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TERM – JUNE 2024 SYLLABUS 2022

OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 3 Hours

Full Marks: 100

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

SECTION – A (Compulsory)

1. Choose the correct option:

- (i) A department store has one storekeeper. The average number of customers handled by the storekeeper is 30 per hour. If the customer arrives at the store at mean rate of 25 per hour, what will be the average number of customers in the system:
 - 2 customers. (a)
 - (b) 3 customers.
 - 5 customers. (c)
 - (d) None of the above.
- (ii) Which one of the following standards is associated with the "Quality Assurance" in Final Inspection Test"?
 - (a) ISO 9001.
 - ISO 9002. (b)
 - ISO 9003. (c)
 - ISO 9004. (d)
- (iii) Business Process Re-engineering is:
 - (a) eliminating loss-making process.
 - (b) redesigning operational processes.
 - redesigning the product and services. (c)
 - (d) recruiting the process engineers.
- Forecasting the weather is an example of: (iv)
 - Narrow AI. (a)
 - (b) General AI/human-level.
 - (c) Super AI.
 - Deep-learning. (d)
- (v) 'Z' chart is a chart used in:
 - (a) Programme control.
 - (b) Job control.
 - Cost control. (c)
 - (d) Quality control.
- The starting point of Production cycle is (vi)
 - Product design (a)
 - (b) Production planning
 - Routing (c)
 - Market Research (d)
- (vii) The lead-time is the time:
 - (a) To place holders for materials.
 - (b) Time of receiving materials.
 - Time between receipt of material and using materials. (c)
 - (d) Time between placing the order and receiving the materials.



 $[15 \times 2 = 30]$

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(viii) The type of production control which is typically found where a particular bottleneck machines exists in the process of manufacturing is

- (a) Block control
- (b) Load control
- (c) Flow control
- (d) Batch control
- (ix) Which one of the following is NOT the advantage of Preventive Maintenance?
 - (a) Better product quality
 - (b) Greater safety of workers
 - (c) Increased breakdowns and downtime
 - (d) Fewer large-scale repairs
- (x) A Ltd., a large scale industry manufactures Product K of 24 units per shift of 8 hours. The standard time per unit is 15 minutes. What is the productivity of the per shift of 8 hours?
 - (a) 50%
 - (b) 60%
 - (c) 75%
 - (d) 80%

(xi) The objective function of a LPP is $Z = 3x_1 + 2x_2$. If $x_1 = 10$ and $x_2 = 5$, then the value of Z is:

- (a) 35
- (b) 40
- (c) 45
- (d) 50

(xii) A ______ is a business unit in a growing market, but not yet with high market share.

- (a) cash cow
- (b) dog
- (c) question mark
- (d) star
- (xiii) The test is a catch-all category, indicating that the structure must fit legal, stakeholder, trade union or similar constraints.
 - (a) The Feasibility Test
 - (b) The People Test
 - (c) The Parenting Advantage Test
 - (d) The Specialised Cultures Test
- (xiv) _____ is similar to referral programs.
 - (a) Influencer marketing
 - (b) Affiliate Marketing
 - (c) Pay-per-click
 - (d) Content marketing
- (xv) What describes the categories of activities within and around an organization, which together create a product or service?
 - (a) SWOT analysis
 - (b) BCG framework
 - (c) Value chain
 - (d) Brain storming

Answer:

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)
с	b	b	а	а	d	d	b	с	с	b	с	а	b	с

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[5 x 14 = 70]

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SECTION – B

Answer any 5 questions out of 7 questions given. Each question carries 14 marks.

2.	(a)	Enumerate the scope of Operations Management	[7]
	(b)	Explain the scope of Total Quality Management.	[7]

Answer:

(a) Operations Management (OM) encompasses all organizational activities that acquire the raw form of materials (input), process or convert into a consumable products and services as required to meet the needs of the end customers. OM deals with both tangible product and intangible services.

Scope of Operation Management

Operations Management concerns with the conversion of inputs into outputs, using physical resources, so as to provide the desired utilities to the customer while meeting the other organizational objectives of effectiveness, efficiency and adoptability. It distinguishes itself from other functions such as personnel, marketing, finance, etc. by its primary concern for 'conversion by using physical resources'. Following are the activities, which are listed under Production and Operations Management functions:

- 1. Location of facilities.
- 2. Plant layouts and Material Handling.
- 3. Product Design.
- 4. Process Design.
- 5. Production Planning and Control.
- 6. Quality Control.
- 7. Materials Management.
- 8. Maintenance Management.

