FINAL EXAMINATION

GROUP III

(SYLLABUS 2012)

SUGGESTED ANSWERS TO QUESTIONS

DECEMBER 2013

Paper-15: BUSINESS STRATEGY AND STRATEGIC COST MANAGEMENT

Time Allowed: 3 Hours Full Marks: 100

The figures in the margin on the right side indicate full marks.

SECTION A (50 marks)

(Business Strategy)

Questions No. 1 and 2 are compulsory.

Answer any two from the rest in this section.

(Please answer all parts of a question at one place)

1.

(a) Fastfix is a small company operating in a single city. Its business is repairing laptops. It has earned a good name for its fair charges and speedy delivery. For the next five years, the environment offers the following information:
Many school students are being given laptops by the school themselves and this trend is likely to continue for another five years. College students and coaching centres provide new laptops to all the students during the admission. The fees are inclusive of these costs.
Tablets are first replacing laptops in certain market segments and models are changing every six months. If there are major repairs, richer people discard the products and go in for new products or newer versions. However, there are rural markets and certain parts of urban markets which will still be interested in the low-cost repaired and re-sold products.
Considering the above case of Fastfix it will limit its operations to only one city. You are required to give:

(i) A vision statement;
(ii) A mission statement;
(iii) Does SWOT analysis exist?
(iv) Some parameters that could be used in such the above situation relating to the financial and growth perspectives in a Balance Score Card (BSC).

(b) A case of Business Intelligence in Aviation—The entire matrix of India's aviation industry has challenged ever since no-frills airlines made air travel affordable for the country's growing middle class. Given that Low Cost Carriers (LCC) are the future air travel in India, LCC are practically non-existent in now-a-days. What is the reason behind such sorry state of affairs among airlines? The answer lies in 'pricing'. Experts

say that Indian LCC have not been able to price their tickets right and at one point even brought their fares close to that of Full Service Carriers (FSC).
According to global standards, the average cost per passengers for LCCs should be $35 lower than that of FSCs. But this is contingent on better utilization of aircraft through faster turnarounds i.e., the time taken between landing and the next flight. This is where technology initiatives such as Corporate Performance Management using Business Intelligence (BI) tools can come very handy.

(i) What is 'Business Intelligence'?
(ii) How to create a 'Business Intelligence Strategy' in aviation industry?
(iii) How 'Business Intelligence' can enhance the overall decision-making process in Low Cost Airlines Carriers. (2+2+2+2)+(2+2+3)

Answer

(a)

(i) Vision Statement: Our Company intends to provide the best quality of repairs to laptops in the fastest possible time anywhere in the city with the most reasonable changes to customers.

(ii) Mission Statement: We deliver at customers' doorstep their fully functional laptops with minimum downtimes for customers while ensuring:
(a) Timely delivery as promised:
(b) Reasonable charges:
(c) Good quality of services;
(d) Replacement of parts by genuine parts based on genuine needs;
(e) Pick up of faulty laptops; and
(f) Offer stand by laptops as per customer requests.

(iii) SWOT Analysis:

(a) Strengths: Access to standard parts that normally fail in laptops, network of trained employees who have thorough job knowledge, available loyal customers, less time in delivery and perfect commitment.
(b) Weakness: Going beyond the scope of faults recognised by the customers, often leading to cost over runs while preventing future repairs calls.
(c) Opportunities: Branches may be opened in schools/colleges/big coaching centres. Business can be extended to sale of reworked computers in ready and going markets, preventing maintenance services, annual maintenance contracts, upgrades and compatibility addition with new peripherals, etc.
(d) Threats: Unless tablet markets also are created to, there is a threat to long term survival. Threats from one stop shops for repairing all types of mobiles/computers/laptop/tablets/iphones/smart phones, etc. Threats of obsolescence resulting in non-availability of spares.

