53
Wheat	12	29	32
Jawar	5	11	12
Bajra	3	6	5
Other cereals	6	11	12
Pulses	10	10	11

(a) 121.774

(b) 116.636

(c) 116.088

(d)108.007

29. Which one of the following is not correct?

(a) Fisher's index number is less biased than Laspeyres' index number

(b) Paasche's index number has a downward bias

(c) Fisher's index number is based on Arithmetic mean

(d) Fischer's index formula takes into account the influence of the current as well as the base year.

30. When Laspeyres' index number is 930/580 & Paasche's index number is 1110/800 then fisher's index number is

(a) 123.45

(b) 133.89

(c) 176.23

(d) 149.18

Answer:

1	a	(9!*4!)/10! = 9!*4*3*2*1 / 10*9! = 24/10 =2.40
2	a	12 balls to be arranged and taken from 5 black, 4 white and 3 grey balls, so 12!/ 5!*4!*3! = 27720 ways.
3	d	1/6!+6*5/6!+6/6! = (1+30+6) /6! = 37 / 6!
4	c	9/10!-2/9!+11/10! = (9+11)/10!-(2*10)/(10*9!) =20/10! – 20/10! = 0
5	d	10 cyclists and 3 prizes, so 10P3 = 10!/(10-3)! or, 10!/7! = 10*9*8*7! / 7! = 10*9*8 = 720 ways
6	a	20*19 = 380
7	a	$x^2-(1)x+(1+10)=0$ or, $x^2-x+11=0$ or, $x^2+11=x$
8	c	
9	b	$2 + \beta = -\frac{k}{2}$ & $2\beta = -3$ Or, $\beta = -\frac{3}{2}$ Or $k = -2\,(2 - \frac{3}{2})$ Or, -1
10	b	The required quadratic equation is $x^2 - (\alpha + \beta)\,x + \alpha\beta = 0$ Or, $x^2 - (1 - \frac{1}{2})\,x + 1(-)\frac{1}{2} = 0$ Or, $2x^2 - x - 1 = 0$
11	c	$\log_y \frac{1}{2} = \frac{1}{3}$ $\frac{1}{2} = y^{\frac{1}{3}}$ $\frac{1}{8}^{\frac{1}{3}} = y^{\frac{1}{3}}$ $y = \frac{1}{8}$
12	c	$4^3 = 64$ in Logarithmic Form : $\log_4 64 = 3$

13	14	15	16	17	18	19	20	21
a	d	c	a	b	d	b	a	d
22	23	24	25	26	27	28	29	30
a	c	a	a	a	a	b	c	d

Suggestions:

The study guide is to be followed thoroughly. Supplementary readings could be made from other resources. In this issue MCQs are based on basic concepts developed in the respective modules/sub modules of the study guide. Students should try to solve individual questions with concepts taught in guide book to understand the correct answer of each question. Formula used here are all covered in study guide. Brief solutions on selected problems in algebra section are given as keys.

Best Wishes.

Topic

Fundamentals of Business Economics -

Module 1:
Basic Concepts

Module 5:
Fundamentals of Management

FOUNDATION

Paper-4

Fundamentals of Business Economics and Management (FBEM)

TIPS ON BUSINESS ECONOMICS AND MANAGEMENT FOR THE MONTH OF MAY 2025

Let us now start our usual exercise of Mock Test:

I. Choose the correct answer:

1. Who proposed the growth definition of economics?
   A. Keynes
   B. Marshall
   C. Samuelson
   D. Pigou
2. What is the normal shape of the PPF curve?
   A. Concave to the origin
   B. Convex to the origin
   C. Straight line rising upward to the right
   D. None of the above
3. If the seller sells at a fixed market price, then the MR curve will be
   A. Vertical
   B. Horizontal
   C. Upward rising
   D. Downward falling
4. If the seller has to reduce the price to increase sales, then with an increase in sales
   A. Both AR & MR will rise
   B. AR falls & MR rises
   C. Both AR & MR will fall
   D. MR falls & AR rises
5. Ceteris paribus means other things remaining
   A. Negatively changed
   B. Positively changed
   C. Constant
   D. None of the above
6. If the quantity demanded for good X is given by: Qx=K/Px, where, K>0, Px=Price of good X,

   Then the MR curve is
   A. Downward sloping
   B. Indeterminate
   C. Flat (horizontal) and lies above the horizontal axis
   D. Coincides with the horizontal axis
7. For a normal demand curve the MR curve will
   A. Appear below the demand curve
   B. Appear above the demand curve
   C. Parallel to the demand curve
   D. None of the above
8. When both AR and MR are downward sloping straight lines, then the absolute slope of the AR curve will be
   A. Twice that of the MR curve
   B. Half of that of the MR curve
   C. Equal to that of the MR curve
   D. None of the above
9. The third phase of returns to a variable factor shows
   A. Diminishing returns
   B. Increasing returns
   C. Negative returns
   D. None of the above
10. When TP curve becomes an upward sloping straight line passing through the origin, then the MP=AP curve becomes
    A. Horizontal
    B. Vertical
    C. Upward sloping
    D. Downward sloping
11. In the long run, the possibility of greater technical division of labour in any factory leads to
    A. Decreasing returns to scale
    B. Constant returns to scale
    C. Increasing returns to scale
    D. None of the above
12. The MR curve of a competitive firm becomes
    A. Vertical

B. Horizontal

C. Upward rising

D. None of the above

13. The long run equilibrium of a firm under perfect competition indicates that the plant size will be

A. Below optimum size

B. Over optimum size

C. Optimum size

D. None of the above

14. If SAC=AR of a competitive firm at its short-run equilibrium point, then it is called

A. Shut down point

B. Break-even point

C. Turning point

D. None of the above

15. A monopoly firm sells equilibrium quantity corresponding to which the price elasticity of demand is

A. Relatively inelastic

B. Relatively elastic

C. Unit elastic

D. Perfectly inelastic

16. At the profit maximizing output level of a monopolist, the marginal cost curve has to be upward rising

A. True

B. False

C. Not necessarily true

D. Usually false

17. A monopolist does not have a supply curve for its product because

A. It is a price taker in the product market

B. It can select both its output and its price

C. The price is always fixed by the Govt.

D. None of the above

18. Inflation means

A. High price situation

B. Stable price situation

C. Rising price situation

D. None of these

19. Monetary policy means

A. Change in money supply of the economy

B. Change in the tax rate of the economy

C. Change in the Govt. expenditure of the economy

D. All of these

20. "Uber taxi service is user friendly" – which category this statement belongs to, in a PESTEL analysis?

A. Political factor

B. Economic factor

C. Social factor

D. Legal factor

21. The term "U" in VUCA stands for

A. Universe

B. Uncertainty

C. Utopian

D. None of the above

22. Leadership is a part of

A. Organization

B. Management

C. Both A & B

D. None of the above

23. Accountability is the liability created for the use of

A. Authority

B. Responsibility

C. Accountability

D. All of the above

24. The process of co-ordination must begin in the early stages of

A. Control

B. Planning

C. Organizing

D. Staffing

25. The premises which can be controlled by the management are known as

A. Internal premises

B. External premises

C. Controllable premises

D. Tangible premises

26. Which of the following is not an agency cost?

A. Residual loss

B. Bonding costs

C. Concurrent loss

D. Monitoring costs

27. Introduction of a person to the job and the organization is called

A. Induction

B. Placement

C. Orientation

D. None of the above

28. Which of the following are the methods of off-the-job training?

A. Role playing

B. Case studies

C. Lectures and classroom instruction

D. All of the above

29. Selection of language in which the message is to be given is called

A. Medium

B. Decoding

C. Encoding

D. Feedback

30. Informal means of circulating the information is called as

A. Grapevine

B. Verbal

C. Horizontal

D. Written

Answer:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	A	B	C	C	D	A	B	C	A	C	B	C	B	B
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
C	D	C	A	C	B	B	A	B	C	C	A	D	C	A

So friends!!

Hope you have enjoyed this mock test. But please do not consult the key before you finish off solving all the problems given in this mock test. Keep a record of the test result so that you can measure your progress yourself.

Best of luck for your exam !!!

CMA INTERMEDIATE COURSE

Syllabus 2022

Topic

Module no. 12: Companies Act, 2013

INTERMEDIATE

Group I - Paper-5

Business Laws and Ethics (BLE)

BUSINESS LAWS AND ETHICS

It is expected that you - the students prepare a time-table with the time allotted for each subject and read, write, revise and recapitulate all that you keep on reading. The first important point is that you must read the *Bear Act* and the *Sections* and start asking questions to yourself and find your own answers. Read the Act carefully and try to know the sense of the contents in it.

In this issue we shall deal with Equity Share Capital of Company briefly with reference to *Companies Act, 2013*.

Share Capital

A share is the interest of a member in a company. Section 2(84) of the Companies Act, 2013 (hereinafter referred to as Act) "share" means a share in the share capital of a company and includes stock. It represents the interest of a shareholder in the company, measured for the purposes of liability and dividend. It attaches various rights and liabilities. Share, debentures or other interest of any member in a company shall be movable property. It shall be transferable in any manner provided for in the articles of association [AOA] of the company. A member may transfer any "other interest" in the company in the manner provided in the articles. For example *rights attached to a member in a guarantee company such as membership interest, suspension of membership or assignment of interest may be made transferable by making a provision in the Articles of the company.*

TYPES OF SHARE CAPITAL

Section 43 of the Act provides that the share capital of a company limited by shares shall be of two kinds:

(a) Equity share capital: (i) with voting rights; or (ii) with differential rights as to dividend, voting or otherwise in accordance with such rules as may be prescribed; and

(b) Preference share capital:

EQUITY SHARE CAPITAL

"Equity share capital", with reference to any company limited by shares, means all share capital which is not preference share capital. As per section 43 (a) equity share capital may be divided on the basis of voting rights and differential rights (DVR) as to dividend, voting rights or otherwise according to the rules. A DVR share is like an ordinary equity share, but it provides fewer voting rights to the shareholder. The difference in voting rights can be achieved by reducing the degree of voting power. It is ideal for long term investors, typically small investors who seek higher dividend and are not necessarily interested in taking a voting position.

The Companies (Share Capital and Debentures) Rules, 2014 (hereinafter referred to as Rules) provide that no company whether it is unlisted, listed or a public company limited by shares shall issue equity shares with differential rights as to dividend, voting or otherwise, unless it complies with the following conditions:

a) The AOA of the company authorize the issue of shares with differential rights.

b) The issue of shares is authorized by an ordinary resolution passed at a general meeting of the shareholders: Provided that where the equity shares of a company are listed on a recognized stock exchange, the issue of such shares shall be approved by the shareholders through postal ballot.

c) The shares with differential rights shall not exceed twenty six percent of the total post-issue paid up equity share capital including equity shares with differential rights issued at any point of time.

d) The company having consistent track record of distributable profits for the last three years.

e) The company has not defaulted in filing financial statements and annual returns for three financial years immediately preceding the financial year in which it is decided to issue such shares.

f) The company has no subsisting default in the payment of a declared dividend to its shareholders or repayment of its matured deposits or redemption of its preference shares or debentures that have become due for redemption or payment of interest on such deposits or debentures or payment of dividend.

g) the company has not defaulted in payment of the dividend on preference shares or repayment of any term loan from a public financial institution or State level financial institution or scheduled Bank that has become repayable or interest payable thereon or dues with respect to statutory payments relating to its employees to any authority or default in crediting the amount in Investor Education and Protection Fund to the Central Government.

h) the company has not been penalized by Court or Tribunal during the last three years of any offence under the RBI Act, 1934, the SEBI Act, 1992, the Securities Contracts Regulation Act, 1956, the FEMA, 1999 or any other special Act, under which such companies being regulated by sectoral regulators.

The Rules as aforesaid clearly state that the company shall issue DVR shares only after approval from shareholder by passing a ordinary resolution. It further provides that a listed company where the equity shares of a company are listed on a recognized stock exchange, the issue of such shares shall be approved by the shareholders through postal ballot. The explanatory statement to be annexed to the notice of the general meeting to be convened pursuant to section 102 or of a postal ballot pursuant to section 110 shall contain the following particulars:

a) total number of shares to be issued with differential rights;

b) the details of the differential rights;

c) the percentage of the shares with differential rights to the total post issue paid up equity share capital including equity shares with differential rights issued at any point of time;

d) the reasons or justification for the issue;

e) the price at which such shares are proposed to be issued either at par or at premium;

f) the basis on which the price has been arrived at;

g) (1) **In case of private placement or preferential issue**–

a. details of total number of shares proposed to be allotted to promoters, directors and key managerial personnel;

b. details of total number of shares proposed to be allotted to persons other than promoters, directors and key managerial personnel and their relationship if any with any promoter, director or key managerial personnel;

(2) **In case of public issue** - reservation, if any, for different classes of applicants including promoters, directors or key managerial personnel;

h) the percentage of voting right which the equity share capital with differential voting right shall carry to the total voting right of the aggregate equity share capital;

i) the scale or proportion in which the voting rights of such class or type of shares shall vary;

j) the change in control, if any, in the company that may occur consequent to the issue of equity shares with differential voting rights;

k) the diluted Earnings Per Share [EPS] pursuant to the issue of such shares, calculated in accordance with the applicable accounting standards;

l) The pre and post issue shareholding pattern along with voting rights as per clause 35 of the listing agreement issued by SEBI from time to time. The Rules further provide that the company shall not convert its existing equity share capital with voting rights into equity share capital carrying differential voting rights and vice–versa.

According to the Rules the Board's Report for the financial year in which the issue of equity shares with differential rights was completed shall include the following details with respect to DVR shares:

a) total number of shares allotted with differential rights;

b) details of the differential rights relating to voting rights and dividends;

c) the percentage of the shares with differential rights to the total post issue equity share capital with differential rights issued at any point of time and percentage of voting rights which the equity share capital with differential voting right shall carry to the total voting right of the aggregate equity share capital;

d) price at which such shares have been issued;

e) particulars of promoters, directors or key managerial personnel to whom such shares are issued;

f) change in control, if any, in the company consequent to the issue of equity shares with differential voting rights;

g) diluted EPS pursuant to the issue of such each class of shares, calculated in accordance with the applicable accounting standards;

h) pre and post issue shareholding pattern along with voting rights in the same specified format as given in explanatory statement.

The rules provide that the holders of the equity shares with differential rights shall enjoy all other rights such as bonus shares, rights shares etc., which the holders of equity shares are entitled to, subject to the differential rights with which such shares have been issued. The company issuing equity shares with differential rights shall ensure that the Register of Members contains all the relevant particulars of the shares so issued along-with details of the shareholders.

Topic

Module 5: Lease Accounting

Module 8: Hire Purchase and Installment Sale Transactions

INTERMEDIATE

Group I - Paper-6

Financial Accounting (FA)

Lease Accounts / Hire Purchase and Instalment Sale Transactions

Lease Accounts

Lease accounting is the process by which companies account for leases (agreements to use an asset for a period in exchange for payment). Lease transactions can have significant effects on a company's financial statements, including its balance sheet, income statement, and cash flow.

A lease is a contractual agreement where one party (the lessor) provides an asset for use by another party (the lessee) in exchange for periodic payments. Leases are an essential financial tool for companies, as they allow access to expensive equipment or property without the immediate need for full ownership.

Leases can be categorized into several types based on factors like the ownership rights, the nature of the contract, the accounting treatment, and the type of asset. Understanding these different types of leases is crucial for both lessors and lessees.

Types of Leases

There are two primary types of leases under modern accounting standards:

1. Finance Lease (Capital Lease)

A finance lease, also known as a capital lease, is a type of lease in which the lessee assumes all the risks and rewards associated with ownership of the leased asset. Although the lessor retains legal ownership, the lessee records the asset on their balance sheet as if they own it. This type of lease is typically long-term, and the asset is generally used for most or all of its useful life.

- The lease transfers ownership of the asset to the lessee at the end of the lease term (in some cases).
- The lessee has the option to purchase the asset at a bargain price at the end of the lease.
- The lease term is usually for a significant portion of the asset's useful life.
- The present value of lease payments is equal to or exceeds the asset's fair value.
- The lessee capitalizes the lease by recognizing both a **right-of-use asset** and a corresponding **lease liability**.

2. Operating Lease

An operating lease is more like a rental agreement where the lessee uses the asset but does not take on the risks and rewards of ownership. The asset is returned to the lessor at the end of the lease term. This lease is typically short-term and is used for assets that are not intended to be purchased.

Key Features:

- The lessee does not assume ownership of the asset at the end of the lease.
- The lease term is usually shorter than the asset's economic life.
- Lease payments are considered operational expenses.
- No asset or liability is recorded on the balance sheet by the lessee (under older standards; under IFRS 16 and ASC 842, most leases must now be capitalized).

Journal Entries for Lease Accounting

Example 1: Initial Recognition (Finance Lease)

Lessor's Books:

- Debit: Lease Receivable (Present value of lease payments)
- Credit: Asset (Carrying value of the asset)

Lessee's Books:

- Debit: Right-of-Use Asset (Present value of lease payments)
- Credit: Lease Liability (Present value of lease payments)

Example 2: Lease Payment (Finance Lease)

Lessor's Books:

- Debit: Cash (Amount of payment received)
- Credit: Lease Receivable (Reduction in lease receivable)

Lessee's Books:

- Debit: Lease Liability (Reduction in lease liability)
- Debit: Interest Expense (Interest on lease liability)
- Credit: Cash (Amount of lease payment)

Hire Purchase and Instalment Sale Transactions

Hire Purchase and Instalment Sale Transactions are methods of purchasing goods or assets where the payment is made in installments over time rather than a lump sum. These methods allow buyers to acquire assets without immediate full payment.

Hire Purchase System

In a Hire Purchase agreement, the buyer (hirer) takes possession of the asset immediately but does not own it until the final installment is paid. The ownership (title) of the asset transfers to the buyer only after the payment of all installments. It is typically used for purchasing goods such as vehicles, machinery, and equipment.

Key Features of Hire Purchase:

- **Possession:** The buyer gets possession of the asset immediately.
- **Ownership:** Ownership remains with the seller (financier) until the last installment is paid.
- **Default:** If the buyer defaults, the seller can reclaim the asset.
- **Interest:** Interest is charged on the outstanding balance.
- **Rights:** The buyer has the right to use the asset but not to sell or transfer it until ownership passes.

Accounting Treatment in Hire Purchase:

- The asset is shown in the buyer's books even though ownership hasn't transferred.
- The interest is treated as a finance cost and spread over the period of the agreement.
- Each installment payment is split into two parts: principal repayment and interest.

Journal Entries:

1. **On Purchase of Asset (initial recognition):**
   - o Debit: Asset Account
   - o Credit: Hire Vendor Account (for the cost of the asset)
2. **For Interest Payment:**
   - o Debit: Interest Expense Account
   - o Credit: Hire Vendor Account
3. **For Installment Payment:**
   - o Debit: Hire Vendor Account
   - o Credit: Cash/Bank Account

Instalment Sale System

In an Instalment Sale transaction, ownership of the asset is transferred to the buyer immediately upon signing the agreement. However, the payment is made over several installments. If the buyer defaults, the seller cannot reclaim the asset as ownership has already transferred.

Key Features of Instalment Sale:

- **Possession and Ownership:** Both possession and ownership are transferred to the buyer at the time of sale.
- **Default:** If the buyer defaults, the seller cannot take back the asset but may seek legal remedies.
- **Interest:** Interest is usually charged on the outstanding balance.
- **Security:** Sometimes, the asset serves as security for the unpaid installments.

Accounting Treatment in Instalment Sale:

- The buyer records the asset at its full cost in the books.
- Interest is recognized as an expense over time.
- Each installment payment is split between principal and interest.

Journal Entries:

1. **On Purchase of Asset:**
   - o Debit: Asset Account
   - o Credit: Instalment Vendor Account
2. **For Interest Payment:**
   - o Debit: Interest Expense Account
   - o Credit: Instalment Vendor Account
3. **For Installment Payment:**
   - o Debit: Instalment Vendor Account
   - o Credit: Cash/Bank Account

Key Differences Between Hire Purchase and Instalment Sale

Aspect	Hire Purchase	Instalment Sale
Ownership Transfer	After the last installment is paid.	Immediately upon signing the agreement.
Seller's Rights in Default	Can repossess the asset.	Cannot repossess; may sue for damages.
Interest Treatment	Interest on the outstanding balance.	Interest on the outstanding balance.
Legal Rights	Buyer has possession but not ownership.	Buyer has both possession and ownership.
Accounting Treatment	Asset recorded at cost with ownership conditional.	Asset recorded with immediate ownership.

Questions

1. Which of the following is recognized on the lessee's balance sheet under a finance lease?
   a) Lease payments only
   b) Right-of-use asset and lease liability
   c) Only lease expense
   d) Depreciation only
2. What is the right-of-use asset in lease accounting?
   a) The physical asset being leased
   b) The lease payments made over the lease term
   c) The lessee's right to use the leased asset
   d) The present value of the lease payments
3. What is the main difference between a finance lease and an operating lease for the lessee?
   a) A finance lease requires asset ownership at the end of the lease term
   b) A finance lease recognizes both the asset and liability on the balance sheet, whereas an operating lease only recognizes expenses
   c) Operating leases are always shorter in duration
   d) A finance lease does not involve lease payments
4. In a finance lease, what is the journal entry for lease payments made by the lessee?
   a) Debit: Lease Liability, Credit: Cash
   b) Debit: Lease Expense, Credit: Lease Liability
   c) Debit: Lease Liability, Credit: Lease Receivable
   d) Debit: Cash, Credit: Lease Receivable
5. In an operating lease, how are lease payments recognized in the lessee's books?
   a) As a liability
   b) As an asset
   c) As an expense
   d) As a revenue
6. Which of the following is true about an instalment sale?
   a) Ownership is transferred immediately.
   b) Ownership is retained by the seller until the last installment is paid.
   c) The buyer has no legal right to use the asset until full payment.
   d) Interest is not charged in an instalment sale.
7. In a hire purchase agreement, what happens if the buyer defaults on payments?
   a) The seller sues for damages.
   b) The seller repossesses the asset.
   c) The buyer continues to own the asset.
   d) The agreement is renegotiated.
8. Which accounting entry is common to both hire purchase and instalment sale transactions?
   a) Debit Asset Account
   b) Credit Interest Expense Account
   c) Debit Hire Vendor Account
   d) Debit Bank Account
9. In an instalment sale, what does the first installment include?
   a) Only principal repayment
   b) Only interest payment
   c) Both principal and interest
   d) Neither principal nor interest
10. In an instalment sale, the seller's recourse in case of default is:
    a) Repossessing the asset
    b) Retaining ownership
    c) Suing for unpaid installments
    d) Re-negotiating the contract

Answer:

1	2	3	4	5	6	7	8	9	10
b	c	b	a	c	a	b	a	c	c

Topic

Module 2 :
Heads of Income

Module 3:
Total Income and Tax Liability of Individuals & HUF

INTERMEDIATE

Group I - Paper-7A

Direct Taxation (DT)

Income From Other Sources

Income From Other Sources

1. A receipt shall be taxable under this head if such income does not specifically fall under any one of the other four heads of income.

2. **Basis of chargeability:** Income under this head shall be chargeable on 'accrual' or 'cash' basis depending on the method of accounting regularly followed by the assessee.

3. **Casual Income:** Winning from lotteries, crossword puzzles, etc. are taxable under this head. Tax is charged on such income at a flat rate of 30% plus surcharge (if any) plus cess.