(iv) Balance Score Cards (BSC):
(a) Financial perspective: Revenue from repairs, average job order cost, total spares purchases, delivery costs, (revenue per jobless variable cost per job) as a % of revenue par job, debtors management (target nil), etc.
(b) Learning/innovation/growth perspectives: Number of employees trained, number of new products repaired, number of new spares used, machinery used for cleaning/servicing, new logistics management, service call tracking, repair status on-line tracking, etc.

(b)

(i) **The term Business Intelligence (BI)** represents the tools and systems that play a key role in the strategic planning process of the corporation. These systems allow a company to gather, store, access and analyze corporate data to aid in decision making. Generally these systems will illustrate BI in the areas of customer profiling, customer support, market research, market segmentation, product profitability, statistical analysis, and inventory & distribution analysis to name a few.

(ii) BI can help here on two counts by utilising the data held within the organisation, trusting that it is reasonably clean and accurate:

I. Establishing Early Warning Systems and Detection of Trends;

II. Finding Relevant Patterns and Insights.

So a BI strategy needs lo:

(I) be aligned to support the business strategy and goals;

(II) provide the information the business needs to be an effective job;

(III) Make best and cost effective use of the BI technology and best practices available in terms of implementation speed and development.

(iii) The BI tools can serve to provide self-service querying and reporting facilities, dashboards and the like to analyze the performance of the airlines in depth and enhance the overall decision making process in the organisation. BI can help capture information such as:

(I) Average landing per day in each serviced location;

(II) Average flight duration between and two destinations;

(III) Average seat capacity utilization during different times of the day;

(IV) Average delay in take-off or landing; and

(V) Average turnaround time of aircraft.

2.

(a) **What are 'Core Products'? Give three examples of companies and their core products.**

(b) **In a small town called Vellore in South Indian State of Tamilnadu, there is now one famous deemed university called the Vellore Institute of Technology (VIT). Its founder, Mr. Viswanathan, has adopted a unique model of building formidable Core Competencies. He has made huge investments in creating world-class infrastructure, which has attracted the best minds as students not only from various parts of India, but also from other countries of the world, including developed countries like Canada and several African nations. What has really mattered is that the quality of teaching has improved, as VIT has been able to attract high calibre teachers from all over the country. The National and International seminars that it has been able to conduct, very' regularly, has opened up many vistas of knowledge, and opened up many doors, in the international arena, through very innovative tie-ups with foreign universities. In fact, VIT is just one example of a deemed university that has made India proud. Since, it supplies high quality information technology professionals to all IT companies world-wide, VIT has already made a name for itself, among such companies. The campus recruitments are one hundred percent. This has made it a very formidable learning centre in India.**
There are few tests useful for identifying a core competence. Does it fit to VIT?

(c) **What do you understand by the term 'Strategic Drift'? How can an organisation prevent it?** **(3+3)+(1x4)+(1+4)**

Answer

(a) A **core product** is the dominant product offered by a company. It is often its first product and is the basis for many other products that company manufactures. The company branding is often tied to the popularity of their core product.

'Core Products' are those that are used in a wide array of end-user products. For example, motor is a core product and is used in many end products like fan, vacuum cleaner, pump, grinders, etc. The core products are used to launch a variety of end products. For example, Honda uses its engines in automobiles, motorcycles, lawn mowers and portable generators.
Example of firms and their core products:

Cannon - laser printer subsystems.
Honda - gasoline powered engines.
NEC - semiconductors.
3M - substrates, coating, adhesives.

Thus, a core product is not the actual product but can be defined as the benefit of the product that makes it useful to the purchaser. This benefit might be an intangible idea or concept connected with convenience, status or the ability to achieve a certain task quickly. This benefit gives the product value and meets the needs of the intended customer. The core product should be distinguished from the actual product and from the augmented product, which includes added value such as after-sales service and warranty.

(b) There are few tests useful for identifying a core competence. A core competence should;
(i) Provide access to a wide variety of markets.
(ii) Contribute significantly to the end-product benefits.
(iii) Be difficult for competitors to imitate; and
(iv) It should be valuable.

(c) **Strategic drift** is a subtle and unnecessary shift from an intended course or direction to another one-that is usually undesirable, at least in the long term perspective.
An organisation can prevent it by:
(i) Having a culture that welcomes and openly tolerates feedback, both positive and negative.
(ii) Embracing change when necessary.
(iii) Not hesitating to question when changes seems unnecessary.
(iv) Formalising senior decisions making models and discouraging unwanted surprises.
(v) Getting senior executives and decisions units to align individual goals with the long term success of the organisation, so the direction is not missed out.
(vi) Having a grand strategy, which is a comprehensive set of corporate strategies that are durable and flexible, tailored to the strengths of the senior decision makers and organisation.

3.

(a) **HP and Microsoft global strategic alliance is one of the longest standing alliances of its kind in the industry, with more than 25 years of combined market place leadership focused on helping customers and channel patterns around the world to improve productivity through the use of innovative technologies. Branded the HP and Microsoft Frontline Partnership, the companies share technology, engineering and marketing resources to create and promote solutions based on industry-standard computing platforms that help solve some of the most challenging IT problems. HP and Microsoft have jointly engineered solutions that deploy smoothly, seamlessly and delivered**

competitive advantage. Over the time, the alliance has expanded from its earliest roots focused on the desktop PC to include innovations in the data center and emerging technologies for businesses of all sizes. The alliance also has expanded to provide opportunities for our more than 32,000 joint resellers and ecosystem partners.

(i) Define strategic alliance. Identify three basic types of strategic alliances.

(ii) What are the advantages of the HP and Microsoft global strategic alliance?

(1½ +1½ × 3) + (½ × 8)

Answer

(a)

(i) A **Strategic Alliance** is a relationship between two or more parties to pursue a set of agreed upon goals or to meet a critical business need while remaining independent organizations. This form of cooperation lies between M&A and organic growth.

Strategic alliances are cooperative strategies between firms whereby resources and capabilities are combined to create a competitive advantage. All strategic alliances require firms to exchange and share resources and capabilities to co-developed or distribute goods or services.
The three basic types of strategic alliances are:

(a) Joint ventures, where a legally independent company is created by at least two other firms, with each firm usually owning an equal percentage of the new company:
Benefits of Joint Venture:
(i) Pooling of resources,
(ii) Full utilization of underutilized resources,
(iii) Higher rates of profits,
(iv) Low risk factors,
(v) Massive leverage

(b) Equity strategic alliances, whereby partners own different percentages of equity in the new company they have formed:
Example of Equity Strategic Alliances
Ford Motor Company and Mazda Motor Corporation formed a long – standing equity strategic alliance.

(c) Non-equity strategic alliance, which are contractual relationships between firms to share some of their resources and capabilities. Typical forms are like Licensing agreements, distribution agreements and supply contracts.
Example of Non-Equity Strategic Alliances
Example of a successful non- equity strategic alliances is the du and Vodafone alliances formed in 2009.

(ii) The following are specific advantages in the global strategic alliance:

(a) Get instant market access;
(b) Exploit new opportunities to strengthen the position in a market where a firm already have a foothold:
(c) Increase sales:
(d) Gain new skills and technology:
(e) Develop new products at a profit:
(f) Share fixed costs and resources;

(g) Enlarge the distribution channels;
(h) Broaden the businesses and political contact base;
(i) Gain greater knowledge on international customs and culture:
(j) Enhance your image in the world market place.

4.

(a) Write two uses of 'Strategic Group Analysis' in business.

(b) How does a 'Value Chain' analysis help a firm to gain competitive advantage?

(c) Write the benefits that can be derived from 'unrelated diversification'. What are the two ways that an unrelated diversification strategy can create value?

(2+3)+(1+2+2)

Answer

(a) **'Strategic Group Analysis'** is more useful in several ways in business:

(i) Helps identify who the most direct competitors and on what basis they compete.
(ii) Strategic group mapping might also be used to identify opportunities.
(iii) Can also help identify the strategic problems.
(iv) Raises the question of how likely or possible it is for another organisation to move from one strategic group to another.