4. **Income from letting of machinery, plant or furniture is charged to tax under this head, if such income is not chargeable under the head "Profits and gains of business or profession".**

5. **Composite rent: If letting of building is inseparable from letting of machinery, furniture, etc. then income from such letting is charged to tax under the head "Income from other sources" otherwise Income from house property.**

6. **Family pension:** It is taxable under the head "Income from other sources" after allowing standard deduction to the minimum of a) 1/3rd of such pension; or b) ₹ 25,000 (if assessee has opted for old tax regime, then ₹ 15,000)

7. **Gift: Following receipts by any person shall be considered as his income:**

   a) If any sum is received without consideration in excess of ₹ 50,000 during the previous year;

   b) If an immovable property is received without consideration and the stamp duty value exceeds ₹ 50,000, the stamp duty value of such property;

   c) If an immovable property is received with consideration and the stamp duty value of such property exceeds such consideration by higher of the following:

   (i) ₹ 50,000; or

   (ii) An amount equal to 10% of the consideration

   \- the difference between the stamp duty value and the consideration;

   d) If movable properties are received without consideration and the aggregate fair market value of such properties exceeds ₹ 50,000, the whole of aggregate fair market value of such properties;

   e) If movable properties are received for consideration which is less than the aggregate fair market value of properties by an amount exceeding ₹ 50,000, the difference between the aggregate fair market value and the consideration

   Exceptions:

   (a) ***Gift received from any relative.***

   (b) ***Gift received on the occasion of the marriage of the individual.***

   (c) ***Any sum of money which is received under a will or by way of inheritance.***

   (d) ***Any sum of money which is received in contemplation of death of the payer***

   (e) ***Any sum of money which is received from - local authority, any fund or foundation or university or other educational institutions or hospital or other medical institutions or any trust or institution referred u/s 10(23C) or a registered trust or institution;***

   (f) ***Receipts from an individual by a trust created or established solely for the benefit of relative of the individual.***

   (g) ***Receipts by way of distribution at the time of total or partial partition of HUF;***

   (h) ***Shares received in a consequence of demerger or amalgamation of a company or business reorganization of a co-operative society***

8. **Interest on securities** is charged to tax u/s 56. However, if such securities are held as stock, then taxed u/s 28.

9. **Interest on delayed receipt of compensation or enhanced compensation** shall be taxable in the year of receipt after deducting standard deduction @ 50% of such income.

10. **Bonus Stripping:** Where any person acquires any unit (original unit) within a period of 3 months prior to the record date and is allotted bonus unit on such date and such person transfers original unit within a period of 9 months after such date, then any loss arising to him shall be ignored and the amount of loss so ignored shall be deemed to be the cost of acquisition of such bonus unit held by him on the date of such sale or transfer.

11. Dividend: As per sec. 2(22),

(a) Any distribution of accumulated profits, which results in the release of assets of the company.

(b) Any distribution of Debenture, debenture-stock, deposit certificates in any form whether with or without interest to its shareholders (equity as well as preference); and Shares to preference shareholders by way of bonus, to the extent to which company possess accumulated profit.

(c) Distribution made on liquidation to the extent to which company possess accumulated profit immediately before liquidation.

(d) Distribution made on reduction of capital of the company to the extent it possess accumulated profit.

(e) Any loan or advance by a company (in which public are not substantially interested) to the extent of accumulated profit (excluding capitalized profit) to its equity shareholder holding not less than 10% of voting power in the company or to a concern of which such shareholder is a member and has substantial interest in such concern or to any person on behalf of or for the benefit of such specified shareholder.

(f) Any payment by a company on purchase of its own shares from a shareholder i.e., buy back of shares

Tax treatment: Dividend or income from units shall be taxable in the hands of shareholders or unit holders at the applicable rate. No deduction shall be allowed from dividend income, or income in respect of units of mutual fund or specified company, other than deduction on account of interest expense and in any previous year. Further, such deduction shall not exceed 20% of the dividend income or income from units included in the total income for that year without this deduction. However, no deduction is available from (f).

12. Specific disallowance: The following expenditures shall not be deducted from any income under this head

- Any personal expenses of the assessee.
- Any interest which is payable outside India on which tax has not been deducted at source.
- Any salary payable outside India on which tax has not been deducted at source.
- 30% of any payment made to a resident on which TDS provision is applicable without deducting TDS as referred u/s 40(a)(ia)
- Any amount paid as Wealth tax or Income tax.
- Any amount specified u/s 40A e.g. payment to relative in excess of requirement, or cash payment in excess of ₹ 10,000.
- No deduction in respect of any expenditure shall be allowed in computing the income by way of any winnings from lotteries, etc.

13. Deemed Profits: Where an allowance or deduction has been allowed for any year in respect of loss, expenditure or trading liability incurred by the assessee; and subsequently, any amount is obtained, as revocation of such loss, expenditure or remission of liability, whether in cash or in any other manner, during any previous year, then such amount received or amount remitted shall be charged to tax.

Advance Tax: Pay as You Earn

Advance Tax ensures taxpayers contribute periodically rather than paying a lump sum at year-end.

Applicability

Advance Tax is applicable when the estimated tax liability is ₹10,000 or more in a financial year. [Section 208]

Who Needs to Pay Advance Tax

- Salaried individuals with other income (rent, capital gains, interest)
- Freelancers and self-employed persons
- Corporates and businesses
- Persons earning from lottery, dividends, horse races, etc.

Exemption

Senior citizens (60+ years) not having income from business/profession are exempt.

Installments and Due Dates

Installment	Due Date	Cumulative % of Total Tax Payable
1st	15th June	15%
2nd	15th Sept	45%
3rd	15th Dec	75%
4th	15th Mar	100%

Presumptive Taxpayers (u/s 44AD/44ADA)

They must pay the entire tax by **15th March** in one installment.

How to Calculate Advance Tax

1. **Estimate total income** from all heads.
2. **Apply deductions** under sections like 80C, 80D, etc.
3. **Compute tax liability** based on applicable slab rates.
4. **Deduct TDS** and other credits.
5. **If liability ≥ ₹10,000**, calculate and pay advance tax accordingly.

Interest on Late Payment or non-payment

Sec.	Scenario	Interest Rate
234B	Non-payment or < 90% payment of tax	1% p.m. from 1st April till actual payment
234C	Deferment of installment	1% p.m. for the period of delay

Adjustment and Refund

- Advance Tax paid is adjusted against final tax payable while filing the income tax return.
- **Refunds** are granted with **½% p.m. interest** (u/s 244A) if excess advance tax was paid.

Special Scenarios

Source of Income	Guideline
Capital Gains/ Dividends	Pay advance tax in next installment after income realization.
Lottery Winnings, Horse Races	Pay immediately considering TDS deductions.
Business Income	Accurate projection of profit critical for advance tax estimation.

Importance of Advance Tax

Advantage	Impact
Regular Revenue Flow	Continuous income for government planning.
Reduced Burden	Spreads tax payment across financial year.
Compliance	Avoids interest penalties under 234B/234C.
Financial Discipline	Encourages better cash flow management.

Conclusion

Proper understanding and timely compliance ensure optimized tax planning, minimization of penalties, and smooth financial management. Taxpayers must diligently classify their incomes, appropriately apply exemptions, and ensure installment-wise advance payments. This proactive approach not only ensures legal compliance but also promotes sound financial discipline.

Topic

Module 5: Goods and Services Tax (GST) Laws

INTERMEDIATE

Group I - Paper-7B

Indirect Taxation (IDT)

Tax Invoice

Goods and Services Tax (GST) has transformed India's indirect tax structure, bringing uniformity across the country. One of the essential documents under GST is the **tax invoice**, which serves as proof of supply for goods and services. Proper invoicing ensures compliance, maintains records, and enables seamless input tax credit (ITC).

An invoice is a commercial instrument issued by a seller to a buyer. It identifies both the trading parties and lists, describes, and quantifies the items sold, shows the date of shipment and mode of transport, prices and discounts, if any, and delivery and payment terms. In certain cases, (especially when it is signed by the seller or seller's agent), an invoice serves as a demand for payment and becomes a document of title when paid in full. An invoice does not bring into existence an agreement but merely records the terms of a pre-existing agreement (oral or written). An invoice can be understood as a document that is meant to serve a particular purpose.

Tax invoices play a key role in:

- Enabling claim of ITC by buyers.
- Maintaining proper documentation and records.
- Complying with GST laws and avoiding penalties.

Introduction to Tax Invoices under GST

Under GST a tax invoice is an important document.

- It not only evidences supply of goods or services, but is also an essential document for the recipient to avail Input Tax Credit (ITC). A registered person cannot avail input tax credit unless he is in possession of a tax invoice or a debit note.
- GST is chargeable at the time of supply. Invoice is an important indicator of the time of supply. Broadly speaking, the time of supply of goods or services is the date of issuance of invoice or receipt of payment whichever is earlier. However, a special procedure for payment of tax has been prescribed for registered persons (other than composition dealers) supplying goods. Such category of persons (suppliers of goods other than composition dealers) need to pay GST only at the time of issue of invoice irrespective of when they receive payment.

Suffice it to say, that the tax invoice is the primary document evidencing the supply and is vital for availing input tax credit.

The GST Law requires that an invoice – tax invoice or bill of supply – is issued on the occurrence of a certain event, being a supply, within the prescribed timelines. Therefore, an invoice, among other documents is required to be issued for every form of supply such as sale, transfer, barter, exchange, license, rental, lease or disposal. This chapter provides an understanding of the various documents required to be issued under the GST law, timelines to issue such document and the contents of every such document. It is to be noted that GST Law does not prescribe any specific format of invoice but mandates that certain field or information should be incorporated in the invoice.

Significance of Tax Invoices

Tax invoices serve several important purposes in the GST framework:

- **Legal Compliance**: Tax invoices are mandated by law under the GST regime, and failure to issue proper invoices can lead to penalties and legal consequences.
- **Input Tax Credit (ITC)**: Tax invoices are necessary for claiming ITC, as they provide evidence of tax paid on inputs and input services used in the course of business.
- **Audit and Verification**: Tax authorities rely on tax invoices to audit and verify the accuracy of tax returns filed by taxpayers, ensuring compliance with GST laws and regulations.

Key Components of a Tax Invoice

A tax invoice under GST must contain specific details to be considered valid. These include:

- **Supplier's Details**: Name, address, GSTIN (Goods and Services Tax Identification Number), and State code of the supplier.
- **Recipient's Details**: Name, address, GSTIN (if registered), and State code of the recipient.
- **Invoice Number and Date**: A consecutive serial number and date of issue of the invoice.

- **Description of Goods or Services**: Details such as quantity, unit price, total value, and applicable GST rate for each item supplied.
- **Taxable Value and Tax Amount**: Separate disclosure of the taxable value, CGST (Central Goods and Services Tax), SGST (State Goods and Services Tax), IGST (Integrated Goods and Services Tax), and cess, if applicable.
- **Place of Supply**: Indicates whether the supply is intra-state (within the same state) or inter-state (between different states).
- **Shipping and Billing Address**: If different from the supplier's and recipient's addresses.
- **Payment Terms**: Terms and conditions of payment, including payment due date and mode of payment.

Types of Tax Invoices

Under GST, there are different types of tax invoices based on the nature of the transaction:

- **Tax Invoice**: Issued for taxable supplies of goods or services.
- **Bill of Supply**: Issued when GST is not applicable or when the supplier is registered under the composition scheme.
- **Credit Note**: Issued to reduce the taxable value or tax amount in case of goods returned or services cancelled.
- **Debit Note**: Issued to increase the taxable value or tax amount due to additional goods supplied or services provided.

Timeline for issuance of invoice

In general, time of issue of tax invoice for:

- **Supply of Goods**: A registered person supplying taxable goods shall issue a tax invoice, before or at the time of:

Where the supply involves the movement of goods	Removal of goods for supply to the recipient
Where the supply does not involve the movement of goods	Delivery of goods or making available thereof to the recipient

- **Supply of Services**: Invoice is required to be issued within 30 days from the date of the supply of service. However, in the case of an insurance/ banking company or a financial institution, including NBFC, the invoice is required to be issued within 45 days

Implications for Businesses and Taxpayers

For businesses and taxpayers, compliance with tax invoice requirements under GST is crucial for several reasons:

- **Input Tax Credit (ITC) Claim**: Proper maintenance and issuance of tax invoices enable businesses to claim ITC, reducing the overall tax liability.
- **Audit and Assessment**: Tax authorities may conduct audits or assessments based on tax invoices to verify the accuracy of tax returns and ensure compliance with GST laws.
- **Legal Compliance**: Failure to issue valid tax invoices or maintain proper records can lead to penalties, interest, and other legal consequences.
- **Business Relationships**: Clear and accurate tax invoices enhance transparency and trust in business transactions, fostering better relationships with customers and suppliers.

Conclusion

A tax invoice is more than just a document—it is a fundamental part of GST compliance. Ensuring accuracy in invoice generation, maintaining proper records, and following e-invoicing regulations helps businesses operate smoothly under GST laws. By adhering to tax invoice guidelines, businesses can optimize tax credits, avoid penalties, and contribute to a transparent tax ecosystem.

Topic

Module 5:
Methods of Costing

Module 6 : Cost
Accounting
Techniques

INTERMEDIATE

Group I - Paper-8

Cost Accounting (CA)

CONTRACT COSTING

The term Contract Costing refers to the form of specific order costing which applies where work s undertaken to customer's specific requirements and each is of long duration. The work is usually constructional and in general the method is similar to job costing.

The salient features of Contract Costing can be expressed as:--

1) The work is generally carried out at a site and not in the factories.
2) It is a contract between the contractor and contractee.
3) Each contract is given a distinguishing number in respect of which cost is ascertained.
4) Generally more than an accounting year is necessary.
5) Most of the cases cost directly chargeable to individual contract.
6) Part payments are made depending on the certificate issued by the architect, showing value of work completed and retention money.
7) An "escalation clause " , under which contractor is compensated for increase in costs on account of inflation , may be included in the contract.
8) In case of non-fulfillment of contract within the stipulated time , the Contractor is required to pay penalty.

Escalation Clause :--

Increase in price due to inflation is a common feature of today. Again a contract takes a longer duration to complete and during this period the price of material, labor, plant may increase beyond a point. It is such a clause which safeguards the interest of both the contractor and contractee against unfavorable price change in future.

Cost-Plus-Contract:

It is the reverse of a fixed price contract. Here the contractor is paid the actual cost incurred plus a certain percentage of profit over the cost of production. This type of contract is suitable in those cases where probable cost of the contract cannot be estimated with a reasonable degree of accuracy in advance due to various reasons, such as longer duration, wide fluctuation in price etc.

Profits of an incomplete Contract –

Here are some Guidelines –

a) When the Contract has just started-

   In such a case no profit should be taken into account , as it is impossible to see the future position clearly. Up to ¼ of completion of the contract , this principle is followed.

b) When the contract is sufficiently advanced—

   1) For completion less than 50%of contract - 1/3rd of Notional Profit
   2) For completion 50% or more of the Contract- 2/3rd of Notional Profit.

c) When Contract is almost Complete –

   Profit may be taken by adopting any one of the following formulae:-

   1) Estimated Profit × Value of Works Certified / Contract Price
   2) Estimated Profit × Value of Works Certified/ Contract Price × Cash Received / Value of Works Certified = Estimated Profit × Cash Received / Contract Price
   3) Estimated Profit × Cost of Work to date / Estimated Total Cost × Cash Received / Value of Works Certified

But if any Contract suffers a loss , that loss is to be charged to Profit & Loss A/c.

A Problem relating to Contract costing is given below in order to clear the situation.

Problem:

Anindita Construction Co. got a contract in January 2024 for construction of a bridge. The Contract price was ₹ 500000. The Co. incurred the following expenses up to 31.12.24.

Material used	₹ 110000
Wages	40000
Direct expenses	20000
Plant purchased on 30.6.24.	100000
Materials in hand	5000
Cost of uncertified work	2000

Depreciation to be charged on plant @10% pa. Other works expense to be charged @20% of wages and office expenses @ 10% of works cost.

The amount certified by the engineer up to 31.12.24 was ₹300000, retention money being 20% of the certified value. Prepare Contract Account showing therein the amount of profit or loss to be transferred to Profit & Loss Account.

Solution:

In the Books of Anindita Construction Co.

Contract Account for the year ended 31.12.24.

Particulars	Amount ₹	Particulars	Amount ₹
To Materials	110000	By Materials c/d	5000
To Wages	40000	By Plant c/d (100000-5000)	95000
To Direct Expenses	20000	By Cost c/d	195800
To Plant	100000		
To Other Works Expenses	8000		
(20% 0f ₹ 40000)			
To Office Expenses (see note)	17800		
	295800		295800
To Cost b/d	195800	By Contractee"s A/c	300000
To Notional Profit c/d	106200	(Value of Certified work)	
		By Uncertified work c/d	2000
	302000		302000
To Profit & Loss A/c	56640	By Notional Profit	106200
To Profit Provision c/d	49560		
	106200		106200
To Materials b/d	5000	By Profit Provision	49560
To Plants b/d	95000		
To Uncertified Work b/d	2000		

Workings :

Calculation for Office Expenses :

Materials Consumed (110000-5000)	₹ 105000
Wages	40000
Direct Expenses	20000
Prime cost	165000
Add: Factory Overhead :	
Depreciation on Plant	5000
Other works expenses	8000
Works Cost	178000

Office Expenses = 10% of ₹ 178000 = ₹ 17800

BUDGET AND BUDGETARY CONTROL

Budget –

A plan expressed in money. It is prepared and approved prior to budget period and may show income , expenditure and the capital to be employed. May be drawn up showing incremental effects on formal budgeted or actual figures or be complied by zero-based budgeting.

Budgetary Control –

It is the establishment of budgets relating to responsibilities of executives to the requirement of a policy and the continuous comparison of actual with budgeted results either to secure by individual action the objective of the policy or to provide a basis for revision.

The Budgets which are prepared frequently are :--

1) Sales Budget
2) Selling and Distribution Budget.
3) Production Budget
4) Production Cost Budget .
5) Purchase Budget .
6) Personnel Budget / Labour Budget .
7) Plant Utilisation Budget
8) Capital Expeniture Budget
9) Manenance Cost Budget.
10) Administration Cost Budget
11) Research and Development Cost Budget.**etc.**

A Problem relating to Cash Budget is given below, in order to clear the concept of cash inflows and out flows.

Problem

A new company commences business on 1st July 2024 and deposit 10000 in the Bank . This amount will be inadequate to finance its operations over a period of six months and you are asked to prepare a Cash Budget up to 31st December 2024 to determine the monthly overdraft units to seek from the Company's bankers.

The data finished to you are :

1) Minimum Cash balance to be maintained ₹ 500
2) Plant purchases are made on net thirty days' terms and cheques are paid to creditors on the last day of the month due.
3) Budgeted figures are :-

	July	August	September	October	November	December
Purchases	₹ 5000	4000	3000	4000	4000	5000
Wages	4000	5000	4000	4000	5000	4000
Cash Expenses	400	500	400	400	500	400
Sales	6000	7000	8000	8000	9000	12000

Please interpret the results as shown by the preparation of Cash Budget.

Solution:

Cash Budget for the months from July to December 2024 .

Particulars	**July ₹**	**August ₹**	**Sept. ₹**	**Oct. ₹**	Nov ₹	**Dec. ₹**
Opening Balance Receipts –						

Cost Budget for the months from July to December 2024.

Particular	July ₹	Aug. ₹	Sep. ₹	Oct. ₹	Nov. ₹	Dec ₹
Opening Balance	10000	600	500	500	500	500
Receipts –						
Collection against Sales	-----	-----	5820	6790	7760	7760
Table -A	10000	600	6320	7290	8260	8260
Payments—						
Payments to creditors against-						
Purchase	-------	5000	4000	3000	4000	4000
Wages	4000	5000	4000	4000	5000	4000
Expenses	400	500	400	400	500	400
Plant	5000	-----	----	----	----	----
Total payments B	9400	10500	8400	7400	9500	8400
A – B = C	600	(9900)	(2080)	(110)	(1240)	(140)
Overdraft to be taken:						
D = C+ ₹ 500	Nil	10400	2580	610	1740	640
Closing Balance (D – C)	600	500	500	500	500	500

Topic

Module 7 : Economics of Maintenance and Spares Management

INTERMEDIATE

Group II - Paper-9

Operations Management and Strategic Management (OMSM)

Operations Management

In this issue let us discuss – Economies of maintenance and Replacement of assets

"Economics of Maintenance" refers to studying and managing the costs and benefits associated with maintaining equipment, buildings, infrastructure, or any other assets.

In simple terms, it's about figuring out **how much one should spends on maintenance** to:

- Keep things running well,
- Avoid costly breakdowns,
- Extend the life of assets,
- And minimize total costs over time (including repair, replacement, and downtime costs).

It involves questions like:

- Is it cheaper to fix something when it breaks or to prevent the breakage through regular maintenance?
- When is it more cost-effective to replace an asset instead of repairing it?
- How much should be invested in preventive maintenance to avoid unexpected failures?

It's used a lot in industries like manufacturing, transportation, construction, energy, and facility management.

Imagine a factory runs with a machine that produces goods.

Option 1: No Maintenance

Don't spend anything on regular maintenance. But every year, the machine breaks down **once**, costing ₹10000 to fix plus ₹5000 in lost production time.

Total annual cost = ₹15000.

Option 2: Regular Maintenance

Spend ₹3000 each year on preventive maintenance. With maintenance, breakdowns only happen once every **5 years**, and fixing them still costs ₹10000 + $5,000 in losses.

So over 5 years:

- o Maintenance costs = ₹3000 × 5 = ₹15,000
- o One breakdown = ₹15,000
- o Total over 5 years = $30,000 → $6,000 per year on average.

Conclusion:

Spending ₹3000 each year on maintenance saves you a lot compared to doing nothing (₹6000/year vs ₹15000/year).

That's the economics of maintenance — balancing maintenance spending to minimize your total costs.

In the economics of maintenance, companies often plot two curves:

1. Maintenance Costs Curve
   - o As you do *more* maintenance (more inspections, more part replacements, etc.), your maintenance costs go up.
2. Failure Costs Curve
   - o If you do *less* maintenance, the machine fails more often, so failure costs (repairs + downtime) go up.
   - o But if you do *more* maintenance, failure costs go down because you prevent breakdowns.

When you add these two curves together, you get the Total Cost Curve.

Here's what the curves would look like:

- At first, doing a little maintenance saves you a lot in failures.
- But after a point, doing *too much* maintenance costs more than it saves.
- The lowest point on the Total Cost Curve is the optimal maintenance level — that's the sweet spot you want.

Summary:

The goal is not to minimize maintenance costs or failure costs individually, but to minimize the total costs.

Let's build a simple example together:

Suppose we have this situation:

Maintenance Effect (%)	Maintenance Cost (₹/year)	Failure Cost (₹/ year)	Total Cost (₹/year)
0	0	20000	20000
20	2000	12000	14000
40	4500	7000	11500
60	7500	5000	12500
80	11000	4000	15000
100	15000	3800	18800

Look at the **Total Cost** column:

- At 0% maintenance: ₹20000/year
- At 20% maintenance: ₹14000/year

- At 40% maintenance: ₹11500/year (lowest!) ← optimal point
- At 60%, 80%, and 100% maintenance: Total cost starts rising again.

Conclusion:

The optimal maintenance effort here is around 40% — it gives you the lowest total cost.

Doing less maintenance causes more expensive failures.

Doing more maintenance costs more without enough extra savings.

- Maintenance Cost rises with more effort,
- Failure Cost drops with more effort,
- Total Cost first goes down, then up again — with the lowest point at 40% maintenance effort.

In real life, companies don't just ask-- **"How much maintenance should we do?"** They also ask-- **"At what point is it better to *replace* the machine rather than keep fixing it?"**

This leads to Repair vs Replace Decision Models**.**

Here's the basic idea:

Over time:

- Maintenance costs slowly increase (things wear out).
- Failure rates increase (old machines break more).
- Efficiency decreases (machines get slower, use more energy).

At some point, the total cost of owning and maintaining the machine becomes higher than the cost of getting a new one**.**

When that happens, it's smarter (and cheaper) to replace rather than keep repairing.

How companies decide:

They use tools like:

- Life Cycle Cost Analysis (LCCA)
- Net Present Value (NPV) of future maintenance vs replacement
- Break-even Analysis

They compare:

Cost to continue maintaining the old machine **vs Cost of buying and maintaining** a new machine

Summary:

If the cost to maintain exceeds the cost to replace (over time), replacement wins**.**

If maintenance is cheap and failures rare, keep maintaining**.**

With respect to this respect we should discuss **Economic Life**

Economic Life is the number of years you should keep using an asset before replacing it, **to** minimize total costs**.** Replacement could be individual or in groups

Basically:

- Early years: Maintenance is cheap - Good to keep.
- Later years: Maintenance gets expensive – Time to replace.

Goal: Find the point where the average annual cost is the lowest**.**

Basic Idea:

At each year, calculate:

Average Cost = (Purchase Cost + Total Maintenance Cost so far) ÷ Years Used

You stop when the average cost starts increasing — that's the economic life.

Quick Example:

Let's say a machine is bought for ₹10000 and maintenance costs grow each year:

Year	Maintenance Cost (₹)	Cumulative Maintenance (₹)	Total Cost (₹)	Average Cost (₹/ year)
1	500	500	10500	10500
2	700	1200	11200	5600
3	1000	2200	12200	4067
4	2000	4200	14200	3550
5	3500	7700	17700	3540
6	6000	13700	23700	3950

Look at the average cost per year:

- It drops from year 1 to 5,
- But in year 6**,** the average cost goes up again.

Conclusion:

The machine's economic life is about 5 years — That's the sweet spot where the machine was cheapest to operate per year!

After 5 years, it gets more expensive to keep it.

So Economic Life = When average total cost per year is at its minimum.

In the real world, companies **adjust Economic Life calculations** to account for **money value over time —**

because**:**

- R1 today is worth more **than** R1 five years from now (because of inflation, investment returns, etc.).
- So, future maintenance costs are discounted back to present value using something called an interest rate or discount rate.

When companies calculate Economic Life**,** they don't just add up raw maintenance costs — they discount future maintenance costs**,** making far-away costs **countless** in today's decisions.

Sometimes this means it's smarter to keep an asset longer than basic economic life suggests, if future maintenance costs are small once discounted.

Companies' replace assets either as individual or as group considering average repair cost, cost of maintenance cost of individual replacements cost of group replacements.

Assume the following breakdown probability distribution

Month following Maintenance	Probability of Breakdown
1	0
2	0.1
3	0.1
4	0.2
5	0.1
6	0.5

Let us take Average Repair Cost on breakdown CR = ₹120 & Cost of Preventive maintenance CPM = ₹75, Cost of Individual Replacement CI = ₹100, Cost of Group Replacement = ₹50/machine

For a pool of 100 machines, Could you recommend PM? When you will go for Replacement?

Answer:

Month following Maintenance (*i*)	Probability of Breakdown (*p*)	Average free run time (*i* * *p*)
1	0.0	0.0
2	0.1	0.2
3	0.1	0.3
4	0.2	0.8
5	0.1	0.5
6	0.5	3.0
		∑4.8months/ breakdown/ machine

Therefore the average number of breakdowns for the pool of say 100 machines per month will be:

For 1 machine in 4.8 months 1 breakdown

So for 1 machine in 1 month (1/4.8) breakdown

So for 100 machines in 1 month (100/4.8) = 20.83 breakdowns

Repair Policy Cost = Average number of repairs per month X Average repair cost on breakdown = 20.83 X 120 = ₹2499.6

Preventive Maintenance Costs for the Six Preventive Maintenance Cycles: Table-I

Preventive Maintenance Cycle (n) , months	Expected Breakdowns in PM Cycle	Average No of Breakdowns per month (Col.2/Col.1)	Expected Monthly Breakdown Cost (Col.3 x ₹120)	Expected Monthly PM Cost (₹75 x 100)/ Col.1	Expected Monthly Cost of each PM cycle (Col.4 + Col.5)
1	0	0	0	7500	7500
2	10	5	600.00	3750	4350
3	20	6.667	800.04	2500	3300.04
4	41	10.25	1230	1875	3105
5	53	10.6	1272	1500	2772
6	108.1	18.017	2162.04	1250	3412.04

Computation of Col.2:

Month 1: 100*0.0 =0

Month 2: 100*(0.0+0.1) +0*0.0 = 10

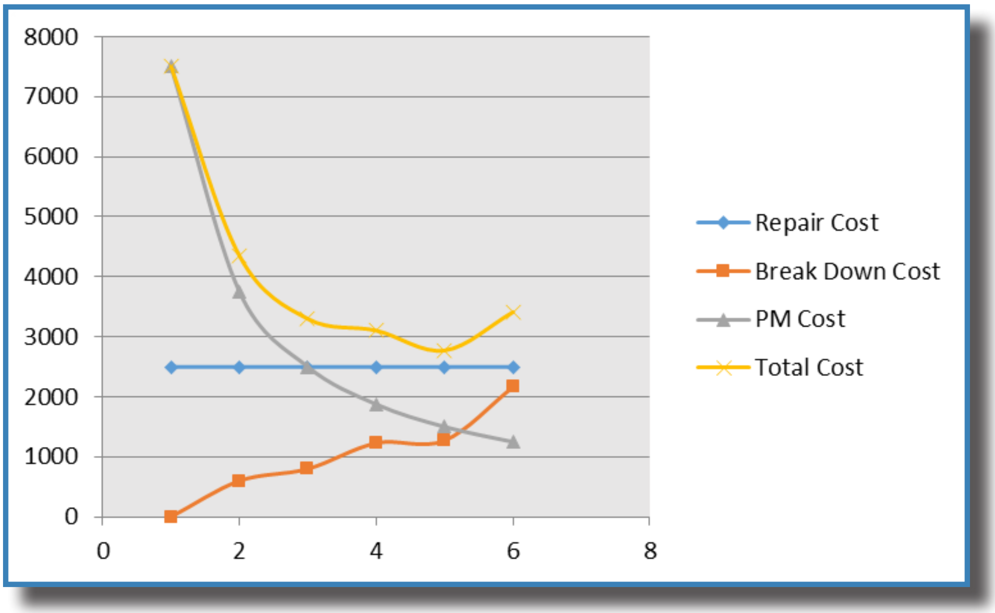
Month 3: 100*(0.0+0.1+0.1) + 0*0.1 +10*0.0 = 20

Month 4: 100*(0.0+0.1+0.1+0.2) + 0*0.1+10*0.1+20*0.0 = 41

Month 5: 100*(0.0+0.1+0.1+0.2+0.1) +0*0.2+10*0.1+20*0.1+41*0.0 = 53

Month 6: 100*(0.0+0.1+0.1+0.2+0.1+0.5) +0*0.1+10*0.2+20*0.1+41*0.1+53*0.0 = 108.1

Graphical Representation Policy 1:



So from the above it is clearly observed that PM policy is inferior to Repair policy. But will repair policy sustainable?

Answer is NO. After continuing for some time with repair policy cost effectiveness of the policy will be lost and at this stage we have to replace ---either individual machines or in blocks.

To do this analysis we will follow the steps below mentioned:

Step-I: Determination of Number of failures in different weeks. Table-II

Preventive Maintenance Cycle (n), months	Probability of Breakdown (*p*)	Expected Breakdowns in PM Cycle
1	0.0	0
2	0.1	10
3	0.1	20
4	0.2	41
5	0.1	53
6	0.5	108.1

Column 2 of Table 1

Step-2: Determination of Average Cost of Different Policies Table-III

Months	No of Individual Replacements	Cost of Replacements			
		Individual (Col2 x 100)	Group (100 X 50)	Total (Col3 +Col4)	Average Cost (Col5/Col1)
1	0	0	5000	5000	5000
2	10	1000	5000	6000	3000
3	20	2000	5000	7000	2333
4	41	4100	5000	9100	2275
5	53	5300	5000	10300	2060
6	108.1	10810	5000	15810	2635

From the table it is observed that the minimum cost per month is obtained by replacing all the machines (whether failed or not) after every 5 months. Thus optimal replacement time interval = 5 months.

But we can go for a policy "Replace as and when a machine fail" and in that case there will not be any group replacement.

To check the feasibility of "Replace as and when a machine fails" the computation will be as following:

Life (months)	Mean value (Xi)	Probability (pi)	pi x Xi
0-1	0.5	0.0	0
1-2	1.5	0.1	0.15
2-3	2.5	0.1	0.25
3-4	3.5	0.2	0.7
4-5	4.5	0.1	0.45
5-6	5.5	0.5	2.75
			4.4

Mean life of a machine is = 4.4

Expected no of failures of a machine during a week = No of Machines/ Mean life of a machine

= 100/4.4

= 22.727

Weekly replacement cost = Expected no of replacements X cost of replacements

= 22.727 × 100

= 2272.7

Since the cost of the policy of individual replacement i.e. "Replace as and when a machine fail" is greater than that of the group replacement, it is advisable to go for group replacement.

Suggestions:

This lesson could be used as an aid to teaching on economies of maintenance and replacement in study notes. Concept of the topic is vital for setting maintenance and replacement policy of a business unit. These discussions are in addition to knowledge imparted by study guide. For Proper understanding read supplementary readings by referring Operations Management by R.S. Russell & B.W. Taylor, Operations Management by J Stevenson, Productions and Operations management by R.B. Khanna & Quantitative Techniques in Management by N. D. Vora.

Best Wishes.

Topic

Module 5 : Accounting Standards

Module 8: Auditing of Different Types of Undertakings

INTERMEDIATE

Group II - Paper-10

Corporate Accounting and Auditing (CAA)

Section A: Corporate Accounting

Topic: Accounting Standards (Ind AS 33 – Earnings Per Share)

………………Continued from Previous Issue on Ind AS

- **Treatment of Right Issue**

  Right issues are generally made at a price lower than fair value of share. Therefore, a right issue usually includes a bonus element. Hence, the number of ordinary shares to be used in calculating basic EPS for all periods prior to right issue is the number of ordinary shares outstanding prior to the issue multiplied by right factor which is calculated as under:

  $$\text{Right Factor} = \frac{\text{Fair value per share immediately prior to right issue}}{\text{Theoretical ex-right fair value per share}}$$

  $$\text{Theoretical Ex-right fair value} = \frac{\text{(Aggregate Market value of share immediately prior to the exercise of the rights @+ Proceeds from exercise of the rights) issue}}{\text{Number of shares outstanding immediately after the right issue}}$$

  Consider the following illustrations.

Illustration 1

On 1.1.2023, M Ltd. had 2,00,000 equity shares of ₹ 10 each fully paid. On 1.7.2024, it issued rights shares to the existing shareholders in the ratio of 1:1 at a price of ₹ 20 each. The closing market price of the shares prior to the issue was ₹ 35. The basic reported EPS for the year ended 31.12.2023 was ₹ 2.20. The net profit after tax for the year ended 31st December were: 2023 — ₹ 4,40,000; 2024 — ₹ 4,80,000.

You are required to compute restated basic EPS for.

Solution

Computation of Theoretical Ex Rights Price

$$= \frac{\text{(Aggregate Market value of share immediately prior to the exercise of the rights + Proceeds from exercise of the rights)}}{\text{Number of shares outstanding immediately after the right issue}} = \frac{2{,}00{,}000 \times 35 + 200000 \times 20}{200000 + 200000} = ₹27.50$$

Therefore, the theoretical ex-rights price is ₹ 27.50.

$$\text{Right Factor} = \frac{\text{Fair value per share immediately prior to right issue}}{\text{Theoretical ex-right fair value per share}} = \frac{35}{27.50} = 1.27$$

Computation of EPS

Basic EPS of 2023 (Given) = ₹2.20

$$\text{Restated Basic EPS for 2023} = \frac{4{,}40{,}000}{200000 \times 1.27} = ₹1.73$$

$$\text{EPS for 2024 including the effect of right issue} = \frac{4{,}80{,}000}{200000 \times 1.27 \times (6/12) + 400000 \times (6/12)} = \frac{4{,}80{,}000}{3{,}27{,}000} = ₹1.47$$

Illustration 2

The following information is available for Raja Ltd for the accounting year 2022-23 and 2023-24.

Net Profit for: 2022-23 — ₹ 50,00,000; 2023-24 —₹ 80,00,000.

Number of shares outstanding prior to right issue — 24,00,000 shares.

Rights Issue: One new share for each three outstanding, i.e., 8,00,000 shares.

Rights issue price ₹ 22.

Last date to exercise rights — 30.6.2024.

Fair value of one equity shares immediately prior to exercise of rights on 30.6.2024 is ₹ 28.

You are required to compute the basic earnings per share for the years 2022-23 and 2023-24.

Solution:

Computation for Basic EPS for 2022-23

$$= \frac{\text{Net Profit for the year attributable to Equity Shareholders}}{\text{Weighted Average Number of Equity Shares Outstanding during the year}} = \frac{50{,}00{,}000}{24{,}00{,}000} = ₹\ 2.08$$

Computation of Theoretical Ex Rights Price

$$= \frac{\text{(Aggregate Market value of share immediately prior to the exercise of the rights @+ Proceeds from exercise of the rights)}}{\text{Number of shares outstanding immediately after the right issue}} = \frac{24{,}00{,}000 \times 28 + 800000 \times 22}{2400000+800000} = ₹\ 26.50$$

Therefore, the theoretical ex-rights price is ₹ 27.50.

$$\text{Right Factor} = \frac{\text{Fair value per share immediately prior to right issue}}{\text{Theoretical ex-right fair value per share}} = \frac{28}{26.50} = 1.06$$

Computation of EPS

Basic EPS of 2023 (Given) = ₹2.08

$$\text{Restated Basic EPS for 2023} = \frac{50{,}00{,}000}{2400000 \times 1.06} = ₹1.97$$

EPS for 2024 including the effect of right issue

$$= \frac{80{,}00{,}000}{2400000 \times 1.06 \times (3/12) + 3200000 \times (9/12)} = \frac{80{,}00{,}000}{30{,}36{,}000} = ₹2.64$$

- **Restatement**

  If the number of equity or potential equity shares outstanding increases as a result of a bonus issue or share split or decreases as a result of a reverse share split (consolidation of shares), the calculation of basic and diluted earnings per share should be adjusted for all the periods presented. If these changes occur after the balance sheet date but before the date on which the financial statements are approved by the board of directors, the per share calculations for those financial statements and any prior period financial statements presented should be based on the new number of shares. When per share calculations reflect such changes in the number of shares, that fact should be disclosed.

- **Treatment for Bonus Issue**

  Here, while calculating the weighted average number of equity shares outstanding, shares included in weighted average from the beginning of the reporting period.

Illustration 3

Y Ltd. had 5,00,000 ordinary shares outstanding as on 01.04.2023. On 01.01.2024 it issued 2 ordinary shores bonus for each share outstanding on 31.12.2023, Profit for the year 2022-23 was ₹9,00,000. Profit for 2023-24 was ₹30,00,000. Calculate Basic EPS the year 2023-24 and adjusted EPS for the year 2022-23.

Solution:

Earnings per share for the year 2023-24 as per Ind AS-33

= 30,00,000/(5,00,000 + 10,00,000) = ₹ 2.00

Adjusted/Restated earnings per share for the year 2022-23

= 9,00,000/(5,00,000 + 10,00,000) = ₹ 0.60

Since the bonus issue is an issue without consideration the issue is treated as if it had occurred in the beginning of the year 2023-24, the earliest period reported.

- **Contracts that may be settled in ordinary shares or cash**

When an entity has issued a contract that may be settled in ordinary shares or cash at the entity's option, the entity shall presume that the contract will be settled in ordinary shares, and the resulting potential ordinary shares shall be included in diluted earnings per share if the effect is dilutive.

When such a contract is presented for accounting purposes as an asset or a liability, or has an equity component and a liability component, the entity shall adjust the numerator for any changes in profit or loss that would have resulted during the period if the contract had been classified wholly as an equity instrument. That adjustment is similar to the adjustments required in paragraph 33.

For contracts that may be settled in ordinary shares or cash at the holder's option, the more dilutive of cash settlement and share settlement shall be used in calculating diluted earnings per share.

An example of a contract that may be settled in ordinary shares or cash is a debt instrument that, on maturity, gives the entity the unrestricted right to settle the principal amount in cash or in its own ordinary shares. Another example is a written put option that gives the holder a choice of settling in ordinary shares or cash.

Topic 2: Auditing of Different Types of Undertakings

Question:

Briefly discuss the payments related aspects and assets and liabilities related aspects to be considered while auditing a hospital.

Answer:

The following points, the auditor shall take into consideration.

Payment Related Aspects:

1. Distinction between capital and revenue expenditure: The auditor must ensure that the organisation has made proper distinction in the accounts between capital expenditure and revenue expenditure.
2. Purchase and sale of assets: Purchase and sale of movable as well as immovable properties should be verified with the help of relevant contracts with the buyer as well as the related voucher. The auditor should also ensure that assets sold really existed on the date of sale and assets have been purchased based on a valid contract.
3. Vouching of expenses: The auditor should vouch all the expenses including the capital expenditure. He should verify that the capital expenditure has been incurred only with the prior sanction of the Managing Committee of the hospital. In this context he shall verify the respective resolutions of the meeting.
4. Depreciation on non-current assets: The auditor should see that depreciation at appropriate rates has been written off against all the non-current assets. Similarly, the auditor shall also verify that amortization has been done on intangible assets.

Asset and Liabilities:

1. Verification of assets and liabilities: The auditor should see that all fixed assets have been acquired under proper authority and that proper registers are maintained to record their particulars. He should also confirm about their physical existence either through physical verification or through confirmation from the concerned parties.
2. Stock-in-trade: The auditor should obtain inventories of stocks and stores at the end of the year and check a percentage of them physically. He should also verify stock register in respect of stock and stores such as medicines, test tubes, cleaning materials, etc. and see that the management has carried out a periodical inspection of all such store items.

Topic

Module 6 : Working Capital Management

Module 9 : Data Processing, Organisation, Cleaning and Validation

INTERMEDIATE

Group II - Paper-11

Financial Management and Business Data Analytics (FMDA)

Subject: Financial Management and Business Data Analytics

Financial Management

Cash Management Models

Cash management models help businesses determine the optimal amount of cash to hold, considering the costs of holding cash and the costs of converting securities into cash. Following are the popular cash management models:

1. Baumol Model:

William J. Baumol developed a model which is usually used in inventory management but has its application in determining the optimal cash balance also. Baumol found similarities between inventory management and cash management. As Economic Order Quantity (EOQ) in inventory management involves trade-off between carrying costs and ordering cost, the optimal cash balance is the trade-off between opportunity cost or cost of borrowing or holding cash and the transaction cost (i.e., the cost of converting marketable securities into cash etc.) The optimal cash balance is reached at a point where the total cost is the minimum.

Assumptions of Baumol model

(i) The cash needs of the firm are known with certainty.

(ii) The cash disbursements (usage) of the firm occur uniformly over a period of time and is known with certainty.

(iii) The opportunity cost of holding cash is known and it remains constant.

(iv) The transaction cost of converting securities into cash is known and remains constant

$$\mathbf{C} = \sqrt{\frac{2A \times F}{O}}$$

Where,

C= Optimum Cash Balance (Economic Investment Size)

A= Annual (or monthly) Cash Disbursement or Requirements

F= Fixed cost per transaction (purchase/sale)

O= Interest Rate or Opportunity cost of one rupee per annum (or per month)

2. Miller-Orr Model

Miller and Orr Model Baumol's model is based on the basic assumption that the size and timing of cash flows are known with certainty. This usually does not happen in realty. The cash flows of a firm are neither uniform nor certain. The Miller and Orr model overcomes the shortcomings of Baumol model. M.H. Miller and Daniel Orr (A Model of the Demand for Money) expanded on the Baumol model and developed Stochastic Model for firms with uncertain cash inflows and cash outflows. The Miller and Orr (MO) model provides two control limits, the upper control limit and the lower control limit along with a return point.

$$Z = 3\left[\frac{3}{4} \times \frac{\text{Transaction Cost} \times \text{Variance of Cash Flows}}{\text{Interest Rate}}\right]^{\frac{1}{3}}$$

$$\text{and, Return Point} = \text{Lower Limit} + \frac{\text{Spread (Z)}}{3}$$

3. Orgler's Model

Orgler's model uses linear programming to optimize cash management by coordinating cash flows with other operations over a planning horizon. It considers various factors like cash inflows, outflows, and investment opportunities to determine the best cash management strategy. The model aims to find a balance between ensuring sufficient cash for day-to-day operations (liquidity) and maximizing returns by investing surplus cash.

Example: 1

The annual cash requirement of Subha Ltd. is ₹1.5 crore. The company has marketable securities in lot sizes of ₹5,00,000, ₹15,00,000, ₹ 25,00,000. Cost of conversion of marketable securities per lot is ₹15,000. The company can earn 10% annual yield on its securities.

You are required to prepare a table indicating which lot size will have to be sold by the Company. Also show the Economic Lot Size, which can be obtained by the Baumol's Model.

Answer:

Computation of Optimum Investment (Lot) Size

Lot Size	Transaction Cost p.a.= No. of Transactions × Cost per Transaction	Interest Cost p.a. = Average Cash balance × Interest Rate p.a.	Associated Cost p.a.
(1)	(2)= [₹1.5 crore ÷ (1)] × ₹15,000	(3) =[Col (1) ÷ 2] × 10%	(4) = (2) +(3)
₹5,00, 000	30 × ₹ 15,000 = ₹4,50,000	₹2,50,000 × 10% = ₹25,000	₹4,75,000
₹15,00, 000	10 × ₹ 15,000 = ₹1,50,000	₹7,50,000 × 10% = ₹75,000	₹2,25,000
₹25,00, 000	6 × ₹ 15,000 = ₹90,000	₹12,50,000 × 10% = ₹1,25,000	₹2,15,000

From the above table, the Economic Lot Size is ₹25,00,000 as associated cost is least at that level.

Optimum Investment Size (Lot size as per the Baumol's Model =

$$\mathbf{C} = \sqrt{\frac{2A \times F}{O}}$$

Where,

C = Optimum Cash Balance (Economic Investment Size)

A = Annual (or monthly) Cash Disbursement or Requirements = ₹1.5 crore

F = Fixed cost per transaction (purchase/sale) = ₹15,000

O = Interest Rate or Opportunity cost of one rupee per annum (or per month) = 10%

$$\mathbf{C} = \sqrt{\frac{2 \times ₹1.5 \text{ Crore} \times ₹15{,}000}{0.01}} = ₹\ 21{,}21{,}320.344$$

Example: 2

A Company has a policy of maintaining a minimum cash balance of ₹ 1,00,000. The standard deviation in daily cash balances is ₹ 10,000. The interest rate on a daily basis is 0.01%. The transaction cost for each sale or purchase of securities is ₹ 50.

Compute the upper control limit and the return point as per the Miller-Orr model.

Answer:

Spread between the upper and lower Cash Balance (Z)

$$Z = 3\left[\frac{3}{4} \times \frac{\text{Transaction Cost} \times \text{Variance of Cash Flows}}{\text{Interest Rate}}\right]^{\frac{1}{3}}$$

$$Z = 3\left[\frac{3}{4} \times \frac{50 \times ₹1{,}00{,}000^2}{0.0001}\right]^{\frac{1}{3}}$$

$= ₹\ 1{,}00{,}415$

$$\text{Return Point} = \text{Lower Limit} + \frac{\text{Spread (Z)}}{3}$$

Thus, the upper control limit of cash balance is

= ₹100000 + ₹1,00415 = ₹ 200415

$$\text{Return Point} = \text{Lower Limit} + \frac{\text{Spread (Z)}}{3}$$

= ₹ 1,00,000 + ₹1,00,415/3 = ₹ 1,33,472

Example: 3

The following information is available in respect of a trading firm:

(i) On an average, debtors are collected after 45 days, inventories have an average holding period of 75 days and creditors payment period on an average is 30 days.

(ii) The firm spends a total of ₹120 lakhs annually at a constant rate.

(iii) It can earn 10% on investments.

From the above information, you are required to calculate:

(a) Cash cycle and cash turnover

(b) Minimum amount of cash to be maintained to meet payments as they become due.

(c) Savings by reducing the average inventory holding period by 30 days.

Answer:

Particulars	Present	Proposed
1. Cash Cycle (in days) = Stock + Debtors (-) Creditors	= 75 +45-30 = 90 Days	= 75 +15-30 = 60 Days
2. Cash Turnover = 360 Days/Cash Cycle	=360 Days/90 days = 4 times	=360 Days/60 days = 6 times
3. Minimum cash balance to be maintained to meet payments as they become due	= ₹120 lakhs/ 4 times = 30 lakhs	= ₹120 lakhs/ 6 times = 20 lakhs

So, savings due to reduction in investments = 10% on (₹30 lakhs – ₹20 lakhs) = ₹1 lakh

Data Analytics (Data Validation)

1. **Data validation**

   Data validation is the process of ensuring the accuracy, integrity, and quality of data before it's used. It involves checking if data meets predefined rules and standards, such as format, range, and completeness, to maintain data integrity throughout its lifecycle.