(b) **The value chain analysis** allows a firm to understand the activities that create value for the firm and those that do not. A value chain analysis follows the product from its raw-material stage to the final customer. The purpose is to add as much value as possible as cheaply as possible and to capture that value.
There are two central types of activities in a value chain, primary and support activities. Primary activities are involved in a product's physical creation, its sale and distribution to buyers, and its service after the sale.
Support activities are those activities necessary for the primary activities to take place. If a firm can either perform the activity in a manner that is superior to how competitors perform it or perform a value-creating activity that competitors cannot complete, then the activity may be a source of competitive advantage.

(c) With **unrelated diversification** few benefits are derived from horizontal relationships - that is the leveraging the core competencies or the sharing of activities across business units within a corporation. Unrelated diversification can create value through two ways of financial economies (cost savings).

(i) **Unrelated diversified** firms can more efficiently allocate capital among the component businesses than can the external financial market. This is possible because the corporate level management has more complete information about the performance of the component businesses and it can also discipline under-performing management teams.

(ii) **Unrelated diversified** firms can also create value by purchasing other businesses at low prices, restructuring them, and reselling them at a higher price. This practice is most successful with mature, low-technology business, rather than high technology or service businesses which are more dependent on employees who may leave.

5.

(a) Define 'Core Competency'. What tests are to be applied to identify core competence? Why core competencies are relevant?

(b) "Instead of setting a high price, the firm may set a low price for a new product by adding a low mark-up to the full cost." What should be the pricing strategy for the above mentioned statement? Under what circumstances such strategy is adopted?

(1+3+2)+(1+3)

Answer

(a) Core competency is a unique skill of technology that creates distinct customer value. It not only integrates the technology but it also organises workforce and delivery of value.

Some of the ways in which a firm can effectively employ its various 'distinctive' or 'core competencies' as follows:

To identify a core competence, Prahlad and Hamel prescribe three tests:

(i) it should be able to provide potential access to a wide variety of market;

(ii) it should make a significant contribution to the perceived customers of the end product; and

(iii) it should be difficult for the competitors to imitate.

Relevance of the Core Competencies:

Core competencies are bundles of skills and competencies that are built over a very long period of time. Their main strength lies in the fact that such competencies are very much unique to the particular organisation and to the particular industry, in which the organisation operates. However, since the competencies are always skill-based, it is not possible for any competitor to copy the same. This gives the organisation an unbeatable competitive advantage.

(b) The statement stated in the question describes the 'Penetration Pricing Strategy' which is adopted to penetrate in the market as quickly as possible. The circumstances behind the low penetration price are:

(i) The new product is being introduced in a market which is already served by well known brands. A low price is necessary to attract gradually consumers who are already accustomed to other brands.

(ii) The low price will to maximise the sales of the product even in the short period.

(iii) The low price is set in the market to prevent the entry of new products.

SECTION B (50 marks)

(Strategic Cost Management)

Question No. 6 is compulsory.

Answer any two from the rest in this section.
(Please answer all parts of a question at one place.)

6.

(a) What do you understand by 'Project Life Cycle'?

(b) The data of running costs per year and resale price of equipment A whose purchase price is ₹2,00,000 are as follows:

Year-	I	II	III	IV	V	VI	VII
Running cost (₹ '000)	30	38	46	58	75	90	110
Resale value (₹ '000)	100	50	25	12	8	8	8

(i) What is the optimum period for replacement?

(ii) When equipment A's age is two years old, equipment B which is a new model for the same usage is available. The optimum period for replacement is 4 years with an average cost of ₹ 72,000. Should equipment A be changed with equipment B? If so, in which year it will be replaced? 3+(3+1+3)

Answer

(a) The project life cycle describes the tasks that must be completed to provide a product or service. Different project life cycles exist for specific products services. For example, the life cycle followed to build a house is very different from the life cycle followed to develop a software package. The project life cycle consists of four phases like Initiation, Planning, Execution (including monitoring and controlling), and Evaluation & Closure.