2. **Importance of Data Validation in Finance**

   (i) **Ensuring Accuracy and Reliability:** Data validation helps identify and correct errors in financial data, ensuring the accuracy and reliability of financial reports.

   (ii) **Meeting Regulatory Requirements:** Many financial institutions are subject to regulations that require them to maintain accurate and complete financial records. Data validation helps ensure compliance with these regulations.

   (iii) **Improving Decision-Making:** Accurate and reliable financial data is essential for making informed business decisions.

   (iv) **Reducing Costs:** By catching errors early, data validation can reduce the costs associated with fixing errors later in the process.

   (v) **Enhancing Efficiency:** Automated data validation can improve efficiency by streamlining data processing and reducing manual intervention.

3. **Types of data validation**

   (i) **Type Checks:** It verifies that the data entered into a field matches the expected data type (e.g., numeric, text, date).

   (ii) **Format Checks:** It ensures that data adheres to a predefined format (e.g., email address, phone number).

   (iii) **Range Checks:** It confirms that data values fall within a specified range or boundary.

   (iv) **Consistency Checks:** It verifies that data is logically coherent and consistent across related fields or tables.

   (v) **Uniqueness Checks:** It ensures that each record or value is unique and does not contain duplicates.

   (vi) **Presence Checks:** It verifies that required fields are not empty.

   (vii) **Pattern Matching:** It Enforce predefined patterns or formats, like email addresses or zip codes.

   (viii) **Cross-Field Validation:** It checks relationships between data in different fields.

   (ix) **Code Validation:** It ensures that data entries are selected from a predefined list of valid codes.

4. **Tools for Data Validation**
   (i) **Spreadsheet Software (e.g., Excel):** Provides built-in data validation features, such as dropdown lists, number range constraints, and data type validation.
   (ii) **Database Management Systems:** Offer data validation rules to enforce data integrity and consistency.
   (iii) **Data Quality Management Tools:** Provide more advanced features for data cleansing, validation, and profiling.
   (iv) **Financial Consolidation Software:** Often includes built-in data validation features for consolidating financial data.

Multiple Choice Questions (MCQs):

1. Which of the following is the objective of data validation?
   (a) To make the data look pretty
   (b) To ensure the data is accurate and reliable
   (c) To reduce the amount of data being processed
   (d) To make the data easy to read

   Answer (b)

2. The mapping or classification of a class with some predefined group or class is known as?
   (a) Data Characterization
   (b) Data Discrimination
   (c) Data Set
   (d) Data Sub Structure

   Answer (b)

3. Multiple data sources may be combined is called as ______
   (a) Data Reduction
   (b) Data Cleaning
   (c) Data Integration
   (d) Data Transformation

   Answer: (c)

4. Which of the following is the objective of data cleansing?
   (a) To make the data more attractive
   (b) To reduce the amount of data being processed
   (c) To remove errors and inconsistencies from the data
   (d) To change the data format

   Answer (c)

Topic

Module 5 : Transfer Pricing

Module 8 : Divisional Performance Measurement

INTERMEDIATE

Group II - Paper-12

Management Accounting (MA)

Module 5: Transfer Pricing

In cost and management accounting, transfer pricing is an important way for companies—especially large, global ones—to share costs and check how different parts of the business are doing. It means setting prices for things like goods, services, or ideas that are exchanged between different departments or branches of the same company. The main aim is to divide costs fairly and show the real value of these exchanges, so the company can make better decisions about pricing, using resources, and measuring performance.

Methods and Techniques

Cost and management accountants use different ways to figure out fair prices when one part of a company sells something to another part. One common way is the Cost-Plus Method, where they take the cost to make something and add a bit extra as profit. For more accuracy, they might use Activity-Based Costing (ABC), which looks at what specific tasks or activities actually cause the costs. These methods help companies set prices that make sense, follow the rules, and also give managers useful information to make better business decisions.

Divisional Performance and Goal Congruence Challenges

ransfer pricing also helps measure how well each part of the company is performing. Accountants make sure the prices used match the company's bigger performance goals and encourage all departments to work toward the same overall success. But sometimes, problems come up when managers care more about their own team's results than what's best for the company. To fix this, accountants design performance systems that reward teamwork and shared goals.

Determining Inter-Departmental or Inter-Company Transfer Prices

Things can get more complicated when the company operates in different countries. Each place has different tax rules, currency values, and legal requirements. Cost and management accountants have to deal with these differences and come up with smart ways to follow the rules and avoid paying more tax than necessary. Their skills help global companies handle these complex situations while still reaching their business goals.

International Transfer Pricing

International transfer pricing brings unique challenges, given variations in tax regulations, currency exchange rates, and compliance requirements across different jurisdictions. Cost and management accountants must navigate these complexities to develop strategies that optimize tax efficiency while ensuring regulatory compliance. Their expertise in cost analysis and performance measurement enables multinational corporations to handle the intricacies of international transfer pricing and meet their strategic objectives.

Overall, Transfer pricing is a key part of how international companies operate. It uses different methods to make sure prices are fair and follow the rules, especially the "arm's length" principle, which means prices should be similar to what unrelated companies would charge. Techniques like comparing market prices, adding profit to costs, or sharing profits between divisions are commonly used. But these methods need to be carefully adapted to support performance tracking and teamwork. On top of that, setting fair prices within the company and across countries requires careful planning to balance profit, resource use, tax laws, and company-wide goals.

Multiple Choice Questions (MCQs):

1. Why do companies use transfer pricing between departments or divisions?
   a) To increase sales to customers
   b) To avoid budgeting
   c) To fairly share costs and measure performance
   d) To reduce product quality
2. Which method of transfer pricing is based on comparing similar transactions in the open market?
   a) Comparable Uncontrolled Price (CUP) Method
   b) Activity-Based Costing
   c) Two-part tariff method
   d) Resale Price Method
3. The Cost-Plus Method involves:
   a) Using market price only
   b) Adding a profit margin to the production cost
   c) Subtracting overhead costs
   d) Charging based on competitor pricing
4. Activity-Based Costing (ABC) helps transfer pricing by:
   a) Ignoring indirect costs
   b) Assigning costs based on actual business activities
   c) Estimating costs randomly
   d) Matching prices with sales figures

5. Which method is suitable when both divisions contribute to a joint output and share profits?
   a) Resale Price Method
   b) Profit Split Method
   c) Dual Pricing
   d) Negotiated Transfer Pricing
6. One benefit of negotiated transfer pricing is:
   a) It's faster than other methods
   b) It allows both divisions to agree on a fair price
   c) It avoids recording transactions
   d) It eliminates all costs
7. In international transfer pricing, one major concern is:
   a) Marketing strategy
   b) Employee performance
   c) Following different tax laws in each country
   d) Choosing suppliers
8. Dual pricing involves:
   a) Using two prices – one for internal records and one for external reporting
   b) Charging customers twice
   c) Ignoring market rates
   d) Recording no cost at all
9. Which method is best when market prices are not available and divisions must agree internally?
   a) Cost-Plus Method
   b) CUP Method
   c) Negotiated Transfer Pricing
   d) Resale Price Method
10. The main reason for using the arm's length principle in transfer pricing is to:
   a) Increase internal competition
   b) Set prices as if the divisions were independent companies
   c) Hide profits from tax authorities
   d) Encourage one division to dominate
11. Which transfer pricing method is commonly used when a product is bought and then resold by another division?
   a) Profit Split Method
   b) Cost-Plus Method
   c) Resale Price Method
   d) Activity-Based Costing
12. Which of the following is a key advantage of transfer pricing in management accounting?
   a) It helps reduce employee workload
   b) It avoids external audits
   c) It helps evaluate performance of different parts of a business
   d) It lowers customer prices
13. Transfer pricing supports which of the following business practices?
   a) Outsourcing to foreign companies
   b) Better decision-making and internal control
   c) Ignoring production overhead
   d) Random price setting between divisions
14. If a company wants to ensure both fairness and tax compliance, it should base its transfer pricing on:
   a) Divisional preferences
   b) Estimated market trends
   c) The arm's length principle
   d) Sales growth projections

Answer

1. c
2. a
3. b
4. b
5. b
6. b
7. c
8. a
9. c
10. b
11. c
12. c
13. b
14. c

True and False

1. Transfer pricing helps divisions act like separate businesses while still supporting overall company goals.
2. Using market-based transfer pricing always leads to unfair performance evaluation of divisions.
3. Transfer pricing can affect how profits are shown in different parts of a company.
4. Cost-Plus transfer pricing includes only fixed costs and ignores variable costs.
5. A well-designed transfer pricing system encourages teamwork and fair competition among divisions.

Answer

1. True
2. False
3. True
4. False
5. True

Fill in the blanks

1. The __________ method of transfer pricing is based on adding a markup to the cost of production.
2. Transfer pricing is a key tool in measuring __________ performance within an organization.
3. A company may shift profits by setting transfer prices that benefit a division located in a __________ tax country.
4. When external buying and selling is possible, the _________ price is often used as the transfer price.
5. A lack of goal __________ can cause divisions to act in their own interest instead of supporting overall company strategy.

Answer

1. cost-plus
2. divisional
3. low
4. market
5. congruence

Module 8: Divisional Performance Measurement

As organisations grow, they often transition from centralized to decentralized structures to better respond to dynamic and localized needs. Decentralization empowers lower levels of management with decision-making authority, fostering greater agility and responsiveness. To facilitate performance evaluation, organisations establish responsibility centres—such as cost, revenue, profit, and investment centres.

The degree of decentralization is influenced by factors like managerial competence, growth imperatives, and the nature of organisational operations. While decentralization delegates operational authority, top management retains ultimate accountability, supported by robust accounting and monitoring systems. Certain functions, such as treasury management, often remain centralized to ensure effective cash control and cost efficiency.

The core objective of decentralization is to strike a balance between decision-making efficiency and organisational oversight, enabling sustainable growth.

Disadvantages of Decentralization

- Potential for goal incongruence or sub-optimization by divisional managers.
- Increased communication challenges due to geographical and hierarchical distance.
- Personnel issues during implementation, especially if managers struggle with delegation.
- High costs associated with training and potential for subpar decision-making.

Divisionalization and Decentralization

Large organisations frequently adopt divisional structures to enhance focus and performance measurement. In these setups:

- **Decentralization** delegates decision-making to divisional and departmental levels.
- **Centralization** consolidates decision-making at the top, with subordinates executing instructions.

Benefits of decentralization include:

- Development of managerial talent.
- Effective handling of local issues.
- Reduced burden on senior leadership.
- Improved job satisfaction.
- Enhanced alignment with organisational objectives.

DuPont Methodology

Developed by the DuPont Corporation, this framework dissects **Return on Equity (ROE)** into component parts, offering deeper insights into financial performance and revealing both strengths and areas for improvement.

Key Components:

1. **Operating Performance** – Net Profit ÷ Revenue: Reflects profitability and margin strength.
2. **Asset Utilization** – Revenue ÷ Total Assets: Measures efficiency in asset usage.
3. **Financial Leverage** – Assets ÷ Equity: Evaluates the impact of debt on returns.

Significance:

- High margins, efficient asset usage, and appropriate leverage enhance ROE.
- Aids divisional managers in understanding their contribution to overall returns.
- Informs capital allocation by top management.
- Emphasizes that relying solely on leverage to boost ROE may increase financial risk.

Performance Measurement: ROI and Its Challenges

Organisations commonly use **Return on Investment (ROI)** to evaluate divisional performance, aligning goals with shareholder wealth maximization. ROI measures profit as a percentage of assets employed, supporting inter-divisional comparisons and strategic planning.

Advantages:

- Facilitates performance comparisons.
- Encourages focus on profitability and asset utilization.

Challenges:

- May promote short-term thinking.
- Complexities in valuing non-current assets can distort results.
- Uniform ROI benchmarks may ignore risk differences across diverse business units.

Residual Income (RI)

Definition: RI calculates the profit remaining after deducting a capital charge from divisional profit, providing a more nuanced measure than ROI.

Formula:

RI = Divisional Profit – (Capital Charge % × Divisional Investment)

Advantages:

1. Promotes acceptance of investments that exceed the cost of capital.
2. Enhances shareholder wealth by focusing on growth opportunities.
3. Encourages consideration of opportunity cost.
4. Aligns divisional performance with corporate financial objectives.

Drawbacks:

- Absolute measure: Difficult to compare across divisions of different sizes.
- May also encourage a short-term focus, similar to ROI.

Economic Value Added (EVA)

Definition: EVA is a value-based metric that assesses whether a company generates returns exceeding its cost of capital.

Formula:

EVA = Net Operating Profit After Tax (NOPAT) – (WACC × Economic Capital Employed)

Components:

- **Cost of Equity:** Estimated via CAPM, reflecting shareholder return expectations.
- **Cost of Debt:** Based on expected return by lenders.
- **Tax Adjustments:** Ensures post-tax accuracy of financing costs.

Significance:

- Measures true economic profit and shareholder value creation.
- Supports performance-based incentive compensation.
- Guides strategic decisions aimed at enhancing long-term value.

Advantages:

- Focuses on sustainable wealth creation.
- Removes accounting distortions, enabling fairer comparisons.
- Encourages decisions that contribute positively to economic value.

Limitations:

- Like RI, it's an absolute measure, making cross-comparison challenging.
- Risk of fostering short-termism if not complemented by long-term performance metrics.

Multiple Choice Questions (MCQs):

1. **Which of the following is *not* a type of responsibility centre?**

   a) Cost Centre

   b) Revenue Centre

   c) Value Centre

   d) Investment Centre

2. **Decentralization allows organizations to:**

   a) Increase central authority

   b) Reduce local decision-making

   c) Improve agility in local markets

   d) Eliminate middle management

3. **Which method breaks down ROE into component ratios?**

   a) ROI Method

   b) Residual Income

   c) DuPont Analysis

   d) Balanced Scorecard

4. **The formula for ROE in DuPont Analysis is:**

   a) Net income ÷ Total assets

   b) Net income ÷ Equity

   c) (Net income ÷ Sales) × (Sales ÷ Assets) × (Assets ÷ Equity)

   d) Revenue ÷ Assets

5. **Which of the following is *not* a benefit of decentralization?**

   a) Improved decision-making

   b) Greater job satisfaction

   c) Loss of goal congruence

   d) Development of managerial talent

6. **Residual Income is calculated as:**

   a) Profit after tax × Capital employed

   b) Divisional profit − (Capital charge × Investment)

   c) ROI × Capital charge

   d) Net income ÷ Equity

7. **Which metric avoids suboptimal decisions often caused by ROI?**

   a) ROI

   b) EVA

   c) Residual Income

   d) Net Profit

8. **An organization with many independent divisions typically follows a:**

   a) Centralized structure

   b) Hybrid structure

   c) Divisionalized structure

   d) Flat structure

9. **In DuPont analysis, financial leverage refers to:**

   a) Operating income ÷ Sales

   b) Assets ÷ Equity

   c) Equity ÷ Debt

   d) EBIT ÷ Net income

10. **The cost of equity is calculated using:**

    a) Risk-free return only

    b) CAPM

    c) Internal Rate of Return

    d) Depreciation model

11. **EVA is most effective when:**

    a) Managers are evaluated on revenue

    b) Only profits are considered

    c) Capital costs are ignored

    d) Managers are held accountable for capital use

12. **One drawback of residual income is:**

    a) Difficult to compute

    b) Encourages goal congruence

    c) Difficult to compare across divisions of different sizes

    d) Ignores the cost of capital

13. **If the EVA is zero, it means:**

    a) Losses were incurred

    b) Capital was destroyed

    c) Expected return was met

    d) No return was earned

Answer

1. c
2. c
3. c
4. c
5. c
6. b
7. c
8. c
9. b
10. b
11. d
12. c
13. c

Fill in the blanks

1. The DuPont model breaks ROE into margin, turnover, and ______.
2. EVA stands for Economic ______ Added.
3. A profit centre is responsible for both revenues and ______.
4. Financial leverage increases when the company uses more ______.
5. CAPM is used to calculate the cost of ______.

Answer

1. leverage
2. value
3. costs
4. debt
5. equity

True & False

1. DuPont analysis is only applicable to service industries..
2. Residual income encourages suboptimal decisions.
3. EVA is more suitable for evaluating divisions of different sizes.
4. ROI increases automatically as assets depreciate.
5. A positive RI implies the investment exceeds the cost of capital.

Answer

1. False
2. False
3. True
4. True
5. True

CMA FINAL COURSE

Syllabus 2022

Topic

Module 9 : Specific Legal Provisions related to MSME Sector

FINAL

Group III - Paper-13

Corporate and Economic Laws (CEL)

GOVERNMENT POLICY TOWARD MSME

INTRODUCTION -

For establishment of new businesses, the "Make in India and Made in India" movement is essential to the growth of entrepreneurship. Micro, Small, and Medium-Sized Enterprises (MSMEs) are therefore essential to the development of the Indian economy. Through their innovative business practices, MSMEs have been helping to develop an

entrepreneurial culture. MSMEs have the distinctive quality of being extensively

distributed throughout several economic sectors, offering a wide variety of goods and services to satisfy both domestic and international customers. It goes without saying that MSME contributes 8% of GDP, 45% of manufacturing output, and 40% of the nation's exports. They yield big returns with the least amount of investment, ability to

engage people in economic activity. Numerous programs and initiatives are available through the Ministry of MSME to support entrepreneurs, particularly small enterprises.

DEFINITION OF MSME :

The limits have been revised recently

- **Micro Enterprises:**
- Investment limit: Up to ₹2.5 crore (previously ₹1 crore).
- Turnover limit: Up to ₹10 crore (previously ₹5 crore).
- **Small Enterprises:**
- Investment limit: Up to ₹25 crore (previously ₹10 crore).
- Turnover limit: Up to ₹100 crore (previously ₹50 crore).
- **Medium Enterprises:**
- Investment limit: Up to ₹125 crore (previously ₹50 crore).
- Turnover limit: Up to ₹500 crore (previously ₹250 crore).
- Impact and Rationale:

  These changes aim to help MSMEs scale their operations, access credit more easily, and contribute to employment generation, according to the government. The increased limits are intended to address the impact of inflation and rising raw material costs, allowing more businesses to qualify for MSME benefits and policies.

MICRO, SMALL AND MEDIUM ENTERPRISES -

- **SME DIVISION SCHEMES -**

1. **Associated scheme Description of International Cooperation (IC) :**

   - The following actions are covered by the plan:

   a) Sending delegations of MSME businesses abroad to investigate new areas of technology infusion or upgrade, facilitate joint ventures, expand markets for MSMEs' products, engage in international collaborations, etc.

   b) Indian MSMEs' participation in international buyer-seller meetings, trade shows, and exhibitions where there is international participation in both India and other nations.

   c) Organizing international seminars and conferences on subjects that MSMEs find interesting.

   - Assistance kind Up to 95% of entrepreneurs' space rent and airfare can be covered under the IC plan. Assistance is given according to the enterprise's size and type.

     Additionally, it offers support for typical delegation costs such as local transportation, freight and insurance, secretarial and communication services, printing of shared catalogs, etc.

2. **Description of Assistance to Training Institutions (ATI):**

   Training institutions will receive funding in the form of capital grants to build or upgrade their facilities and support the implementation of training programs for skill development and entrepreneurship. Assistance kind The maximum amount of matching funding available for infrastructure development or improvement will be Rs. 150 lakh, which cannot exceed 50% of the project's total cost. However, the maximum amount of matching aid for the North-Eastern Region (including Sikkim), Andaman C Nicobar, and Lakshadweep will be Rs. 270 lakh, or 90% of the project cost, whichever is lower. For entrepreneurship and skill development programs, the maximum amount of help per trainee per hour is Rs. 50 (Rs. 60 for NER, ACN, and Lakshadweep).

3. **Marketing Assistance Description:**

   Assistance is provided for the following activities: a) Organizing exhibitions abroad and participating in international exhibitions/trade fairs b) Co-sponsoring of exhibitions organized by other organizations / industry associations / agencies c) Organizing buyer-seller meets, intensive campaigns, and marketing promotion events Nature of assistance Financial assistance of up to 95% of the airfare and space rent for entrepreneurs; assistance is provided on the basis of size and type of the enterprise. Financial assistance for co-sponsoring would be limited to 40% of the net expenditure, subject to a maximum amount of Rs. 5 lakh.

▪ **DEVELOPMENT COMMISSIONER (DC-MSME) SCHEMES:**

1. **Related scheme Credit Guarantee Description :**

   Government of India, and the Small Industries Development Bank of India (SIDBI) have set up a trust called the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE). This trust manages the Credit Guarantee Fund Scheme, which provides financial assistance to micro and small enterprises. The scheme is funded by the Government of India and SIDBI.The scheme offers collateral-free loans of up to Rs. 50 lakh to individual micro and small enterprises.

2. **The Credit Linked Capital Subsidy (CLCS) Scheme :**

   It promotes technology Upgradation in Micro and Small Enterprises (MSEs). Technology Upgradation means adopting modern technology to improve productivity, product quality, and environmental conditions. The scheme provides:

   - 15% upfront capital subsidy on institutional finance for technology Upgradation
   - Eligible sectors include tiny, khadi, village, and coir industrial units
   - Ceiling on loans increased from Rs. 40 lakh to Rs. 1 crore
   - Rate of subsidy enhanced from 12% to 15%
   - Subsidy calculated based on plant and machinery purchase price, not term loan disbursed.

3. **The ISO G000/ISO 14001 Certification Reimbursement Scheme:**

   It is an initiative by the Government of India to boost the competitiveness of Small and Medium Enterprises (SMEs).

   The scheme provides reimbursement of up to 75% of the expenses incurred by SMEs in acquiring ISO 9000, ISO 14001, or HACCP certification, with a maximum limit of Rs. 75,000.

   To be eligible for the scheme, SMEs must have acquired the certification and possess an EM Part-II Number, which can be obtained from the District Industries Centre (DIC) as per the MSMED Act, 2006.

   The scheme aims to encourage SMEs to adopt international quality standards, improve their environmental management, and enhance their competitiveness in the global market.

MSMEs' PRICE SUBSIDY SCHEME :

By offering financial support, the Price Subsidy Scheme seeks to assist Micro, Small, and Medium-Sized Businesses (MSMEs).

ADVANTAGES:

1. *Raw material subsidies: MSMEs can receive raw material subsidies, which lower production costs.
2. *Competitiveness*: The program assists MSMEs in competing with global players and larger businesses.
3. *Increased profitability*: MSMEs can boost their profitability by cutting expenses.

QUALIFICATIONS:

1. *MSME registration*: Businesses need to be MSMEs.
2. *Turnover limits*: MSMEs are eligible if their turnover is less than a certain threshold, usually ₹5–10 crores.
3. *Sector-specific eligibility*: Certain industries, including food processing or textiles, might have certain requirements.

4. **The Micro and Small Enterprises Cluster Development Programme (MSE-CDP):**

It is an initiative by the Ministry of MSME to promote the growth and competitiveness of micro and small enterprises (MSEs) through cluster development.

Objectives:

* Enhance MSEs' sustainability and growth by addressing common challenges.
* Build MSEs' capacity for collective action through self-help groups and associations.
* Develop/upgrade infrastructure in industrial areas/clusters.
* Establish common facility centers for testing, training, and other support services.

5. **Related scheme Micro Finance Programme:**

The Indian government's Micro Finance Programme aims to provide financial assistance to underserved areas. The programme is operated in partnership with SIDBI, a financial institution.

Key features:

- The government provides funds to SIDBI for the programme.
- SIDBI requires a 10% security deposit for loans, which is split:
- 2.5% from the Micro Finance Institution (MFI)/ Non-Governmental Organization (NGO)
- 7.5% from the government's funds

6. **The MSME Market Development Assistance (MDA) scheme:** aims to boost the participation of Micro, Small, and Medium Enterprises (MSMEs) in international exhibitions, fairs, and other business growth opportunities. The scheme offers three key benefits:

- *Participation in International Exhibitions/Fairs*: Registered small and micro- manufacturing enterprises with DI/DIC can participate in international exhibitions and fairs to showcase their products and services.
- *Financial Assistance for Global Standards (GS1) in Barcoding*: MSMEs can avail financial assistance for adopting global standards in barcoding, which helps in improving product traceability, inventory management, and supply chain efficiency.
- *Purchase and Price Preference Policy*: The scheme also offers a purchase and price preference policy, which reserves 358 items for exclusive purchase from MSMEs by the Central Government. This policy also provides tender documents free of cost, xemption from earnest money and security deposit, and a 15% price preference in Central Government purchases for individual MSMEs.

PREFERENCE SCHEME:

By giving MSMEs preferential status in government procurement, the Preference Scheme seeks to support them.

ADVANTAGES:

* Priority in government procurement*: MSMEs have precedence in the processes involved in government procurement.
* Reserved procurement*: MSMEs are the only ones eligible for a specific portion of government procurement.
* Relaxed eligibility criteria:* MSMEs might not be subject to some eligibility requirements, like turnover requirements or prior experience.

QUALIFICATIONS:

1. *MSME registration*: Businesses need to be MSMEs.
2. *Turnover limits*: MSMEs are eligible if their turnover is less than a certain threshold, usually ₹5–10 crores.
3. *Sector-specific eligibility*: Some industries, including aerospace or defense, may have particular requirements.

7. **The National Awards for Individual Micro, Small, and Medium Enterprises (MSEs):**

Recognize their outstanding contributions to the Indian economy. These MSEs have demonstrated remarkable growth, innovation, and quality in production, exports, and product development, surpassing initial expectations.

Thanks to the entrepreneurial spirit of MSEs, India now produces items that were previously imported. Many of these new products offer additional features, solving multiple user problems. The Ministry of Micro, Small, and Medium Enterprises

(MoMSME) presents these National Awards annually to deserving entrepreneurs and enterprises, acknowledging their efforts and contributions.

8. **The National Manufacturing Competitiveness Programme (NMCP):**

It is a five-year initiative launched by the National Manufacturing Competitiveness Council (NMCC) to enhance the competitiveness of Indian micro, small, and medium enterprises (MSMEs).

The program encompasses 10 schemes, including:

- *Marketing Support*: Assistance for MSMEs in marketing, including bar coding.
- *Incubation Support*: Funding for entrepreneurial and managerial development of SMEs through incubators.
- *Quality Management*: Enabling the manufacturing sector to be competitive through Quality Management Standards and Quality Technology Tools.
- *Intellectual Property Rights*: Building awareness on IPR for MSMEs.
- *Lean Manufacturing*: Implementing lean manufacturing competitiveness schemes for MSMEs.

- *Design Clinics*: Providing design expertise to MSMEs through design clinics.
- *Technology Upgradation*: Offering marketing assistance and technology Upgradation schemes for MSMEs.
- *ICT Promotion*: Promoting the use of Information and Communication Technology (ICT) in the Indian manufacturing sector.

These schemes aim to improve the competitiveness of MSMEs, enhance their productivity, and increase their contribution to India's GDP. The program is implemented in a Public-Private Partnership (PPP) mode, with financing tied up to support the initiatives.

▪ **The NATIONAL SMALL INDUSTRIES CORPORATION (NSIC)**

1. Performance and Credit Rating Scheme helps micro and small enterprises (MSEs) establish credibility and access credit at attractive interest rates.

The scheme's main objectives are to:

- Provide an independent assessment of MSEs' capabilities and creditworthiness
- Facilitate recognition in global trade
- Ensure prompt credit sanctions from banks and financial institutions
- Offer subsidized rating fees for MSEs
- Enable vendors and buyers to assess MSEs' capabilities and capacities
- Help MSEs identify strengths and weaknesses and take corrective measures

Key features of the scheme include:

- A combination of credit and performance factors, including operations, finance, business, and management risk
- A uniform rating scale for all empanelled rating agencies
- MSEs can choose from empanelled rating agencies
- The fee structure is turnover-based
- Partial reimbursement of the rating fee is available through NSIC, with the amount dependent on the MSE's turnover.

2. The Bank Credit Facilitation scheme, run by the National Small Industries Corporation (NSIC), helps Micro, Small, and Medium Enterprises (MSMEs) access bank credit. NSIC has partnered with various public and private sector banks to provide credit support to MSMEs at no additional cost.

Key benefits of the scheme include:

- Easy access to bank credit
- No additional costs for MSMEs
- Opportunity to get rated by independent rating agencies, enhancing credibility and creditworthiness
- Timely access to credit from banks at competitive interest rates.

3. The Raw Material Assistance scheme supports Micro, Small, and Medium Enterprises (MSEs) by financing the purchase of raw materials, both domestic and imported. This enables MSEs to focus on producing high-quality products.

Key benefits of the scheme include:

- Financial assistance for raw material procurement for up to 90 days
- Access to bulk purchase benefits, cash discounts, and other economies of scale
- Simplified procedures, documentation, and letter of credit issuance for imports.

4. **The Single Point Registration Scheme (SPRS)** enables **Micro, Small, and Medium Enterprises (MSEs)** to participate in government purchases. The **National Small**

Industries Corporation (NSIC) registers MSEs under this scheme, making them eligible to supply goods to the government.

5. **The National Small Industries Corporation (NSIC)** offers Infomediary Services, a one-stop platform providing information on business, technology, and finance. This service showcases the core competencies of Indian **Small and Medium Enterprises (SMEs)** through the MSMEMart web portal ((link unavailable)). SMEs can access these services through an annual membership, which offers Business-to-Business (B2B) and Business-to-Customer (B2C) compliant solutions. **It** offers Marketing Intelligence Services, which provides valuable insights to Micro, Small, and Medium Enterprises (MSMEs) to help them make informed business decisions.

Key services include:

- Market research and analysis
- Database of bulk buyers, government contracts, and international exporters
- Information on tenders, technology suppliers, and business partnerships
- Market intelligence reports and statistics

- Access to international business directories, magazines, and databases
- Lists of registered MSMEs and industrial associations

These services enable MSMEs to understand market trends, identify business opportunities, and connect with potential buyers and partners.

6. The Janshree Bima Yojana is a group insurance scheme designed to provide financial protection to Khadi artisans. This initiative is a collaborative effort between the **Khadi and Village Industries Commission (KVIC)** and the Life Insurance Corporation of India (LIC).

7. The **Market Development Assistance (MDA)** scheme supports the growth of Khadi and Polyvastra artisans by providing financial assistance to institutions. The scheme

offers 20% of the production value to be shared among artisans, producers, and sellers. The assistance can be used flexibly to enhance outlets, products, production processes, and customer incentives, promoting overall development.

8. The Science and Technology Scheme aims to bridge the gap between laboratory research and practical field applications. It also expands testing and service facilities. The scheme is implemented through two research institutes: the Central Coir Research Institute in Kalavoor and the Central Institute of Coir Technology in Bangalore.

9. The Coir Udyami Yojana is a credit-linked subsidy scheme that supports the setup of coir units. Eligible projects can have a total cost of up to ₹10 lakh, plus working capital for one cycle (capped at 25% of the project cost).

10. Aspire (Scheme for promotion of Innovation, Entrepreneurship and Agro Industry)Description The main objectives of the scheme are to:

(i) Create new jobs and reduce unemployment

(ii) Promote entrepreneurship culture in India(

iii) Grassroots economic development at district level

(iv) Facilitate innovative business solution for un-met social needs, and

(v) Promote innovation to further strengthen the competitiveness of MSME sector.

- **REVAMPED SCHEME OF FUND FOR REGENERATION OF TRADITIONAL INDUSTRIES (SUFRUTI)**

The scheme aims to achieve the following objectives:

A. Organize traditional industries and artisans into competitive clusters, ensuring their long-term sustainability.

B. Provide stable employment for artisans and rural entrepreneurs.

C. Enhance product marketability through design innovation, improved packaging, and better marketing infrastructure.

D. Upgrade artisans' skills through training and exposure visits.

E. Provide common facilities, improved tools, and equipment for artisans.

F. Strengthen cluster governance through stakeholder participation. G.Foster innovative skills, technologies, and partnerships to replicate successful cluster-based models.

Initial Public Offering (IPO) under MSME:

Benefits of IPO for MSMEs

1. *Access to capital*: IPOs provide MSMEs with access to capital from a wide range of investors.
2. *Increased visibility*: Listing on a stock exchange increases visibility and credibility for MSMEs.
3. *Liquidity*: IPOs provide liquidity to shareholders and founders.
4. *Growth opportunities*: IPOs can facilitate growth through acquisitions, expansions, and strategic partnerships.

Eligibility Criteria for MSME IPO

1. *MSME registration*: Enterprises must be registered as MSMEs.
2. *Net worth*: MSMEs must have a minimum net worth of ₹1 crore.
3. *Revenue*: MSMEs must have a minimum revenue of ₹5 crores in the preceding financial year.
4. *Profitability*: MSMEs must have been profitable in the preceding financial year.

SME Platforms for IPO

1. *BSE SME*: Bombay Stock Exchange's SME platform provides a dedicated platform for MSME IPOs.
2. *NSE Emerge*: National Stock Exchange's Emerge platform provides a platform for MSME IPOs.

EARNEST MONEY DEPOSIT:

Under MSME A buyer's contribution to show their commitment to buying a good or service is known as the Earnest Money Deposit (EMD). EMD has particular ramifications under the MSME (Micro, Small, and Medium Enterprises) framework.

EMD's ADVANTAGES FOR MSMEs :

protection: EMD gives MSMEs a certain amount of protection by guaranteeing that purchasers will stick with the deal.

Serious purchasers : By weeding out non-serious consumers, EMD lowers the possibility of orders being canceled.

Cash flow management: Since MSMEs are paid in advance, EMD can assist them in better managing their cash flow.

UDYOG AADHAAR

Udyog Aadhaar is a unique identification number provided to micro, small, and medium enterprises (MSMEs) in India.

1. *Easy registration*: Simplified online registration process.
2. *Unique identification*: Single identification number for MSMEs.
3. *Access to government schemes*: Eligibility for various government schemes and subsidies.
4. *Bank loan facilities*: Priority in bank loan facilities.
5. *Tax benefits*: Eligibility for tax benefits and exemptions.

BENEFITS OF MSME REGISTRATION IN INDIA:

MSMEs gain greatly from MSME registration, which helps them expand and maintain their competitive edge in their respective industries. Quick and simple access to funding, lower interest rates, patent registration and industrial promotion subsidies, timely payments from customers (distributors, suppliers, or end users), and free ISO certification are all advantages of MSME registration. In-depth information regarding the advantages of MSME registration and how it can assist MSMEs in enhancing their operations and financial stability can be found in this section.

Advantages:

- Loans without collateral. It might be difficult for small and medium-sized firms to get loans.
- Subvention of Overdraft Interest Up to a specific amount, MSMEs can take advantage of interest subvention or low interest rates on their overdraft arrangements.
- Patent Registration Subsidy . MSMEs can protect their discoveries and inventions at a very low cost thanks to a nearly 50% rebate on the entire cost of patent registration. For MSMEs that make significant investments in RCD, patent registration is essential since it protects their intellectual property.
- Subsidy for Industrial Promotion MSMEs can upgrade their technology, equipment, and hence overall infrastructure by utilizing the industrial promotion subsidies provided for plant and machinery purchases.
- Buyers' On-Time Payments. The primary cause of financial difficulties for micro, small, and medium-sized businesses is the late payments made by their clients or suppliers.
- Free ISO Certification.For small and medium-sized enterprises, ISO certification is crucial because it fosters credibility and trust with suppliers, consumers, and other business partners.

CONCLUSION:

Micro, Small, and Medium-Sized Enterprises (MSMEs) policies in India are designed to foster competitiveness, growth, and development. Important projects consist of: Financial assistance in the form of credit guarantees and loans without collateral Exemptions from taxes and streamlined regulations Improvements in infrastructure and technology Assistance with marketing and exporting; programs for skill development and training The goals of these policies are to empower MSMEs, boost their GDP contribution, and generate job opportunities.

Topic

Module 6 : Equity and Bond Valuation and Evaluation of Performance

Module 7 : Mutual Funds

FINAL

Group III - Paper-14

Strategic Financial Management (SFM)

Topic: Equity and Bond Valuation

- **Bond Valuation when Coupon is paid Semi-annually**

Often bonds are found to pay interest semi-annually. To value plain vanilla bonds with semi-annual interest payment, one needs to work with a unit period of six months, and not one year. Accordingly, the bond valuation equation has to be modified along the following lines:

a) The annual interest payment, C, must be divided by two to obtain the semi-annual interest payment.

b) The number of years to maturity must be multiplied by two to get the number of half-yearly periods.

c) The discount rate has to be divided by two to get the discount rate applicable to half-yearly periods.

Thus, the modified formula will be –

$$P = \sum_{i=1}^{2n} \frac{C/2}{(1+r/2)^i} + \frac{M}{(1+r/2)^{2n}}$$

or, $P = C/2 \times PVIFA_{r/2,2n} + M \times PVIF_{r/2,2n}$

where P is the value of the bond, C/2 is the semi-annual interest payment, r/2 is the discount rate applicable to a half-year period, M is the maturity value, and 2n is the maturity period expressed in terms of half-yearly periods.

Consider the following illustration.

Illustrtaion 1

Given, Coupon rate = 10%, Tenure of the bond = 8 years; Face value = Rs.100; Interest is payable semi-annually; the required return on this bond is 14 percent. Calculate the value of the bond.

Solution:

Here, $P = C/2 \times PVIFA_{r/2,2n} + M \times PVIF_{r/2,2n}$

$= 5\ (PVIFA_{7\%,16yrs}) + 100\ (PVIF_{7\%,16yrs})$

= Rs.5 (9.447) + Rs.100 (0.339) = Rs.81.135

- **Calculation of Yield to Maturity (YTM)**

YTM is the discount rate that makes the present value of the cash flows receivable from owning the bond equal to the price of the bond. It is the interest rate (r) which satisfies the following equation:

$$P = \frac{C_1}{(1+r)^1} + \frac{C_2}{(1+r)^2} + \frac{C_3}{(1+r)^3} + \ldots\ldots\ldots + \frac{C_n}{(1+r)^n} + \frac{M}{(1+r)^n}$$

The computation of YTM requires a trial-and-error approach.

Consider the following illustration.

Illustration 2

Consider a Rs.500 par value bond, carrying a coupon rate of nine percent, and maturing after eight years. The bond is currently selling for Rs. 400. What is the YTM on this bond?

Solution:

The YTM is the value of 'r' in the following equation:

$400 = 45\ (PVIFA_{r,8yrs}) + 500\ (PVIF_{r,8yrs})$

At r = 12%,

Rs. 45 $(PVIFA_{12\%,8yrs})$ + Rs. 500 $(PVIF_{12\%,8yrs})$

= Rs. 45(4.968) + Rs 500(0.404) = Rs 425.56

At r = 13%,

Rs. 45 $(PVIFA_{13\%,8yrs})$ + Rs. 500 $(PVIF_{13\%,8yrs})$

= Rs. 45(4.8) + Rs 500(0.376) = Rs 404

At r = 14%,

Rs. 45 $(PVIFA_{12\%,8yrs})$ + Rs. 500 $(PVIF_{12\%,8yrs})$

= Rs. 45(4.639) + Rs 500(0.351) = Rs 384.26

Thus 'r' lies between 13 percent and 14 percent.

By simple interpolation,

$$13\% + (14\% - 13\%) \times \frac{404 - 400}{404 - 384.26} = 13.2\%$$

- **Approximate Yield to Maturity**

YTM can also be approximated by the following formula –

$$YTM = \frac{C+(M-P)/n}{0.4\ M+0.6\ P}$$

where YTM is the yield to maturity, C is the annual interest payment, M is the maturity value of the bond, P is the present price of the bond, and n is the years to maturity. This formula was suggested by Gabriel A. Hawawini and Ashok Vora in 1982.

Consider the following Illustration.

Illustration 3

Refer to Illustration 2

Use the approximate YTM formula to calculate YTM.

Solution:

$$YTM = \frac{C+(M-P)/n}{0.4\ M+0.6\ P} = \frac{45+(500-400)/8}{0.4\times500 + 0.6\times400} = 13.1\%$$

Topic: Performance Evaluation of Mutual Funds

- **Risk-adjusted Performance Measures - Sharpe Ratio:**

William F. Sharpe developed a risk adjusted measure considering Total Risk of a portfolio or fund as a criterion for ranking of portfolio in 1966. It measures the excess return generated by the portfolio in comparison to the risk-free rate for bearing the total risk involved in the portfolio. The risk measure in Sharpe Ratio is defined by *volatility*. Volatility is a simple measure which can be easily calculated using *standard deviation* of the return. Sharpe Ratio is calculated as follows,

$$\text{Sharpe Ratio} = \frac{Rp - Rf}{\sigma p}$$

Where Rp denotes the Return of the Portfolio, Rf denotes the Risk-free rate of Return and σp denotes the Standard Deviation of the Portfolio Return which is a measure of to what extent the portfolio return varies or fluctuates.

This ratio considers Capital Market Line (CML) for comparing the performances of the portfolio as it considers Total Risk.

Since, the ratio measures the risk premium (the reward) for bearing the risk (volatility or variability), this ratio is also named as Reward to Variability Ratio. Thus, a portfolio is considered to be performing well as compared to its peer group, not only if it generates high excess returns but also if such high return is not associated with a high risk. Thereby, higher the Sharpe Ratio better is the performance of the portfolio, because it indicates that for each unit of variability faced, the investor is compensated with higher risk premium.

The Sharpe Ratio is very easy to understand and compute and provides a comparison tool for comparing two portfolios with different total risk for their performance.

- **Multiple Choice Questions**

1. The following information is available for a mutual fund:

   Return 13%

   Risk (S.D. i.e. σ) 16%

   Beta (β) 0.90

   Risk Free Rate 10%

   Treynor's Ratio of the mutual fund is:

   (A) 3.85

   (B) 4.43

   (C) 3.33

   (D) 3.73

   Solution: (C) 3.33

   Justification: Treynor's Ratio = (Rp – Rf)/β = (13 – 10)/0.90 = 3.33 Where, Rp = Return; Rf = Risk Free Rate of Return; β = Beta

2. The following information is extracted from MF, a mutual fund scheme. NAV on 01-11-2023 is Rs. 65.78, annualized return is 15%. Distributions of income and capital gains were Rs. 0.50 and Rs. 0.30 per unit in the month. What is the NAV on 30-11-2023?

   (A) Rs. 67.50

   (B) Rs. 66.14

   (C) Rs. 65.80

   (D) Rs. 66.96

   Solution: (C) 65.80

   Justification:

   Monthly return = 1.25% = (NAV – 65.78 + 0.5 + 0.3)/65.78

   0.82225 = NAV – 64.98

   NAV = 65.80225 = 65.80

3. A certain mutual fund has a return of 17% with standard deviation of 3.5% and the Sharpe ratio is 4. The risk-free rate is:

   (A) 12.5%

   (B) 4%

   (C) 3%

   (D) 7.5%

   Solution: (C)

   Sharpe ratio = (Rp – Rf)/σ

   Rp – Rf = σ x Sharpe ratio,

   So, Rf = Rp - σ x Sharpe ratio,

   = 17% – 3.5% × 4 = 17 – 14 = 3%

4. B can earn a return of 18% by investing in equity shares on his own. Now he is considering a recently announced equity based Mutual Fund Scheme in which initial expenses are 1% and annual recurring expenses are 2%. How much should be Mutual Fund earn to provide B, a return of 18%?

   (A) 18.18%

   (B) 20.18%

   (C) 22.18%

   (D) 21%

   Solution: (B)

   Justification: 18/99% + 2% = 18.18 %+ 2% = 20.18%

   Initially, only 99% is available for investment.

- **Comprehensive Problem**

A has invested in different points in time, in three schemes of a mutual fund. The following details are given:

Scheme	MF-P	MF-Q	MF-R
Amount of investment (Rs.)	2,00,000	4,00,000	2,00,000
NAV (Rs. /unit) on purchase date	10.30	10.10	10.0
Dividend received up to 30-11-2023 (Rs.)	6000	0	5000
NAV (Rs. /unit) on 30-11-2023	10.25	10.0	10.20
Effective annual yield (%) as on 30-11-2023	9.66	-11.66	24.15

Find out the following:

	MF-P	MF-Q	MF-R
Number of units			
Holding period (no. of days)			
Holding period yield (%) up to two decimal places			
NAV (`) on 30-11-2023			

Solution:

		P	Q	R
Investment (Rs.)	(a)	2,00,000	4,00,000	2,00,000
NAV p.u on purchase date	(b)	10.30	10.10	10.00
No of units	(c) = (a)/(b)	19417.48	39603.96	20000
NAV p.u.30/11/23 (Rs.)	(d)	10.25	10.00	10.20
Value on 30/11/23	(e) = (c)x(d)	199029.17	396039.6	204000
Dividend/u	(f)	0.31	0	0.25
Cap gain/u	(g) = (d)-(b)	-0.05	-0.10	+0.20
Return p. u	(h) = (f) + (g)	0.26	-0.10	+0.45
Annual yield	(i)	9.66	-11.66	24.15
Holding period (days)	(j) = (h x 365) (i)x(b)	95.38 = 95	30.99 = 31	68.01 = 68
Holding period yield (%)	(k) = (j x i)/365	2.52%	-0.989%	4.5%

Overall effective annual yield = (a) × (i) / 8,00,000 = 2.62%

Topic

Module 12 :
Double Taxation and Avoidance Agreements (DTAA) [Sec.90. 90A and 91]

FINAL

Group III - Paper-15

Direct Tax Laws and International Taxation (DIT)

Double Taxation Avoidance Agreement

In home country, tax is an obligation, while in the host country, tax is a cost.

The phenomenon of "Double Taxation" refers to a situation where a taxpayer is liable to pay tax on the same income in two or more jurisdictions. This typically arises due to the global movement of people, goods, services, and capital. To mitigate this hardship and to promote international trade and investment, countries enter into **Double Taxation Avoidance Agreements (DTAAs)**.

A DTAA is a bilateral treaty signed between two countries to avoid or mitigate double taxation of the same income in both countries. It also promotes the exchange of information between tax authorities to prevent tax evasion.

What is Double Taxation?

Double taxation occurs when an individual or a business is taxed twice on the same income in two or more countries. This can happen due to conflicting tax laws and regulations between nations. For instance, if a person earns income in one country but is also considered a tax resident in another, they may be subject to taxation on the same income by both countries. For instance, Mr. X, an ordinarily resident in India, earned bank interest of ₹ 1,00,000 on his money deposited into a bank located in US. In that case, such income is taxable in US on the Source of income basis and again in India as he is an ordinarily resident India.

In times when economies are going global and borders fading, double taxation is still one of the major obstacles to the development of inter-country economic relations. In order to prevent this hardship or to avoid double taxation, relief is provided to the tax-payer.

Double taxation can occur in two primary forms:

- **Juridical Double Taxation:** When the same person is taxed on the same income in more than one country.
- **Economic Double Taxation:** When the same income is taxed in the hands of more than one taxpayer (e.g., both the company and shareholders).

Introduction to Double Taxation Avoidance Agreements (DTAA)

DTAA, also known as tax treaties, are bilateral agreements between two countries aimed at preventing double taxation and promoting cooperation in tax matters. These agreements delineate the taxing rights of each country concerning various types of income, such as dividends, interest, royalties, and capital gains.

Significance of DTAA

DTAA serves several significant purposes:

- **Preventing Double Taxation**: The primary purpose of DTAA is to eliminate or mitigate double taxation, thereby promoting cross-border trade, investment, and economic activities.
- **Promoting Investment**: By providing certainty and clarity on tax matters, DTAA encourages foreign investment by reducing the tax burden on investors and businesses operating across borders.
- **Facilitating Exchange of Information**: DTAA facilitates the exchange of information between tax authorities of different countries, promoting transparency and combating tax evasion and avoidance.