(b) The calculations of average cost per year during the life of the Equipment A:

Year	Running cost (₹)	Cumulative Running cost	Resale price	Cumulative Dep. cost	Cumulative Total Cost	Average cost per year
1	30,000	30,000	1,00,000	1,00,000	1,30,000	1,30,000
2	38,000	68,000	50,000	1,50,000	2,18,000	1,09,000
3	46,000	1,14,000	25,000	1,75,000	2,89,000	96,333
4	58,000	1,72,000	12,000	1,88,000	3,60,000	90,000
5	72,000	2,44,000	8,000	1,92,000	4,36,000	87,200
6	90,000	3,34,000	8,000	1,92.000	5,26,000	87,667
7	1,10,000	4,44,000	8,000	1,92,000	6,36,000	90,857

(i) As average cost per year of ₹87,200 is minimum in 5th year so Equipment A should be replaced at the end of the 5th year.

(ii) Given, the optimum period for replacement of Equipment B is 4 years with an average cost of ₹72,000. As minimum average cost of B is lower than minimum average cost of Equipment A. **So A should be replaced by B.**

As, Equipment A is two years old, so total cost per year of A from 3rd year is as follows:

Year of services	Total cost per year (₹)
3	2,89,000 - 2,18,000 = 71,000
4	3,60,000 - 2.89,000 = 71,000
5	4,36,000 - 3,60,000 = 76,000
6	5,26,000 - 4,36,000 = 90,000
7	6,36,000 - 5,26,000 = 1,10,000

As the total cost per year of A is higher in 5th year than the minimum average cost of Equipment B (i.e. ₹ 72.000) so Equipment A should be replaced at the end of the 4th year.

7.

(a) Agarwal Fasteners Pvt. Ltd. Specializes in manufacturing critical stainless steel fasteners as per industry standards and specific customer requirements for a wide variety of industries. Founded in 1974, Agarwal Fastener manufacturers and imports best quality tools, reliable fasteners using modern multi stationed equipment. Having its manufacturing plant in Mumbai. Agarwal Fasteners has a direct sales team in Maharastra and supplies its products to the rest of India through its dealer and reseller network. Due to its focus on quality and timely delivery, the company has witnessed growth and expansion in its business over the last three decades. "Since we specialize in providing customized fasteners as per specific requirements of our clients, we need to deal with various vendors across the world for raw materials and also manufacturer for many high qualities tools and dies in house. We hence needed robust, modular and secure ERP software with tightly integrated inventory, operations and accounting modules that could help link our warehouse to the shop floor," says Vikram Agarwal, Managing Director, Agarwal Fasteners Pvt. Ltd.
What distinct benefits Agarwal Fasteners Pvt. Ltd. expects from Enterprise Resource Planning (ERP)?

(b) Why 'Lean Accounting' is needed?

(c) A transport business makes a journey regularly, and has established that the standard fuel cost for each journey is 20 litres of fuel at ₹ 40 per litre. New legislation has forced a change in the vehicle used for the journey and an unexpected rise in fuel costs. It is decided retrospectively that the standard cost per journey should have been 18 liters at ₹ 50.5 per litre.
Required:
Calculate the original and revised flexed budgets if the journey is made 120 times in the period.

(d)

Items	31.03.2012 (₹ in Lakhs)	31.03.2013 (₹ in Lakhs)
Sales	120	129.6
Prime cost of sales	80	91.1
Variable Overheads	20	24
Fixed Expenses	15	18.5
Profits	5	4

During 2012-13, average prices increased over these of the previous year:

(i) 20% in case of sales;
(ii) 15% in case of prime cost; and
(iii) 10% in case of overheads.
Prepare a profit variance statement from the above data. 5+2+(1+1) + (½ ×14+4)

Answer

(a) Agarwal Fasteners Pvt. Ltd. expects the following distinct benefits from **Enterprise Resource Planning (ERP)**:
(i) Determination of cost of products correctly;
(ii) ERP can be used in multi-national, multi-company, and multi-site manufacturing and distribution environments;
(iii) Flexibility and efficiently distribution and deliver to the right product from the right warehouse to the right customer at the right time;
(iv) Internets enables ERP offers internet (i.e., E-Commerce);
(v) It ensures automatic quality control procedure: and
(vi) It improved the production planning.