Key Components of DTAA

DTAA typically includes the following key components:

- **Residency Rules**: Defines the criteria for determining an individual's tax residency status, which is essential for determining the country's right to tax.
- **Permanent Establishment (PE)**: Establishes the threshold for determining when a business activities in one country constitute a permanent establishment, subject to taxation in that country.
- **Taxation of Various Income Sources**: Specifies the rules for taxing different types of income, such as dividends, interest, royalties, and capital gains, ensuring that each country has the right to tax certain types of income.
- **Tax Rates and Tax Credits**: Prescribes the applicable tax rates for various types of income and provides mechanisms for granting tax credits or exemptions to prevent double taxation.
- **Mutual Agreement Procedure (MAP)**: Sets out procedures for resolving disputes between tax authorities of the treaty countries and ensuring the consistent application of the treaty provisions.

Mode of providing relief

As per Article 2 of the Vienna Convention on Laws of Treaties, 1969, "Treaty" means an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation. The two countries' government agrees to provide relief against double taxation of the same income. The relief is granted based on the terms of such agreement. Generally, such an agreement provides relief through the following methods:

Exemption Method

In this method, one country provides an exemption to such type of income. Generally, the residence country gave up its right and the country of source is then given the exclusive right to tax such incomes.

a. Full Exemption Method: Under this method, income earned in the State of Source is fully exempt in the State of Residence.

b. Exemption with Progression: Under this method, income from the State of Source is considered by the State of Residence only for the rate purpose.

Credit Method

Full Exemption	Full exemption of foreign income from residence country tax.
Exemption with Progression	Foreign income exempt but considered to determine slab rates.
Full Credit	Full tax paid in source country credited against residence tax.
Ordinary Credit	Credit limited to proportionate domestic tax payable.
Tax Sparing	Credit allowed for tax that would have been payable but was spared
Underlying Tax Credit	Credit for corporate taxes paid by a foreign subsidiary.

In this method, the resident remains liable in the country of residence on its global income, however as far as the quantum of tax liabilities is concerned credit or deduction for tax paid in the source country is given by the residence country against its domestic tax as if the foreign tax were paid to the country of the residence itself.

a. Full Credit: Total tax paid in the State of Source is allowed as a credit against tax payable in the State of Residence.

b. Ordinary Credit: The state of Residence allows credit of tax paid in the state of Source restricted to that part of income tax which is attributable to the income taxable in the state of Residence.

c. Tax Sparing: The state of Residence allows credit for deemed tax paid on income which is otherwise exempt from tax in the State of Source.

d. Underlying Tax Credit: In this method attempts to mitigate the economic double taxation. Economic double taxation occurs when the same income is taxed more than once in the hands of different persons in the same tax jurisdiction.

DTAA can be of two types, limited or comprehensive. Limited DTAA are those which are limited to certain types of incomes only e.g. DTAA between India and Pakistan is limited to shipping and aircraft profits only. Comprehensive DTAAs are those which cover almost all types of incomes covered by any model convention.

Mode of Providing Relief under Indian Law

- **Section 90**: Relief where India has a DTAA.
- **Section 90A**: Relief where agreement is with specified associations outside India.
- **Section 91**: Unilateral relief where no DTAA exists.

Note: As per Section 90(2), if DTAA provisions are more beneficial to the taxpayer compared to domestic law, DTAA provisions prevail.

Impact on Taxpayers and Businesses

DTAA has a profound impact on taxpayers and businesses engaged in cross-border transactions:

- **Reduced Tax Liability**: Taxpayers benefit from reduced tax liability on income derived from foreign sources, as DTAA often lowers the withholding tax rates on dividends, interest, royalties, and other income.

Impact	Description
Lower Withholding Taxes	Reduced taxes on cross-border payments.
Greater Certainty	Assured taxation framework for foreign investments.
Enhanced Compliance	Promotes adherence to international and domestic laws.
Avoidance of Litigation	Provides alternate dispute resolution through MAP.

- **Certainty and Predictability**: Businesses enjoy greater certainty and predictability regarding their tax obligations in foreign jurisdictions, enabling better tax planning and investment decisions.
- **Enhanced Compliance**: DTAA promotes compliance with tax laws by providing clear rules and procedures for determining tax liability, reducing the risk of unintentional non-compliance.
- **Dispute Resolution**: The inclusion of a Mutual Agreement Procedure (MAP) in DTAA provides a mechanism for resolving disputes between taxpayers and tax authorities, ensuring fair and impartial resolution of tax disputes.

Conclusion

The Double Taxation Avoidance Agreement plays a pivotal role in ensuring fairness and equity in international taxation. It protects taxpayers from dual tax burdens and provides a clear mechanism for taxing cross-border incomes. With the advent of evolving global tax practices, the Indian DTAA framework has incorporated anti-abuse rules, exchange of information, and multilateral agreements to strike a balance between tax collection and facilitation of international trade.

Effective understanding and strategic application of DTAA provisions are now integral to global business operations, international investments, and tax planning strategies.

Topic

Module 12 :
Learning Curve

FINAL

Group III - Paper-16

Strategic Cost Management (SCM)

Learning Curve

1. Introduction:

Learning is the process by which human beings acquire a vast variety of competencies, skills and knowledge. In any environment if a person is assigned to do the same task again and again then after a period of time, there is an improvement in his performance. This happens due to the fact that the phenomenon of Learning takes place causing increase in competency of the person carrying out the task. Repetition of the task is likely to make the person more confident and knowledgeable and will eventually result in a more efficient and rapid operation. It is a common understanding that 'practice makes a man perfect'. Ultimately, the learning process will stop after continually repeating the job. As a consequence, the time to complete a task will initially decline and then stabilize once efficient working is achieved. When data of performance of such a repeated task are collected over a period of time and plotted on a graph paper we get a curve called Learning Curve. A Learning Curve is actually a correlation between a learner's performance on a task and the number of attempts or time required to complete the task. The curve shows that if a task is performed over and over then less time is required at each iteration. Thus, Learning Curve theory proposes that learner's efficiency in a task improves over a period of time with more n more repetitions of a specific task.

2. Significance:

The Significance of Learning curve can be understood as under:

a. It is an important tool used in Cost Analysis, Cost Estimation and Efficiency studies.

b. It makes cost predictions accurately and graphically especially for those relating to direct labour cost.

c. It is a geometrical progression, which reveals that there is steadily decreasing cost for the accomplishment of a given repetitive operation

d. Essential measure of experience gained in production of an article by an individual or a group of people, where people involved in production tend to become more efficient than before. As more units are produced each subsequent unit takes fewer Man-hours to produce.

3. Phases of Learning curve:

The Learning Curve passes through three different phases.

a. In the first phase, there will be gradual increase in production rate until the maximum expected rate is reached and this phase is generally steep.

b. In the second phase, the learning rate will gradually deteriorate because of the limitations of equipment.

c. In the third phase, the production rate begins to decrease due to a reduction in customer demand and increase in costs.

4. Learning Curve ratios

Under the Learning Curve model, the cumulative average time per unit produced is assumed to fall by a constant percentage every time total output of the unit doubles. Learning Curve is a geometrical progression which reveals that there is a steady decrease in cost as the identical operation is increasingly repeated.

Learning Curve is essentially a measure of the experience gained in production of an article by an organisation. As more and more units are produced, workers involved in production become more efficient than before. Each subsequent unit takes fewer man-hours to produce. The Learning Curve exists during a worker's startup or familiarization period on a particular job. After the limits of experimental learning are reached, productivity tends to stabilize and no further improvement is possible. The Learning Curve ratio or Learning Ratio can be calculated with the help of the following formula:

Learning Curve Ratio = ***Average Labour Cost of first 2n units / Average Labour Cost of first n units***

Let us understand the application of this formula with the help of this example: If the Average labour cost of the first 50 units of a Product is Rs.40 and that of the first 100 units is Rs.32 then the Learning Ratio is calculated as 32/40 = 0.8 or 80% which means that every time the output doubles, the average labour cost is reduced to 80% of the previous amount. In this case, average labour cost of the first 200 units will be 80% of that of the first 100 units = 80% of Rs.32 = Rs.25.60. Conventionally Learning Curves are referred to by complements of their decrease rates. In the above example 80% Learning Curve showed a 20% decrease in average labour cost for every doubling of the output. Learning percentage is actually the Slope of the Learning Curve. It can be noted that a 100% learning implies no decrease of average labour cost (which means "No Learning" effect).

5. Graphical Representation of Learning Curve:

The Learning Curve is a graphical representation of the phenomenon explained by Theodore P. Wright in his "Factors Affecting the Cost of Airplanes", 1936. It refers to the effect that learning had on Labour productivity in the aircraft industry, which translates into a relation between the cumulative number of units produced (X) and the average time (or Labour cost) per unit (Y), which resulted in a convex downward slope, as seen in the diagram below.

There is a simple rationalization behind all this: the more units produced by a given worker, the less time this same worker will need to produce the following units, because he will learn how to do it faster and better. Therefore when a firm has higher cumulative volume of production, its time (or Labour cost) per unit will be lower.

Wright's Learning Curve model is defined by the following function:

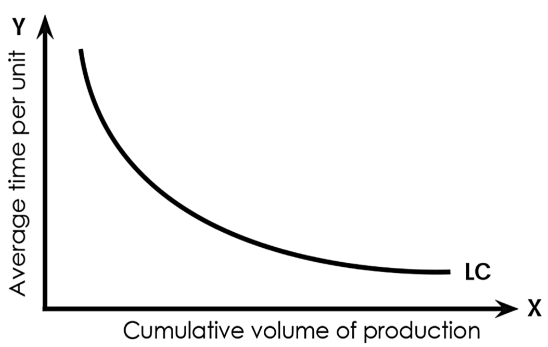
$\mathbf{Y = aX^b}$

Where Y =Average time (or Labour cost) per unit

a= Time (or Labour cost for the first unit)

X= Cumulative volume of production

b= Learning Index =[log (learning percentage)/log 2]



*F*igure 1: Learning Curve Graph

Most important implication arising from the curve is the fact that when the average time or Labour cost per unit decreases with the increase in cumulative output then the firm which is producing more and for a longer period will dominate the market because of its lower average time or Labour cost.

6. Application of Learning Curve:

Learning Curve is now being widely used in business. Some of the uses are as follows:

a. The Learning Curve gives good opportunities for cost reduction to be achieved by improved learning.

b. As employees become more efficient, the rate of production increases and so more materials are needed, the work-in-progress inventory turns over faster, and finished goods inventory grows at an accelerated rate.

c. Learning Curve technique is useful in exercising control. Variable norms can be established for each situation, and a comparison between these norms and actual expenses can be made.

d. The Learning Curve may be used for make-or-buy decisions especially if the outside manufacturer has reached at the maximum level. It helps to calculate the sensitive rates in wage bargaining.

7. Limitation of Learning Curve Applications:

The following points limiting the usefulness of Learning Curves can be noted:-

a. The Learning Curve is useful only for new operations where machines do not constitute a major part of the production process. It is not applicable to all production situations.

b. The Learning Curve assumes that the production will continue without any major interruptions.

c. Changes other than learning also affect the Learning Curve.

8. Illustration:

In a manufacturing unit, a lot of 20 units is to be produced for a new order. Per unit Material cost is ₹ 1500, Labour cost is ₹ 150 per hour and Set up cost is ₹3500. The learning percentage is expected to be 90. Overhead is charged @ 50% of total Material, Labour and Set Up cost. Determine the average unit cost for the lot when the first unit took 5 hours to complete.

Solution:

We know the learning curve formula

$$Y = aX^b$$

Where Y =Average time (or Labour cost) per unit

a= Time (or Labour cost for the first unit) = 5 hours

X= Cumulative volume of production = 20

b= Learning Index = [log (learning percentage)/ log 2]

1. **Step 1:** Calculate the learning curve exponent.

   b= Log (0.9) /Log (2) ≈ -0.152

2. **Step 2:** Calculate the average time per unit for 20 units

   $y= 5 \times (20)^{-0.152}$

   y= 3.171 hours

3. **Step 3:** Calculate the total labour cost

   Total labour hours= 3.171 hours per unit × 20 units

   = 63.42 hours

   Total Labour Cost = 63.42 hours × ₹ 150 per hr = ₹9513

4. **Step 4:** Calculate the total material cost = 20 units × ₹ 1500 per unit = ₹ 30000

5. **Step 5:** Calculation of overhead cost = 50 % of total material, labour, and setup cost

   = 50 % of (₹ 30000+ ₹9513+ ₹3500)

   = 50 % of **₹43013 = ₹ 21507**

6. **Step 6:** Total Cost including overhead = Material + Labour + Setup cost + Overhead Cost

   = ₹ 30000+ ₹9513+ ₹3500+ ₹21507 = ₹64520/-

7. **Step 7:** Average unit cost = Total Cost including overhead/ No of units of lot (size) being produced = ₹64520/20 units = ₹3226/-

Therefore average per unit cost for the lot is ₹3226/-

Topic

Module 13 : Information Systems Security Audit

FINAL

Group IV - Paper-17

Cost and Management Audit (CMAD)

Information Systems Security Audit

Information and Cyber In-security to Security

The two terms viz. Cyber Security and Information System Security are often used interchangeably. Though the terms are closely related but not exactly same, these are the two ways to protect important information. Cybersecurity focuses on protecting digital/computer systems and networks from cyber threats, while information system security is a broader term that encompasses all aspects of protecting information and systems, including physical security and non-digital data. Actually both are playing important role , since feeling of insecurity is the root cause of development of both the practices.

Information security is actively developing through the use of various technologies that can guarantee the confidentiality, integrity and availability of information. The most important criteria for information security can be described as: Confidentiality, i.e. providing access to information only to authorized users; Integrity, i.e. ensuring the accuracy and completeness of information and the methods of its processing; Accessibility, i.e. ensuring access to information and related assets to authorized users as required.

Cyber Security	Information Security
It is the practice of protecting the data from outside the resource on the internet.	It is all about protecting information from unauthorized users, access, and data modification or removal in order to provide confidentiality, integrity, and availability.
It is about the ability to protect the use of cyberspace from cyberattacks.	It deals with the protection of data from any form of threat.
Cybersecurity to protect anything in the cyber realm.	Information security is for information irrespective of the realm.
Cybersecurity deals with the danger in cyberspace.	Information security deals with the protection of data from any form of threat.
Cyber security professionals deal with the prevention of active threats or Advanced Persistent threats (APT).	Information security professionals are the foundation of data security and security professionals associated with it are responsible for policies, processes, and organizational roles and responsibilities that assure confidentiality, integrity, and availability.
It deals with threats that may or may not exist in the cyber realm such as protecting your social media account, personal information, etc.	It deals with information Assets and integrity, confidentiality, and availability.
Acts as first line of defence.	Comes into play when security is breached.
Protects against unauthorized access, use, disclosure, disruption, modification, or destruction of digital information.	Protects the confidentiality, integrity, and availability of all types of information, regardless of the medium in which it is stored.
Requires specialized knowledge of computer systems and networks, as well as programming and software development skills.	Requires knowledge of risk management, compliance, legal and regulatory issues, as well as technical knowledge.
Emphasizes protecting the data itself, regardless of where it is stored or how it is transmitted.	Emphasizes the protection of information assets, which includes data but also other information such as intellectual property, trade secrets, and confidential customer information.
Continuous review of newer ways of evolving malware , hacking techniques etc.	Deals with a wide range of threats, including physical security breaches, insider threats, and social engineering attacks.
Cyber crime, cyber fraud causes insecurity and deals with set it resolved.	Information security strikes against unauthorized access, disclosure modification, and disruption.
Digital threats, hacking , phishing etc. are the concern resolved.	Addresses a wider range of threats, including physical theft, espionage etc.
Firewalls, detection systems, anti-virous etc. are the concerns.	Uses a range of technologies, including encryption, access controls, and data loss prevention tools.

In-security becomes a reality when someone gets access to own database or destroys the same remotely. Hence, to keep vigil is the saver from such criticality. In this regard , a regular process of Audit through internal and/ or external agencies is desired. Using internal team and external team, both having its' own limitations. Internal Team may not have the costly detecting Equipment to explore different possibilities of data losses and fraudulent ways to hacking etc. The external teams may have more effectiveness but the entity may have vulnerability to sharing of confidential information through the team.

Information Security Audit

Audit is a "formal inquiry, formal examination, or verification of facts against expectations, for compliance and conformity". Audit is a "formal inspection and verification to check whether a Standard or set of Guidelines is being followed, that Records are accurate, or that Efficiency and Effectiveness targets are being met. An Audit may be carried out by internal or external groups."

An information security audit is an Audit of the level of information security in an organization. It is an independent review and examination of system records, activities, and related documents. These audits are intended to improve the level of information security, avoid improper information security designs, and optimize the efficiency of the security safeguards and security processes.

Within the broad scope of auditing information security there are multiple types of audits, multiple objectives for different audits, etc. Most commonly the control aspects being audited can be categorized as technical, physical and administrative. Auditing information security covers topics from auditing the physical security of Data Centers to auditing the logical security of databases, and highlights key components to look for and different methods for auditing these areas.

When we consider the Information Technology (IT) aspects of information security, it can be seen as a part of an IT Audit. It is often then referred to as an information technology security audit or a computer security audit. However, information security encompasses much more than IT.

IT security audit has the main objectives to:

- ♣ Check the existence of security policy, standards, guidelines and procedures laid down by the organization;
- ♣ Identify the inadequacies and examine the effectiveness of the existing policy, standards, guidelines and procedures deployed by the entity;
- ♣ Identify and understand the existing vulnerabilities and risks;
- ♣ Review existing security controls on operational, administrative and managerial issues, and ensure compliance to minimum security standards;
- ♣ Provide recommendations and corrective actions for improvements. In order to ensure compliance of security policy and to determine the minimum set of controls required to reduce the risks to an acceptable level, the security audits should be conducted periodically (vulnerabilities and threats change with time and environment)

Types of Audit –

The audits can be new installation / enhancement audits, regular audits, random audits or non-office hour audits. The techniques used to the auditing process can include automated auditing tools (ready-made security audit systems and/or security auditors' own developed tools) or there can be manual review techniques (e.g. social engineering attacks and auditing checklists), ethical hacking and other vulnerability tests.

To secure own information from any unsecured measures, the entity need to have a regular assessment procedure for the best results.

An audit process may include several steps. 3D Networks proposed an audit process in seven steps as below:

Security Audit Steps		
	Vulnerability Scanning	
Input Data		Deliverables
	Report Audit	
Logs , Intrusion Detection Systems Report		Vulnerability Report
	Security Architecture Audit	
System Data		Threat Risk Assessment Report
	Baseline Auditing	
		Audit Report
	Internal Control & Workflow Audit	
	Policy Audit	
	Threat/Risk Assessment	

Each of the steps explained below:

(1) vulnerability scanning - scanning the infrastructure,

(2) report audit - auditing reports like logs, intrusion detection systems reports, etc.,

(3) security architecture audit - auditing the existing security architecture,

(4) baseline auditing - auditing the security setup to verify that it is in accordance with the security baseline of the organization,

(5) internal control and workflow audit - auditing the existing workflow,

(6) policy audit - auditing the security policy to ensure that it is in line with the business objective and

(7) threat/risk assessment – assessment of the various risks and threats facing the company's information systems.

During and at the end of the auditing process a series of reports may be elaborated: a report with the vulnerabilities identified in the organization information system, a report with the threats and risks the organization faces as a result of the existing vulnerabilities including faulty policy, architecture, etc., and an audit report which gives the security overview and the results of all the audits.

Another perspective on the security audit process can be considered , which divides the audit in six steps:

(1) planning - to determine and select effective and efficient methods for performing the audit and obtaining all necessary information;

(2) collecting audit data - to determine how much and what type of information to be captured, and how to filter, store, access and review the audit data and logs;

(3) performing audit tests - general review on the existing security policies or standards/security configurations/Technical investigation;

(4) reporting for audit results – present the current security environment;

(5) protecting audit data & tools - safeguard the audit data and tools for the next audit or future use;

(6) making enhancements and follow-up - make corrective actions if required.

Topic

Module 6 : Consolidated Financial Statements and Separate Financial Statements

FINAL

Group IV - Paper-18

Corporate Financial Reporting (CFR)

Topic 1: Consolidated Financial Statements and Separate Financial Statements

Problem 1

Given below are the Balance Sheets of a group of companies comprising of K Ltd., L Ltd., and M Ltd. as at 31st March, 2023 **(Rs. in lakhs)**:

Particulars	K Ltd.	L Ltd.	M Ltd.
I Assets			
(1) Non-current assets			
(a)Property, plant, and equipment	10,800	11,520	10,080
(b) Non-current investment			
68.0 lakh shares in L Ltd.	18,864	-	-
38.4 lakh shares in M Ltd.	-	9,720	-
(2) Current assets			
(a)Inventories	8,856	5,256	8,496
(b)Financial assets			
Trade receivables	10,188	1,944	4,464
Bills receivable	4,680	432	Nil
Cash in hand and at bank	7,812	648	1,080
Total assets	**61,200**	**29,520**	**24,120**
II Equity and Liabilities			
(1) Equity			
(a)Equity Share capital (Rs. 100 per share)	24,480	14,400	11,520
(b)Other equity	-	-	-
Reserves	8,280	5,832	4,176
Retained earnings	7,416	4,320	2,232
(2) Current liabilities			
Financial liabilities			
Trade payables	21,024	4,968	5,796
Bills payable (L Ltd.)	-	-	396
Total equity and liabilities	**61,200**	**29,520**	**24,120**

K Ltd. holds 85% shares in L Ltd. which were acquired on 1st April, 2022. L Ltd. holds 60% shares in M Ltd. which were acquired on 30th September, 2022.

The following balances stood in the books of L Ltd. and M Ltd. on 1st April, 2022:

Particulars	L Ltd. (Rs. in lakhs)	M Ltd. (Rs. in lakhs)
Reserves	5,472	3,744
Retained earnings	3,456	1,080

The business activities of M Ltd. are not seasonal in nature. The parent company has adopted an accounting policy to measure non-controlling interest at fair value as per Ind AS 103. The fair value is to be determined based on the quoted market price. The given market prices of L Ltd. and M Ltd. are Rs. 120 per share and Rs. 125 per share respectively.

Based on the above details, you are required to prepare the Consolidated Balance Sheet of the group comprising of K Ltd., L Ltd., and M Ltd. as at 31st March, 2023.