(b) **'Lean Accounting'** provides accurate, timely, and understandable information that can be used by managers, sales people, operations leaders, accountants, lean improvement teams and other policy makers. The information gives clear insight into the company's performance: both operational and financial. It measures the right things for a company that wants to drive forward with lean transformation.

(c) Original flexed budget 120 × 20 × ₹ 40 = ₹ 96,000
Revised flexed budget 120 × 18 × ₹ 50.50 = ₹ 1,09,080

(d) **Calculation of variance:**

(i) Sales price variance = 129.60 – (129.60 x 100/120) = ₹21.60 (F)

(ii) Sales volume variance = (129.60 x 100/120) -120 = ₹12 (A)

(iii) Total sales variance = 129.6 – 120 = 9.60 (F)
Decrease in volume = 120 – 12
100- ? = 10%

(iv) Prime cost price variance = (91.10 x 100/115) – 91.10 = ₹11.88 (A)

(v) Prime cost volume variance = 80 x 0.1 = 8(F)

(vi) Prime cost usage or Efficiency variance = (80 x 90/100) – (91.10 x 100/115)= 7.22 (A)

(vii) Prime cost variance = 80 – 91.1 = 11.1 (A)

(viii) Variable overhead price variance = (24 x 100/110) – 24 = ₹2.18 (A)

(ix) Variable overhead volume variance = 20 x 0.1 = 2 (F)

(x) Variable overhead efficiency variance = (20 x 90/100) – (24 x 100/110) = ₹3.82 (A)

(xi) Variable overhead cost variance = 20 – 24 = 4 (A)

(xii) Fixed overhead price variance = (18.5 x 100/110) – 18.5 = ₹1.68 (A)

(xiii) Fixed overhead efficiency variance = 15 – (18.5 x 100/110)= ₹1.82 (A)

(xiv) Fixed overhead cost variance = 15 – 18.5 = 3.5 (A)

Profit variance statement:

Budgeted profit		5.00
Add. Sales price variance	21.60	
Prime cost volume variance	8.00	
Variable O/H volume variance	2.00	
		31.60
		36.60
Less: Sales volume variance	12.00	
Prime cost price variance	11.88	

Prime cost usage variance	7.22	
Variable O/H price variance	2.18	
Variable O/H efficiency variance	3.82	
Fixed O/H price variance	1.68	
Fixed O/H efficiency variance	1.82	
		40.60
Actual Loss		4.00

8.

(a) An automobile production line turns out about 100 cars a day, but deviations occur owing to many causes. The production is more accurately described by the probability distribution given below:

Production per day	Probability	Production per day	Probability
95	0.03	101	0.15
96	0.05	102	0.10
97	0.07	103	0.07
98	0.10	104	0.05
99	0.15	105	0.03
100	0.20	Total	1.00

Finished cars are transported across the day, at the end of the each day; by ferry has space for only 101 cars.

Required:

(i) What will be the average number of cars waiting to be shipped?

(ii) What will be the average area of empty space on the boat?

The fifteen random numbers are given: 20, 63, 46, 16, 45, 41, 44, 66, 87, 26, 78, 40, 29, 92, & 21

(b) Mention different types of 'Non-conventional Variance Analysis'.

(c) Two similar products A and B, manufactured by a company for a production period have the following data:

Particulars	Product A	Product B
Selling price (₹/unit)	50	70
Variable cost (₹/unit)	30	40
Labour hours per unit	2	6

Total fixed costs that have to be incurred irrespective of the type of product amounts to ₹ 1,80,000. Besides, there are specific fixed costs of ₹ 60,000 to be incurred only if A is produced and ₹ 72,000 to be incurred only if B is produced. Assume no inventory. At present, 7,500 units of A and 7,500 units of B are sold.