Solution:

Consolidated Balance Sheet of the Group of K Ltd., L Ltd., and M Ltd. as at 31st March, 2023

Particulars	Note No.	Rs. in lakhs
I Assets	**-**	**-**
(1) Non-current assets	-	-
Property, plant, and equipment	1	32,400
(2) Current assets	-	-
(a)Inventories	2	22,608
(b)Financial assets	-	-
Trade receivables	3	16,596
Bills receivable	4	4,716
Cash and cash equivalents	5	9,540
Total assets	**-**	**85,860**
II Equity and Liabilities	**-**	**-**
(1) Equity	-	-
Equity attributable to the owners of the parent	-	-
Equity share capital	-	24,480
Other equity	6	20,830.32
(2) Non-controlling interest [Working Note 5]	-	8,761.68
(3) Non-current liabilities	-	Nil
(4) Current liabilities	-	-
Financial liabilities	-	-
Trade payables	7	31,788
Total equity and liabilities	**-**	**85,860**

Notes to Accounts

Note No.	Particulars	Rs. in lakhs
1	Property, plant, and equipment	-
-	K Ltd.	10,800
-	L Ltd.	11,520
-	M Ltd.	10,080
-	Total	32,400
2	Inventories	-
-	K Ltd.	8,856
-	L Ltd.	5,256
-	M Ltd.	8,496
-	Total	22,608
3	Trade receivables	-
-	K Ltd.	10,188
-	L Ltd.	1,944
-	M Ltd.	4,464
-	Total	16,596
4	Bills receivable	-
-	K Ltd.	4,680
-	L Ltd.	432
-	Less: Inter-company Owings	(396)
-	Total	4,716
5	Cash and cash equivalents	-
-	K Ltd.	7,812
-	L Ltd.	648
-	M Ltd.	1,080
-	Total	9,540
6	Other equity	-
-	Reserve (Working Note 6)	8,696.16
-	Retained earnings (Working Note 6)	8,444.16
-	Capital Reserve (Working Note 4)	3,690
-	Total	20,830.32
7	Trade payables	-
-	K Ltd.	21,024
-	L Ltd.	4,968
-	M Ltd.	5,796
-	**Total**	31,788

Working Notes

1. **Analysis of Reserves and Surplus (L Ltd.)**

Particulars	Reserves (Rs. in lakhs)	Retained earnings (Rs. in lakhs)
(a)Balance as on 01.04.2022	5,472	3,456
(b)Balance as on 31.03.2023	5,832	4,320
(c)Pre-acquisition balance (a)	5,472	3,456
(d)Post acquisition balance (b-a)	360	864

2. **Analysis of Reserves and Surplus (M Ltd.)**

Particulars	Reserves (Rs. in lakhs)	Retained earnings (Rs. in lakhs)
(a)Balance as on 01.04.2022	3,744	1,080
(b)Balance as on 31.03. 2023	4,176	2,232
(c)Increase in balance during 2022-23 (b-a)	432	1,152
(d) Half of (c)	216	576
(e)Pre-acquisition balance (a +d)	3,960	1,656
(f) Post-acquisition balance (d)	216	576

3. **Computation of the effective interest of K Ltd. in M Ltd.**

Particulars	%
(a)Acquisition by K Ltd. in L Ltd.	85
(b)Acquisition by L Ltd. in M Ltd.	60
(c)Acquisition by group in M Ltd. (85% x 60%)	51
(d)Non-controlling interest in M Ltd. (100% - 51%)	49

4. **Computation of goodwill/capital reserve on acquisition**

Particulars	L Ltd. (Rs. in lakhs)	M Ltd. (Rs. in lakhs)
(a)Investment or consideration	18,864	8,262 (9,720 x 85%)
(b)NCI at fair value	-	-
[(7,200/100) x Rs. 120 x 15%]	2,592	-
[(5,760/100) xRs.125 x 49%]	-	7,056
(c)Identifiable net assets	-	-
Share capital	14,400	11,520
Pre-acquisition reserves	5,472	3,960
Pre-acquisition retained earnings	3,456	1,656
Total of (c)	23,328	17,136
(d)Capital reserve [c- (a +b)]	1,872	1,818
Total capital reserve		3,690

5. **Computation of non-controlling interest**

Particulars	L Ltd. (Rs. in lakhs)	M Ltd. (Rs. in lakhs)
(a)Fair value of non-controlling interest	2,592	7,056
(b)Share in post-acquisition reserve	54(360 x 15%)	105.84(216 x 49%)
(c)Share in post-acquisition retained earnings	129.60(864 x15%)	282.24(576x 49%)
(d)NCI's share of investment in M Ltd.	1,458(9,720x 15%) *	-
(e)Total (a +b +c -d)	1,317.60	7,444.08
(f)Total non-controlling interest		8,761.68

*The non-controlling interest in L Ltd. will take its proportionate share in M Ltd. Therefore, they have to bear their proportion of investment by L Ltd. in M Ltd. also.

6. Computation of consolidated other equity

Particulars	Reserves (Rs. in lakhs)	Retained earnings (Rs. in lakhs)
(a)Balance of K Ltd.	8,280	7,416
(b)Share in post-acquisition balance in L Ltd.	306(360 x 85%)	734.4(864x 85%)
(c)Share in post-acquisition balance in M Ltd.	110.16(216 x 51%)	293.76(576 x 51%)
(d)Total of consolidated other equity (a +b +c)	8,696.16	8,444.16

Topic 2: Government Accounting in India

Question: Discuss the ddifferences between Government Accounting and Commercial Accounting

Answer:

The main differences between government accounting and commercial accounting can be summarized as follows:

Points	Government Accounting	Commercial Accounting
Meaning	It is the process of collecting, summarizing and proper recording of financial transactions (revenues and expenditures) of government organization.	It is the process of identifying, collecting, summarizing and proper recording of business transactions of financial nature of business firms.
Purpose	Its objective is to show the position of public properties and funds.	Its objective is to show the net results (profit or loss) and financial position (profitability, liquidity, solvency etc.) of the business.
Basis	It follows cash basis of accounting	It follows accrual basis of accounting.
Govt. Budget	It is guided by the government budget.	It ignores the government budgeting.
Auditing	Here books of accounts are audited by a constitutional body of the government.	Here books of accounts are audited by an independent professional auditor.
Accounting System	Generally, it is maintained under single entry system	It follows the principles of double entry system
Final Accounts	It does not require preparation of final account	It requires final account to show profit or loss of the business.

Topic

Module 18 : Valuation and Related Party Transactions

FINAL

Group IV - Paper-19

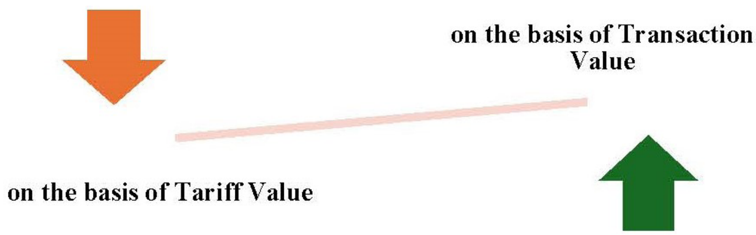
Indirect Tax Laws and Practice (ITLP)

Customs Valuation Rules

Customs Valuation Rules

Customs administration has been an integral part of our economic framework since time immemorial, reflecting centuries-old practices of revenue collection that trace their origins as far back as Kautilya's *Arthashastra*. Today, the Customs Act, 1962, together with the Customs Valuation Rules, provides the modern machinery for determining the value of imported and exported goods. Entry No. 83 of the List I to the Schedule VII of the Constitution empowers the Union Government to legislate and collect duties on imports and exports. Accordingly, the Customs Act, 1962, effective from 1-2-1963 provides vide its section 12 for the levy of duties on goods imported into or exported from India. The items and the rates of duties leviable thereon are specified in two Schedules to the Customs Tariff Act, 1975. The First Schedule specifies the various import items in systematic and well considered categories, in accordance with an international scheme of classification of internationally traded goods known as 'Harmonized System of Commodity Classification' and specifies the rates of import duties thereon, as prescribed by the legislature. The duties on imported items are usually levied either on specific or ad-valorem basis, but in few cases specific-cum-ad valorem duties are also levied. The Second Schedule incorporates items that are subject to exports duties and the rates of duties thereof.

The rate of customs duty leviable on imported or exported goods are either specific or ad valorem basis (i.e., as a percentage of the value of goods) or at times on specific cum ad valorem. In case of ad valorem duty, the valuation of the goods may be determined in any of the following manner:



In an era of rapidly evolving global commerce, understanding the nuances of customs valuation is paramount. This document delves into the multifaceted methods—ranging from transaction value to computed and residual methods—that underpin the current valuation framework. By systematically delineating each method and its corresponding conditions, the discussion illuminates how these rules help bridge historical customs practices with contemporary standards, thereby ensuring a consistent and just approach to duty assessment and revenue collection. These rules not only ensure equitable taxation but also uphold transparency and fairness in international trade by adhering to globally recognized principles.

Valuation on the basis of Transaction Value [Sec. 14(1)]

1. ***Valuation of Imported Goods***: The value of the imported goods shall be the transaction value of such goods, that is to say,
   - the price actually paid or payable for the goods;
   - when sold for export to India;
   - for delivery at the time and place of importation;
   - where the buyer and seller of the goods are not related; and
   - price is the sole consideration for the sale

   subject to such other conditions as may be specified in the rules[1] made in this behalf.

Taxpoint

- Such transaction value in the case of imported goods shall include, in addition to the price as aforesaid, any amount paid or payable for costs and services, including

1 The Customs Valuation (Determination of Value of Imported Goods) Rules, 2007 have been specified.

- commissions and brokerage (excluding buying commission);
- engineering, design work;
- royalties and licence fees;
- costs of transportation to the place of importation;
- insurance;
- loading, unloading and handling charges

to the extent and in the manner specified in the Customs Valuation (Determination of Value of Imported Goods) Rules, 2007

Customs Valuation (Determination of price of imported goods) Rules, 1988

Methods to be followed (in hierarchal order) for determination of the price of imported goods

SN	Valuation Method	Key Conditions/Notes
1	**Transaction Value (Rule 3)**	- Sale in the ordinary course of trade under competitive conditions - Price is the sole consideration - Buyer and seller are not related
2	**Transaction Value of Identical Goods (Rule 4)**	- Based on sale of goods identical in characteristics, quality, and reputation - Adjustments if the sale differs in quantity or commercial level
3	**Transaction Value of Similar Goods (Rule 5)**	- Goods not identical but perform the same function - Similar in characteristics and component materials
4	**Deductive Value (Rule 7)**	- Based on unit price in India after deducting costs (commission, transport, insurance, taxes, etc.) - Applicable when preceding methods fail
5	**Computed Value (Rule 8)**	- Considers cost of materials, fabrication, processing, plus an amount for profit and general expenses
6	**Residual Method (Rule 9)**	- Applied using reasonable means with available data when none of the above methods yield a value

Note: On request, the order of application of rules 7 (i.e. Deductive value) and 8 (i.e. Computed value) shall be reversed.

Transaction Value [Rule 3]

Transaction value shall be accepted as price, provided the following conditions are satisfied –

1. The sale is in the ordinary course of trade under fully competitive conditions;
2. There are no restriction as to the disposition or use of the goods by the buyer other than restrictions which –
   a. are imposed or required by law or by public authorities in India; or
   b. limit the geographical area in which the goods may be resold; or
   c. do not substantially affect the value of the goods;
3. The sale or price is not subject to condition or consideration for which a value cannot be determined;
4. Any part of the proceeds of subsequent resale, disposal or use of the goods by the buyer will not be shared with the seller unless an appropriate adjustment is made;
5. The buyer and seller are not related.

Transaction value of identical goods [Rule 4]

The value of imported goods shall be the transaction value of identical goods sold for export to India and imported at or about the same time as the goods being valued.

Taxpoint

1. *Identical goods* means imported goods –
   a) which are same in all respects, including physical characteristics, quality and reputation as the goods being valued except for minor differences in appearance that do not affect the value of goods;
   b) produced in the country in which the goods being valued were produced; and
   c) produced by the same person who produced the goods or where no such goods are available, then goods produced by a different manufacturer.

   However, identical goods do not include goods where engineering, development, art work, design work, plan or sketch was done by the buyer in India free of charge or at a reduced cost.
2. Such identical goods shall be sold at the same commercial and quantity level. Where no such sale is found, the transaction value of identical goods sold at a different commercial level or in different quantity or both shall be used with certain adjustment.
3. Where more than one transaction value of identical goods is found, then the lowest of such value shall be used for determining the value of imported goods.

Transaction value of similar goods [Rule 5]

The value of imported goods shall be the transaction value of similar goods sold for export to India and imported at or about the same time as the goods being valued.

Notes

1. *Similar goods* means imported goods –
   a) which although not alike in all respect, have like characteristics and like component materials which enable them to perform the same function. Such goods shall be commercially interchangeable with the goods being valued having regard to the quality, reputation and the existence of trade-mark.
   b) produced in the country in which the goods being valued were produced; and
   c) produced by the same person who produced the goods or where no such goods are available, then goods produced by a different manufacturer.

   However, similar goods do not include goods where engineering, development, art work, design work, plan or sketch was done by the buyer in India free of charge or at a reduced cost.
2. Such similar goods shall be sold at the same commercial and quantity level. Where no such sale is found, the transaction value of similar goods sold at a different commercial level or in different quantity or both shall be used with certain adjustment.
3. Where more than one transaction value of similar goods is found, then the lowest of such value shall be used for determining the value of imported goods.

Deductive Value [Rule 7]

Where the goods being valued or identical or similar imported goods are sold in India at or about the time of determination of value, then the value of imported goods shall be based on the unit price at which such goods are sold in the *greatest aggregate quantity* to the *unrelated* person in India as reduced by -

a) the commission usually paid or payable or the additions usually made for profits and general expenses for sales in India;

b) the cost of transport and insurance and other cost incurred within India;

c) the customs duty and other taxes payable in India by reason of importation or sale of the goods.

Notes

1. Where such goods are not sold at or about the same time of importation of the goods being valued, then the value of imported goods shall be based on the unit price at which the imported goods or identical or similar imported goods are sold in India at the earliest date after importation but before the expiry of 90 days after such importation.

2. Where such goods are sold in India after further processing, then the value shall be based on the unit price at which the imported goods after processing are sold in the greatest aggregate quantity to an unrelated person in India as reduced by processing and other cost (as referred above) incurred in India.

Computed value [Rule 8]

The value of imported goods shall consist of –

a) The cost or value of materials and fabrication or other processing employed in producing the imported goods;

b) An amount for general expenses and profit made by producers in the country of exportation for export to India;

c) The cost of transport, insurance, etc.

Residual method [Rule 9]

Where the value of imported goods shall not be determined as per any preceding rules, then the value shall be determined using -

- reasonable means consistent with the principles;
- general provisions of these rules; and
- data available in India.

In conclusion, the Customs Valuation Rules represent a vital framework designed to bring fairness, transparency, and consistency to the process of determining the value of imported goods. By employing a hierarchical approach—from the initial transaction value through to alternative methods such as identical or similar goods, and finally, the deductive, computed, or residual methods—these rules ensure that the assessed value accurately reflects the true economic conditions of international trade. This layered methodology not only helps safeguard government revenue but also promotes equitable treatment for businesses and importers by anchoring assessment practices in real-world commercial transactions.

Moreover, as global trade continues to evolve, a thorough understanding and diligent application of these valuation protocols remain imperative for customs officials, importers, and policy makers alike. Through clear documentation and adherence to these established norms, stakeholders can navigate regulatory complexities more effectively, thus minimizing disputes and enhancing compliance. Ultimately, these rules — rooted in both historical context and modern practice — reinforce the integrity of the customs system and serve as a robust guide for ensuring just duty assessments in an increasingly interconnected economic landscape.

Topic

Strategic Performance Management and Business Valuation (SPMBV)

ELECTIVES

Paper-20A

Strategic Performance Management and Business Valuation (SPMBV)

Performance Evaluation During Periods of Uncertainty

Periods of uncertainty—characterized by economic downturns, political instability, global health crises, or rapid technological changes—disrupt the normal functioning of organizations and create complex challenges for performance evaluation. Traditional evaluation frameworks often fail to capture the true efforts and contributions of employees during such times. In these volatile environments, performance evaluation must evolve into a dynamic, empathetic, and forward-looking process that recognizes the shifting realities faced by both organizations and individuals.

Understanding the Nature of Uncertainty

Uncertainty in a business context refers to situations where outcomes are unpredictable, and reliable information is scarce. This could stem from external factors such as pandemics, wars, market crashes, or natural disasters, or internal disruptions like leadership transitions, mergers, or restructuring.

During such times, employees often operate under constrained resources, altered responsibilities, and heightened emotional stress. Evaluating performance under these conditions requires more than just assessing task completion; it involves understanding the broader context in which individuals and teams function.

Key Challenges in Performance Evaluation During Uncertainty

1. **Shifting Objectives and Priorities** Goals set at the beginning of the year or quarter may become irrelevant. New priorities may emerge, requiring rapid adaptation and making earlier benchmarks obsolete.
2. **Disruption of Normal Workflows** Remote work, supply chain interruptions, or team reconfigurations often hinder routine operations. Measuring productivity becomes difficult without standardized processes.
3. **Stress and Well-being Impacts** Uncertainty increases anxiety and reduces mental well-being, affecting employee focus, motivation, and overall performance. Standard performance metrics often overlook these human factors.
4. **Lack of Comparable Benchmarks** With frequent changes, it becomes challenging to compare current performance to past data or industry standards. Contextualizing performance becomes necessary to ensure fairness.
5. **Potential for Bias**

   Managers may unknowingly favor visible or vocal employees, especially in remote settings, leading to skewed evaluations. Less visible contributions may go unrecognized.

Principles for Effective Performance Evaluation During Uncertainty

To respond effectively, performance evaluation systems must become more flexible, human-centric, and contextual.

1. **Flexibility and Adaptability in Goals**
   - o Replace fixed Key Performance Indicators (KPIs) with agile, short-term objectives.
   - o Use outcome-based goals rather than process-focused ones, enabling teams to innovate within constraints.
2. **Continuous and Constructive Feedback**
   - o Shift from annual or bi-annual reviews to frequent, informal check-ins.
   - o Real-time feedback helps identify and address issues promptly and keeps morale high.
3. **Contextual Evaluation**
   - o Understand and factor in the circumstances surrounding employee performance.
   - o Acknowledge achievements despite limited resources or changing roles.
4. **Focus on Core Competencies**
   - o Evaluate skills that matter most in uncertain times: adaptability, collaboration, innovation, and problem-solving.
   - o These "soft skills" often predict how well an individual will perform under stress.
5. **Employee Involvement**
   - o Involve employees in defining and revising performance metrics.
   - o Co-created evaluation systems enhance fairness and foster a sense of ownership.
6. **Empathy and Support**
   - o Build an evaluative culture rooted in compassion and understanding.
   - o Recognize emotional labor and invisible work, especially in teams facing uncertainty.
7. **Team-Based Evaluation**
   - o Use team-level assessments to reflect collective efforts, especially when success depends on collaboration.

Tools and Frameworks for Evaluating Performance

1. **OKRs (Objectives and Key Results)**
   - o Useful for setting flexible, outcome-oriented goals that can be adapted to changing priorities.

2. **360-Degree Feedback**
   - o Helps provide a holistic view of employee performance through peer, subordinate, and supervisory input.
3. **Pulse Surveys and Check-ins**
   - o Offer real-time insights into employee engagement and challenges.
4. **Balanced Scorecards**
   - o Integrate financial and non-financial metrics, including employee learning and customer feedback, to assess performance more comprehensively.

Case Study: Evaluating Performance in a Multinational Firm During Economic Uncertainty

Background:

GlobalComm Inc., a multinational communications company, faced massive disruptions during a worldwide economic downturn. With a sudden dip in revenue and a mandate to cut operational costs, the firm shifted to a remote-first model and reprioritized client retention over expansion. The traditional evaluation system, heavily reliant on sales numbers and in-office presence, was no longer applicable.

Challenges:

- Sales executives couldn't meet prior targets due to a decline in customer budgets.
- Technical teams had to work with fewer resources and manage new tools for remote collaboration.
- Employees reported declining motivation and mental fatigue.

Response:

1. **Redefining Metrics**
   - o Instead of sales volume, performance evaluations focused on customer engagement metrics like client satisfaction scores and account retention rates.
2. **Weekly Check-ins and Feedback Loops**
   - o Managers began holding weekly video calls to offer guidance and understand employee challenges, creating a feedback-rich environment.
3. **Well-being as a Metric**
   - o HR introduced well-being check-ins and included emotional resilience as a consideration in performance reviews.
4. **Training and Development**
   - o Employees were assessed on participation in upskilling programs and ability to adopt new technologies, reflecting adaptability and commitment to growth.
5. **Team Recognition**
   - o Entire teams were evaluated based on collaborative output and how well they adapted to shifting priorities. A quarterly "team excellence award" was introduced.

Outcomes:

- Employee satisfaction scores rose by 15% despite ongoing uncertainty.
- Client churn reduced significantly due to improved focus on retention.
- The new performance system became a permanent feature post-crisis, enhancing resilience and adaptability across the firm.

Lessons from the Case Study

1. **Performance is Multi-Dimensional**
   - o Success isn't solely about hitting numeric targets. Contribution, adaptability, teamwork, and innovation also matter—especially in uncertain times.
2. **Empathy Enhances Performance**
   - o Employees perform better when they feel understood and supported.
3. **Agility in Evaluation Encourages Agility in Execution**
   - o When evaluations are flexible and responsive to context, employees are more likely to experiment, adapt, and drive change.

Future of Performance Evaluation in Uncertain Times

As uncertainty becomes the norm rather than the exception, performance management systems must continue to evolve:

1. **Hybrid Evaluation Models**
   - o Combine quantitative data with qualitative narratives to create a balanced view of performance.
2. **Integration with Mental Health and DEI Metrics**
   - o Future evaluations may include how well employees contribute to inclusive practices and maintain psychological safety in teams.
3. **Real-time Dashboards**
   - o Use AI-powered platforms for live tracking of goals, offering transparency and adaptability.
4. **Customized Evaluation Paths**
   - o Tailor performance expectations based on roles, departments, and individual circumstances.

Budgeting and Valuation in Times of Uncertainty

In periods of uncertainty—marked by economic downturns, political instability, technological disruption, or global crises—the reliability of traditional financial tools like budgeting and valuation is put to the test. Companies can no longer rely solely on past performance to forecast future outcomes. Instead, financial planning must become more dynamic, responsive, and rooted in a broader strategic understanding of risk. This article explores how budgeting and valuation practices must adapt during uncertain times, highlighting shifting metrics, flexible methodologies, and a case study that illustrates these principles in action.

Understanding the Role of Budgeting and Valuation

Budgeting is the process of forecasting income and expenditures over a defined period. It is traditionally used to allocate resources, measure performance, and guide decision-making. **Valuation**, on the other hand, estimates the worth of a business, asset, or project and is critical for investment, acquisition, divestiture, or fundraising decisions.

In stable environments, budgeting and valuation models rely heavily on historical data, linear projections, and predictable inputs. However, during uncertainty, such models often fail due to the breakdown of assumptions about market behavior, customer demand, input costs, and financial stability.

Key Challenges During Uncertain Times

1. **Forecasting Volatility**

   Budget assumptions about revenue growth, cost structures, and capital expenditure may become invalid due to rapid and unpredictable changes in the external environment.

2. **Rapidly Changing Market Conditions**

   Asset values may swing wildly due to shifts in investor sentiment, inflation, geopolitical events, or currency fluctuations.

3. **Unreliable Historical Data**

   Past performance ceases to be a reliable predictor of future outcomes. Traditional benchmarking and year-over-year comparisons lose significance.

4. **Capital Constraints and Resource Scarcity**
   Businesses often face tight liquidity and must reallocate budgets in real time, creating a need for more agile financial planning.

5. **Shifts in Consumer Behavior**

   During periods like a pandemic or recession, demand patterns change dramatically, requiring a rethinking of revenue streams and expense allocations.

Adapting Budgeting in Uncertain Times

In uncertain environments, budgeting becomes less about precision and more about adaptability. Here's how businesses can evolve their budgeting approach:

1. **Scenario-Based Budgeting**
   - Create multiple budget scenarios (best-case, worst-case, most-likely) based on different assumptions about revenue, costs, and external variables.
   - Use tools like Monte Carlo simulations or sensitivity analysis to estimate the range of possible outcomes.

2. **Rolling Forecasts**
   - Replace static annual budgets with rolling monthly or quarterly forecasts that can be updated frequently.
   - This allows companies to adjust course based on new information, such as market changes or government regulations.

3. **Zero-Based Budgeting (ZBB)**
   - Instead of basing budgets on the previous year's numbers, ZBB requires every expense to be justified from scratch.
   - This method encourages cost discipline and aligns spending with current priorities.

4. **Prioritizing Essential Spending**
   - In times of limited resources, classify expenses into essential (survival), strategic (growth), and discretionary (optional) categories.
   - Focus spending on areas that generate cash flow or protect long-term value.

5. **Cross-Functional Involvement**
   - Include teams from operations, marketing, HR, and finance in the budgeting process to ensure a realistic and comprehensive view of needs and risks.

Adapting Valuation in Uncertain Times

Valuation models must also be revised to account for risk, uncertainty, and rapidly changing market conditions.

1. **Dynamic Discount Rates**
   - Increase the discount rate (e.g., in DCF models) to reflect higher risk premiums. Adjust for industry-specific volatility and country risk where applicable.
2. **Flexible Cash Flow Projections**
   - Forecast cash flows with a focus on liquidity, not just profitability.
   - Include stress-tested assumptions for revenues, operating costs, and capital expenditures.
3. **Real Options Analysis**
   - Incorporate managerial flexibility into valuation, such as the ability to delay, expand, or abandon projects based on evolving market conditions.
4. **Use of Multiples with Caution**
   - Market comparables may be distorted by temporary anomalies. Normalize multiples using long-term averages and peer adjustments.
5. **Asset-Based Valuation**
   - In highly uncertain environments, a conservative asset-based approach may be more appropriate than income-based models.
   - This approach values a company based on its tangible and intangible assets, which can provide a safety net for investors.

Integrated Approach: Connecting Budgeting and Valuation

Budgeting and valuation must work in tandem, especially during volatile periods. A robust budget informs realistic valuation assumptions, and vice versa.

- **Budgets provide inputs for valuation models**: Cash flow projections derived from budgets are essential for DCF valuations.
- **Valuation informs budget prioritization**: Understanding which business units or assets are most valuable helps allocate resources strategically.
- **Scenario planning bridges both processes**: The same scenarios used in budgeting can inform valuation ranges.

Case Study: Adaptive Budgeting and Valuation at a Manufacturing Firm

Background:

DeltaMach Ltd., a mid-sized industrial machinery manufacturer, faced severe disruption due to a global supply chain crisis and a drop in industrial demand during a geopolitical conflict. The firm needed to secure funding to continue operations but found that its original budget and valuation models no longer reflected reality.

Challenges:

- Raw material costs surged by 60% due to export bans.
- Several international clients deferred or canceled orders, affecting revenue projections.
- Investors demanded new valuations before committing capital.

Strategic Actions:

1. **Revised Budgeting Strategy**
   - **Scenario Budgeting**: Three new financial scenarios were developed:
     - o *Optimistic*: Supply chain recovery and strong domestic demand.
     - o *Baseline*: Prolonged disruption with partial market access.
     - o *Pessimistic*: Continued raw material scarcity and lower sales volumes.
   - **Rolling Forecast**: Budgets were updated monthly, based on actual order flow and vendor availability.
2. **Zero-Based Budgeting**
   - Non-essential travel, marketing, and capex projects were frozen.
   - Budget approval required justifications linked to cash preservation or revenue generation.
3. **Updated Valuation Approach**
   - A traditional DCF model was adjusted with:
     - o *Higher discount rate* (11% vs. 8%) to reflect country and sector risk.
     - o *Shorter cash flow forecast period* (3 years instead of 5) due to high uncertainty.
   - *Asset-based valuation* was used as a floor value, especially given the company's substantial inventory and property holdings.

4. Transparent Communication

- Financial reports included detailed notes on assumptions, risk factors, and rationale for revised figures.
- This transparency helped rebuild investor trust and attract interest despite the uncertain environment.

Outcomes:

- DeltaMach secured bridge financing of $15 million based on the revised baseline valuation of $120 million.
- The company improved budget discipline and cash utilization.
- The finance team institutionalized quarterly scenario reviews as a permanent part of their strategy.

Lessons from the Case

1. **Agility is More Valuable Than Accuracy**
   - o Quick adaptation of budgets and valuation methods can be more beneficial than perfect precision.
2. **Communication Builds Credibility**
   - o Clearly articulating assumptions and methods helps reassure stakeholders.
3. **Scenario Planning is Essential**
   - o Creating alternate financial realities prepares organizations to pivot quickly.
4. **Cash is King**
   - o In uncertain periods, budgeting and valuation must focus more on liquidity and less on abstract metrics like growth potential.

Topic

Module 5 : Operational Risk and Off-Balance Sheet Risk

Module 8 : Managing Risk in Insurance Business

ELECTIVES

Paper-20B

Risk Management In Banking and Insurance (RMBI)

Operational Risk and Off-Balance Sheet Risk

A bank guarantee and a letter of credit are both promises from a financial institution that a borrower will be able to repay a debt to another party, no matter the debtor's financial circumstances. While different, both bank guarantees and letters of credit assure the third party that if the borrowing party can't repay what it owes, the financial institution will step in on behalf of the borrower.

By providing financial backing for the borrowing party (often at the request of the other one), these promises serve to reduce risk factors, encouraging the transaction to proceed. But they work in slightly different ways and in different situations.

Letters of credit are especially important in international trade due to the distance involved, the potentially differing laws in the countries of the businesses involved, and the difficulty of the parties meeting in person.

While letters of credit are primarily used in global transactions, bank guarantees are often used in real estate contracts and infrastructure projects.

Bank Guarantee: Bank Guarantees represent a more significant contractual obligation for banks than letters of credit do. A bank guarantee, like a letter of credit, guarantees a sum of money to a beneficiary. The bank only pays that amount if the opposing party does not fulfil the obligations outlined by the contract. The guarantee can be used to essentially insure a buyer or seller from loss or damage due to non-performance by the other party in a contract.

Bank guarantees protect both parties in a contractual agreement from credit risk. For instance, a construction company and its cement supplier may enter into a contract to build a mall. Both parties may have to issue bank guarantees to prove their financial bona fides and capability. In a case where the supplier fails to deliver cement within a specified time, the construction company would notify the bank, which then pays the company the amount specified in the bank guarantee.

Types of Bank Guarantees: Bank guarantees are just like any other kind of financial instrument, they can take on various forms. The letters of guarantee help parties involved in large transactions rest assured that they will be paid. Banks can issue guarantees as direct guarantees between the bank and a domestic or foreign business entity. Banks will issue indirect guarantees when the subject of the guarantee is a government agency or another public entity.

The most common kinds of guarantees include:

- **Shipping guarantees**: This kind of guarantee is given to the carrier for a shipment that arrives before any documents are received.
- **Loan guarantees**: An institution that issues a loan guarantee pledges to take on the financial obligation if the borrower defaults.
- **Advanced payment guarantees**: This guarantee acts to back up a contract's performance. Basically, this guarantee is a form of collateral to reimburse advance payment should the seller not supply the goods specified in the contract.
- **Confirmed payment guarantees**: With this irrevocable obligation, a specific amount is paid by the bank to a beneficiary on behalf of the client by a certain date.

Letter of Credit: Sometimes referred to as documentary credit, a letter of credit acts as a promissory note from a financial institution, usually a bank or credit union. It guarantees a buyer's payment to a seller or a borrower's payment to a lender will be received on time and for the full amount. It also states that if the buyer can't make a payment on the purchase, the bank will cover the full or remaining amount owed.

A letter of credit represents an obligation taken on by a bank to make a payment once certain criteria are met. After these terms are completed and confirmed, the bank will transfer the funds. The letter of credit ensures the payment will be made as long as the services are performed. The letter of credit basically substitutes the bank's credit for that of its client, ensuring correct and timely payment.

For example, say a U.S. wholesaler receives an order from a new client, a Canadian company. Because the wholesaler has no way of knowing whether this new client can fulfil its payment obligations, it requests a letter of credit is provided in the purchasing contract.

The purchasing company applies for a letter of credit at a bank where it already has funds or a line of credit (LOC). The bank issuing the letter of credit holds payment on behalf of the buyer until it receives confirmation that the goods in the transaction have been shipped. After the goods have been shipped, the bank would pay the wholesaler their due as long as the terms of the sales contract are met, such as delivery before a certain time or confirmation from the buyer that the goods were received undamaged.

Types of Letters of Credit: Just like bank guarantees, letters of credit also vary based on the need for them.

The following are some of the most commonly used letters of credit:

- An irrevocable letter of credit ensures the buyer is obligated to the seller.
- A confirmed letter of credit comes from a second bank, which guarantees the letter when the first one has questionable credit. The confirming bank ensures payment in the event the company or issuing bank default on their obligations.
- An import letter of credit allows importers to make payments immediately by providing them with a short-term cash advance.
- An export letter of credit lets the buyer's bank know it must pay the seller, provided all the conditions of the contract are met.
- A revolving letter of credit lets customers make draws—within limits—during a certain time period.

Special Considerations: Both bank guarantees and letters of credit work to reduce the risk in a business agreement or deal. Parties are more likely to agree to the transaction because they have less liability when a letter of credit or bank guarantee is active. These agreements are particularly important and useful in what would otherwise be risky transactions, such as certain real estate and international trade contracts.

Banks thoroughly screen clients interested in one of these documents. After the bank determines that the applicant is creditworthy and has a reasonable risk, a monetary limit is placed on the agreement. The bank agrees to be obligated up to, but not exceeding, the limit. This protects the bank by providing a specific threshold of risk.

Another key difference between bank guarantees and letters of credit lies in the parties that use them. Bank guarantees are normally used by contractors who bid on large projects. By providing a bank guarantee, the contractor provides proof of its financial credibility. In essence, the guarantee assures the entity behind the project it is financially stable enough to take it on from beginning to end. Letters of credit, on the other hand, are commonly used by companies that regularly import and export goods.

Risks involved in Bank Guarantees and Letters of Credit in Banking Sector: Both bank guarantees (BGs) and letters of credit (LCs) involve risks for banks, but in different ways. BGs primarily carry the risk of default by the customer whose obligations are guaranteed, while LCs primarily face the risk of fraud or non-compliance with the terms of the LC. Banks also face operational and legal risks associated with both instruments.

Bank Guarantee Risks:

- **Credit Risk**: The bank faces the risk of not being able to recover the guaranteed amount from the customer if the customer defaults on their obligations.
- **Counterparty Risk**: The bank also bears the risk that the beneficiary (the party receiving the guarantee) may not be able to fulfil their obligations under the contract.
- **Operational Risk**: Banks need to ensure that the guarantee is issued and administered correctly, including proper verification of documents and timely payments.
- **Legal Risk**: Banks can face legal challenges if they incorrectly issue or dishonour a guarantee, or if there are ambiguities in the guarantee terms.

Letter of Credit Risks:

- **Fraud Risk**: There's a risk of fraudulent documents or misrepresentations being used to secure the LC, leading to the bank being obligated to pay out even if the goods or services are never delivered or are not as agreed.
- **Non-Compliance Risk**: The bank risks being required to pay if the beneficiary presents documents that appear to be in compliance with the LC, even if there are underlying discrepancies or problems.
- **Operational Risk**: Similar to BGs, LCs involve operational risks related to document processing, payment timing, and adherence to international trade regulations.
- **Political and Economic Risk**: Events like political instability or currency fluctuations in the country of the beneficiary can affect the bank's ability to recover funds or make payments.

To Conclude: While BGs primarily focus on the customer's creditworthiness and ability to fulfil obligations, LCs prioritize the strict adherence to documented terms and conditions, but also carry the risk of fraud or non-compliance. Banks need to manage both types of risks through careful due diligence, risk assessment, and adherence to regulations.

Managing Risk in Insurance Business

Centuries ago merchants were encouraged to take hazardous journeys by the existence of insurance: if they took the risk and disaster struck, then they would not be ruined if they were insured. The same social advantage is still there today. The exciting ventures have changed somewhat, but the ability to insure against various perils still enables individuals and companies to take on risks that they would not otherwise undertake. Policyholders reduce uncertainty by passing risks to an insurance company. It is not surprising, therefore, that insurance companies themselves are subject to risk and uncertainty.

Most of the major uncertainties centre around how many claims there will be and how much the insurer will have to pay to settle them. These uncertainties have a big influence on how much the insurer will charge for the protection provided and how much the insurer needs to reserve for future claims payments. Other risks to the insurer include:

- recovery of fixed expenses,
- failure of other parties (e.g. brokers or reinsurers),
- falls in asset values and the insurance cycle.

The size of the free reserves will influence the ability of the insurer to cope up with these risks as will reinsurance cover and the investment policy.

Indian insurance companies manage business risks through a multi-pronged approach, including proactive risk assessments, adherence to regulatory guidelines, and the use of various risk mitigation and transfer techniques. They also focus on maintaining profitability, adhering to regulatory policies, and developing innovative products to meet evolving market demands. Additionally, they leverage technology for cyber risk monitoring and modelling.

Here's a more detailed look at their risk management strategies:

1. **Risk Identification and Assessment**:
   - **Underwriting policies**: Insurance companies use prudent underwriting policies to evaluate risks and ensure profitability.
   - **Risk Management Teams**: Risk management teams analyse the risk involved and the quality of operations of each account.
   - **Cyber Risk Modelling**: Technology helps insurers model and manage cyber risk accumulations.
   - **Regulatory Compliance**: Insurers adhere to IRDAI regulations concerning insurance products, sales strategies, and consumer protection.
2. **Risk Mitigation and Transfer**:
   - **Reinsurance**: Transferring a portion of risk to other insurance companies to spread potential losses.
   - **Securitization**: Transforming a portion of assets or liabilities into securities to manage risk.
   - **Hedging**: Using derivative instruments to protect against financial risks.
   - **Product Design**: Shifting some risks to policyholders through product design.
3. **Risk Management in Practice**:
   - **Investment Strategies**: Insurers develop strategic investing techniques to maximize profits and minimize investment risks.
   - **Data Analytics**: Using data analytics to understand consumer behaviour and tailor products.
   - **Compliance**: Adhering to legal and regulatory requirements, including solvency regulations.
   - **Corporate Governance**: Establishing strong corporate governance structures, including Chief Risk Officers (CROs) and risk management committees, as outlined by the IRDAI.
   - **Reputation Management**: Building and maintaining a strong reputation through effective communication and customer service.
4. **Emerging Trends**:
   - **AI and Technology**: Using AI, data analytics, and other technologies to enhance risk management processes.
   - **Low-Cost Insurance**: Meeting the needs of diverse consumer segments with affordable and tailored insurance products.
   - **Customer Focus**: Prioritizing customer service and addressing their needs effectively.

By implementing these strategies, Indian insurance companies aim to manage their risks effectively and ensure long-term financial stability and sustainability.

Insurance companies face a variety of risks, broadly categorized as financial and non-financial. Financial risks include those related to investments, interest rates, and claims payouts, while non-financial risks encompass operational, regulatory, and reputational aspects.

Financial Risks:

≈ **Investment Risk**: The risk that the value of investments held by the insurer may decline, potentially impacting the company's ability to meet its obligations.

≈ **Interest Rate Risk**: Fluctuations in interest rates can affect the value of investments and the cost of liabilities, especially for life insurance companies.

≈ **Credit Risk**: The risk that a policyholder or counterparty may default on their financial obligations, leading to losses for the insurer.

≈ **Liquidity Risk**: The risk that an insurer may not have enough cash on hand to meet its obligations, potentially leading to financial difficulties.

≈ **Claim Risk**: The risk that actual claim payouts exceed the premiums collected, leading to financial losses.

Non-Financial Risks:

≈ **Operational Risk**: The risk of losses due to failures in internal processes, systems, or human errors.

≈ **Regulatory Risk**: The risk that changes in regulations or compliance requirements may impact the insurer's operations or financial results.

≈ **Reputational Risk**: The risk that negative publicity or unethical business practices may damage the insurer's reputation and customer trust.

≈ **Cybersecurity Risk**: The risk of data breaches, cyberattacks, or other cybersecurity incidents that could disrupt operations, damage reputation, and lead to financial losses.

≈ **Climate Change Risk**: The risk that climate-related events (e.g., extreme weather, natural disasters) may increase claims payouts and impact the insurer's investments.

≈ **Strategic Risk**: The risk that the insurer's business strategy may not be effective in achieving its goals or adapting to changing market conditions.

≈ **Talent Shortage**: The risk that the insurer may be unable to attract and retain skilled employees, particularly in the face of technological advancements and changing market dynamics.

≈ **Geopolitical Risk**: The risk that geopolitical events, such as wars, trade tensions, or sanctions, may disrupt global markets and impact insurance operations.

For over a decade, the insurance industry has grown increasingly sophisticated in its ability to understand and manage risk. Following a string of natural catastrophes from 1989 to 1994, insurers-reinforced by the activities of modelers, rating agencies, reinsurers, and the capital markets- made it a priority to quantify their risk and manage their exposures to acceptable levels. More recently, industry leaders have begun to take a more holistic view of risk, capital, and return Data on extreme events are rare by definition, and the unprecedented level and breadth of loss is forcing in to the open the issues that have long been discussed largely only among specialists in the risk management community.

Topic

Module 5 : Scalability, Scaling up and Stabilisation of Sustainable Business

ELECTIVES

Paper-20C

Entrepreneurship and Start Up (ENTS)

Startup Valuation

Startup valuation is the process of determining the current or projected worth of a startup company, essentially assigning a monetary value to its potential. This valuation is crucial for raising capital, determining equity distribution, and understanding a company's growth potential.

What are the benefits of startup valuation?

(a) Attract investors to provide capital injections.

(b) Make more informed strategic decisions.

(c) Determine appropriate equity allocations.

(d) Fuel business negotiations with suppliers and other partners.

(e) Establish credibility and trust with stakeholders, investors, and potential clients.

(f) Facilitate growth and expansion through better access to funding.

(g) Attract talent by using equity as a compensation strategy.

(h) Comply with legal and tax regulations, especially when issuing stock options or calculating tax liabilities on equity compensation.

What are the challenges in determining startup valuation?

(i) Lack of historical data: Established companies have a track record of performance to look back on, which is an important data point in valuation. Startups, being new to the game, lack this important piece of information

(ii) Differences in valuation methods: One of the trickiest parts about figuring out the worth of company as there is no unanimously agreed-upon approach to evaluating a company. This inevitably means that two investors looking at the same company can come up with vastly different numbers.

(iii) Uncertain future performance: Nobody can say how a company is going to perform in the coming two, five, or ten years. Markets can fluctuate rapidly, major world and economic events occur, and new technologies emerge which can either make or break business opportunities. But valuing a company now requires some understanding of how the business is likely to perform in the future, making for a difficult calculation.

(iv) No comparable companies: Startups that are at the forefront of breaking new technology may find it difficult to compare themselves to other businesses because, well, there are not any. Imagine trying to evaluate Uber or Airbnb in their first years of business, without a similar competitor to compare against.

What are the key factors influencing startup valuations?

(i) **Market Size and Opportunity:** The size of the target market and the growth potential it represents are crucial factors in a startup's valuation. Investors want to know that your product or service has a large enough market to scale and generate significant returns. A larger addressable market suggests more room for growth, which can justify a higher valuation.

(ii) **Revenue and Growth Projections:** A startup's current revenue and its projected growth are critical in determining its valuation, especially for investors seeking a return on their investment. Consistent revenue growth demonstrates that there is demand for your product or service, which reduces perceived risk.

(iii) **Funding Stage:** The stage of funding a startup is in—whether seed, Series A, or beyond—has a direct impact on its valuation. Early-stage startups, such as those in the seed or pre-seed stages, typically have lower valuations because they are still proving their business model and may not yet have significant revenue or traction. As startups progress through Series A, B, and later rounds, they usually have more validated business models, larger customer bases, and stronger financials, leading to higher valuations.

(iv) **Traction and Customer Base:** Having strong traction or a growing customer base is a powerful indicator of market demand, and it plays a significant role in boosting a startup's valuation. Investors view traction as proof that your product or service resonates with the market, reducing uncertainty about whether the business can succeed. Metrics such as customer acquisition rates, retention rates, and user engagement show that there is genuine interest in what you offer. A solid customer base signals that your startup has established market credibility, making it a safer bet for investors, and ultimately driving a higher valuation.

(v) **Founding Team and Management:** A strong, experienced founding team is one of the most critical factors in a startup's valuation. Investors place significant value on a team's ability to execute its vision, pivot when necessary, and navigate challenges. A team with a proven track record, industry expertise, and complementary skills can inspire confidence in investors, as they are more likely to lead the startup to success.

(vi) **Product or Technology:** A unique or innovative product, particularly one backed by proprietary technology, can serve as a strong competitive advantage, significantly increasing a startup's valuation. Investors are keen on startups that offer something difficult for competitors to replicate, as this suggests a sustainable market position. Whether it's a cutting-edge solution or a patented technology, these assets demonstrate a startup's potential to disrupt the market and capture a large customer base. Additionally, proprietary technology can create barriers to entry for competitors, further securing the startup's growth prospects. Startups with standout products or technologies often attract higher valuations because they offer long-term value and scalability.

(vii) **Profitability and Cash Flow:** A startup's ability to generate profit or maintain healthy cash flow, even at an early stage, is a key factor in determining its valuation. Investors look for startups that demonstrate financial stability and the potential for long-term profitability. Consistent cash flow, even if minimal, signals that the business can sustain itself without relying solely on external funding. It also shows that the startup has an efficient cost structure and a viable path to profitability. Startups with solid cash flow management are viewed as lower-risk investments, which can drive up their valuation. Ultimately, demonstrating the ability to generate profit enhances investor confidence and positions the startup for future growth. (source: https://visible.vc/blog/startup-valuation-techniques/)

Valuation Techniques or Models for Startups

Different methods take into account various factors, such as the stage of the company, revenue, market conditions, and potential for growth. By understanding the key valuation techniques, founders can better navigate conversations with investors and ensure they are presenting their startup in the most favorable light. Popular Valuation techniques every startup founder should know to determine the true value of their business.

1. Berkus Approach or Method

The Berkus Approach is a simplified method that assigns value to a startup based on its progress in key areas like product development, market size, and management team. It is particularly useful for early-stage startups without revenue, as it values the business based on qualitative factors rather than financial data.

2. Scorecard Valuation Method

The Scorecard valuation method is a relative valuation technique used for startups, particularly those in the pre-revenue phase, where traditional financial methods are not feasible. It compares the target startup to similar ventures, often by examining recent investments in the same region and sector, to determine a pre-money valuation. This method assigns weights to various factors that influence a startup's potential, such as the team, market, product, and risk, and then adjusts a baseline valuation based on these weighted factors.

3. Risk Factor Summation Method

The Risk Factor Summation method adjusts a base valuation by considering various risk factors, such as management risk, market competition, or political instability. The final valuation is adjusted up or down depending on the degree of risk involved, making this approach useful for investors assessing high-risk ventures.

4. Cost-to-Duplicate Approach or Method

This method calculates the startup's value based on how much it would cost to replicate its assets from scratch, including intellectual property, infrastructure, and other resources. It's commonly used for startups with valuable technology or physical assets, but it often overlooks the potential market or future growth.

5. Market Multiple Approach or Method

The market multiple method is based on the theory that similar assets sell at similar prices. It values the company against recent acquisitions of similar companies in the market. Similar to the cost to duplicate approach, it helps identify or estimate values that the investors are most likely to pay. This method of how startups are valued is most commonly used for those in their initial stages with very primary groundwork.

6. First Chicago Method

This hybrid method combines both optimistic and pessimistic scenarios to provide a range of possible valuations for a startup. Investors use this technique to consider the best, worst, and most likely financial outcomes for a business, offering a more comprehensive picture of the startup's potential.

7. Comparable Transactions Method

It is one of the most conventional methods proven to provide investors with realistic scenarios and values. Having been built on precedents is what makes it the most popular method. This method takes information such as how many other similar startups were acquired in recent years and uses that as a precedent to arrive at a valuation. The comparable transactions method is commonly utilized to compare and analyze two similar businesses.

8. Venture Capital Method

The Venture Capital Method is used by investors to calculate their potential return on investment (ROI). It focuses on estimating the future exit value of the company and working backward to determine how much equity the investor should demand based on the initial investment and desired ROI.

9. Discounted Cash Flow (DCF) Method

The DCF method values a startup based on its projected future cash flows, adjusted for the time value of money. By forecasting future revenue and then discounting it back to its present value, investors can estimate the long-term financial potential of a startup, making this method ideal for businesses with predictable cash flow.

(Source: https://ipventures.in/valuation-of-a-startup/)

Multiple Choice Questions (MCQs):

1. Which of the following is NOT a common method used to determine a startup's valuation?

   (a) Discounted Cash Flow (DCF) analysis

   (b) Comparable Company Analysis

   (c) Net Asset Value (NAV)

   (d) The Berkus Method

   Answer: (c)

2. Which of the following is the purpose of the Venture Capital method for startup valuation?

   (a) To determine the cost of duplicating the startup's assets

   (b) To project future cash flows and discount them to the present

   (c) To estimate a startup's value based on comparable companies

   (d) To estimate a startup's value based on its potential exit value and desired investor return

   Answer: (d)

3. The Berkus method of startup valuation primarily focuses on:

   (a) Discounted cash flow projections

   (b) A comprehensive assessment of five vital success factors

   (c) Comparing a startup's valuation to similar companies

   (d) Using market multiples to determine valuation

   Answer: (b)

4. The Risk Factor Summation method is particularly useful for:

   (a) Valuing early-stage, pre-revenue startups

   (b) Valuing mature, revenue-generating companies

   (c) Assessing high-risk startups and adjusting valuation accordingly

   (d) Calculating the cost of capital for a startup

   Answer: (c)

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