Required:

(i) What is the current Break-Even Point (BEP)?
(ii) What is the minimum number of units to achieve BEP?

(iii) If there are only 10,000 labour hours possible in production period, what would be the optimum product-mix?

(d) What is meant by 'Learning Curve'? Mention two areas where learning curve technique is useful in business. (3+3)+(1x4)+(2x3)+(2+2)

Answer

(a) Simulation of data of the Automobile Production LIne:

Production/day	Probability	Cumulative Probability	Random No. Range
95	0.03	0.03	0 – 2
96	0.05	0.08	3 – 7
97	0.07	0.15	8 – 14
98	0.10	0.25	15 - 24
99	0.15	0.40	25 - 39
100	0.20	0.60	40 - 59
101	0.15	0.75	60 - 74
102	0.10	0.85	75 - 84
103	0.07	0.92	85 - 91
104	0.05	0.97	92 - 96
105	0.03	1.00	97 - 99
Total	1.00		

Day	Random No.	Production	No. of cars waiting to be shipped	No. of empty space on the boat
1	20	98	-	3
2	63	101	-	-
3	46	100	-	1
4	16	98	-	3
5	45	100	-	1
6	41	100	-	1
7	44	100	-	1
8	66	101	-	-
9	87	103	2	-
10	26	99	-	2
11	78	102	1	-
12	40	100	-	1
13	29	99	-	2
14	92	104	3	-
15	21	98	-	3
Total			6	18

Average No. of cars waiting to be shipped: 6 ÷ 15 = 0.40

Average No. of empty space on the boat: 18 ÷ 15 =1.2

(b) The Non-conventional Variance analysis should include the following:

(i) Quality Cost Variance (QCV) = Actual Quality Cost – Standard Quality Cost

(ii) Market-Share Variance (MSV) = Actual sales at Standard Contribution per unit (SCPU) – Budgeted sales units at SCPU

(iii) Market-Size Variance (MS_1V) = Budgeted share of Contribution at SCPU – Budgeted Contribution

(iv) Market-Cost Variance = Actual Marketing Cost – Budgeted Marketing Cost

(c)

(i) Current BEP (both A and B produced):

Total Fixed Cost = 60,000 + 72,000 + 1,80,000 = ₹ 3,12,000

Contribution of A = 20, B = 30, Average = 25 (equal no. of units A and B)

BEP = 3,12,000/25 = 12,480 units (i.e., 6,240 units of A and 6,240 units of B)

(ii) If only A is produced, BEP (60,000 + 1,80,000)/20 = 12,000 units

If only B is produced BEP (72,000 + 1,80,000)/30 = 8,400 units

Minimum number of units for BEP = 8,400 units of B

(iii) Contribution per labour hour A: 20/2 = 10 and for B = 30/6 = 5

With given 10,000 labour hours calculation of optimum product mix is not possible as with 10,000 labour hours one can produce only 10,000/10 = 1,000 units of A & 10,000/5 = 2,000 units of B which are much lower than their respective BEPs.

(A produced 1,000 units and B produced 2,000 units which are blow the BEP)

(d) Learning Curve Theory is concerned with the idea that when a new job, process or activity commences for the first time it is likely that the workforce involved will not achieve maximum efficiency immediately.

Learning curve techniques are now widely used in business. Some of the uses are as follows:

(i) It is useful in exercising control.

(ii) It may be used for make-or-buy decisions especially if the outside manufacturer has reached the maximum on the learning curve. Helps to calculate the sensitive rates in wage bargaining.

(iii) A knowledge of learning curve techniques assists in planning the inventories of materials., work-in-progress, and finished goods.

(iv) It is frequently used in conjunction with establishing bid price for contracts.

(v) It suggests a basis for correct staffing in continuously expanding production.

9.

(a) **The importance of exceptional quality is demonstrated by the Walt Disney Company in operating its theme parks. The focus of the parks is customer satisfaction. This is accomplished through meticulous attention to every detail, with particular focus on the role of employees in service 'delivery. Employees are viewed as the most important organisational resource and great care is taken in employee hiring and training. All employees are called "cast members", regardless of whether they are**

janitors or performers. Employees are extensively trained in customer service, communication, and quality awareness. Continual monitoring of quality is considered important, and employees meet regularly in teams to evaluate their effectiveness. All employees are shown how the quality of their individual jobs contributes to the success of the park.
Which element of Total Quality Management (TQM) is used in the Walt Disney Company?

(b) A company produces four products, viz. P, Q, R, and S. The data relating to the production activity are as under:

Product	Quantity of production	Material cost/unit	Direct labour hours/unit	Machine hours/uni	Direct labour cost/unit
P	1,000	10	1	0.50	6
Q	10,000	10	1	0.50	6
R	1,200	32	4	2.00	24
S	14,000	34	3	3.00	18

Production overheads are as under:

(i) Overheads applicable to machine oriented activity ₹ 1,49,700

(ii) Overheads relating to ordering materials ₹ 7,680

(iii) Set up cost ₹ 17,400

(iv) Administration overheads for spare parts ₹ 34,380

(v) Material handling costs ₹ 30,294

The following further information have been compiled:

Product	No. of set up	No. of material orders	No. of times materials handled	No. of spare parts
P	3	3	6	6
Q	18	12	30	15
R	5	3	9	3
S	24	12	36	12

Required:

(i) Select a suitable cost driver for each item of overhead expenses and calculate the cost per unit of cost driver.

(ii) Using the concept of Activity Based Costing, compute the factory cost per unit of each product.

(1×5)+(2×5)+5

Answer

(a) Team Approach TQM stresses that quality is an organisational effort. To facilitate the solving of quality problems, it places great emphasis on teamwork. The use of teams is based on the old motto that "two heads are better than one".
"Using techniques such as brainstorming, discussion, and quality control tools, teams work regularly to correct problems. The contributions of teams are considered vital to the success of the company. For this reason, companies set aside time in the workday for the team meetings.
Teams vary in their degree of structure and formality, and different types of teams solve different types of problems. One of the most common types of teams is the

quality circle, a team of volunteer production employees and their supervisors whose purpose is to solve quality problems.
The circle is usually composed of eight to ten members, and decisions are made through group consensus. The teams usually meet weekly during work hours in a place designated for this purpose. They follow a preset process for analysing and solving quality problems.
Open discussion is promoted, and criticism is not allowed. Although the functioning of quality circles is friendly and casual, it is serious business. Quality circles are not mere "Gab sessions". Rather, they *do* important work for the company and have been very successful in many firms

(b) Computation of Cost Driver Rates:

(i) Overheads relating to machinery oriented activity-
Cost driver a machine hour rate= (1,000×0.5)+(10,000×0.5)+(1,200×2)+(14,000×3)
= 49,900

Rate= ₹1,49,700/49,900 = ₹ 3 per hour

(ii) Overheads relating to ordering materials-
Cost driver a number of material orders = ₹ 7,680/30 = ₹ 256 per order

(iii) Set up costs-
Cost driver a No. of set ups = ₹ 17,400/50 = ₹ 348 per set up

(iv) Administrative overheads for spare parts-
Cost driver a No. of spare parts = ₹ 34,380/36 = ₹ 955 per spare parts

(v) Materials handling cost-
Cost driver a No. of times materials handled = ₹ 30,294/81
= ₹ 374 per material handling

Computation of factory cost for each product:

Items	P		Q		R		S	
Materials		10.00		10.00		32.00		34.00
Labour		6.00		6.00		24.00		18.00
Overhead								
Mach. Oriented Activity	1.500		1.50		6.00		9.00	
Ordering of Materials	0.768		0.31		0.64		0.22	
Set up costs	1.044		0.63		1.45		0.60	
Administrative Spare Parts	5.730		1.43		2.39		0.82	
Materials Handling	2.244	11.29	1.12	4.99	2.81	13.29	0.96	11.60
Factory costs (₹)		27.29		20.99		69.29		63.60