(b) Scope of Total Quality Management (TQM)

- 1. An integrated organisational infrastructure
- 2. A set of management practices
- 3. A wide variety of tools and techniques.

TQM is Japanese approach to quality. The term TQM refers to a quest-for quality in an organisation. TQM is a process that underlines three philosophies. One is never-ending push to improve, which is referred to as continuous improvement; the second is the involvement of every employee in the organisation and the third is the goal for customer satisfaction, which means meeting or exceeding customer expectations. It often focuses on benchmarking world-class standards, product and service design and purchasing. In addition, TQM involves a number of other elements such as:

- Team approach,
- Employee empowerment
- Decisions based on facts rather than opinions,

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- Knowledge of quality tools [flow charts, check sheets, histograms, pareto analysis, scatter diagrams etc.]
- Quality at the source and
- Inclusion of suppliers as a part of quality improvement programme.

TQM is a process of continuous improvement at every level of the organisation-the centre of the entire process is customer satisfaction. TQM implies that the organisation is doing everything it can to achieve quality at all stages of the process, from customer demands, to product design, to engineering.

TQM seeks to breakdown communication barriers among employees and also between the organisation and its external stakeholders, in order to increase cross-functional integration and provide new avenues for co-operation to improve quality. It would be incorrect to think of TQM merely a collection of techniques. Rather, TQM reflects a whole new attitude toward quality. It is about the culture of an organisation. To truly reap the benefits of TQM, the culture of an organisations must change. In other words, TQM organisation strives to develop co-operative relationships with its suppliers and distributors so that continuous improvement of quality becomes their goals too. Ford, Motorola, and GM have taken steps to develop long-term relationships with their suppliers and distributors.

3. (a) Discuss briefly the concept of "Preventive maintenance" and its advantages. [3+4=7]

(b) A manager has to decide about the number of machines to be purchased. He has three options i.e., purchasing one, or two or three machines. The data are given below:

Number of machine	Annual fixed cost	Corresponding range of output
One	₹ 12,000	0 to 300
Two	₹ 15,000	301 to 600
Three	₹21,000	601 to 900

Variable cost is ₹ 20 per unit and revenue is ₹ 50 per unit

- A. What is the break-even point for each range?
- B. If projected demand is between 600 and 650 units how many machines should the manager purchase? [7]

Answer:

(a) A system of scheduled, planned or preventive maintenance tries to minimize the problems of breakdown maintenance. It locates weak parts in all equipments, provides them regular inspection and minor repairs thereby reducing the danger of unanticipated breakdowns. The underlying principle of preventive maintenance is that prevention is better than cure. It involves periodic inspection of equipment and machinery to uncover conditions that lead to production breakdown and harmful depreciation. The system of preventive maintenance varies from plant to plant depending on the requirement of the plant. Any company, adopting the preventive maintenance should keep the record of failure of various components and equipment, which help the maintenance department to statistically analyze the failure pattern and replace the item before it fails, so that the breakdown can



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be eliminated. This reduces the unanticipated breakdowns, increases the availability of the equipment for production purpose, maintain optimum productive efficiency of equipment and machinery reduces the work content of maintenance job, increases productivity and safety of life of worker. Production department or maintenance department depending on the size of the plant generally takes up preventive maintenance work. As the preventive maintenance is a costly affair, it is better to maintain records of cost (both labour, materials used and spares used) and a valuation of the work done by the department will show us what benefits are derived from preventive maintenance. The analytical approach to evaluate the work done by preventive maintenance is

- (i) (Inspections incomplete) / (Inspections scheduled) \times 100 should be less than 10%
- (ii) (Hours worked for maintenance) / (Scheduled hours) \times 100 = Performance of the department.
- (iii) Down time to be given as a ratio of the available hours and to be compared against a standard to be worked out for each company or against a figure of the past. The ratio is given as:
 = Down time in hours/ Available hours (where Available Hours = working days × hours per day × number of machines). Here down time is the total time of stoppage of the machine for scheduled and unscheduled maintenance work.
- (iv) Frequency of break downs = (Number of break downs) / (Available machine hours)
- (v) Effectiveness of planning = (Labour hours on scheduled maintenance) / (Total labour hours spent on maintenance).

OR

(Down time due to scheduled maintenance)/(Down time due to total maintenance work)

Advantages of preventive maintenance:

- (i) Reduced breakdowns and downtime,
- (ii) Greater safety to workers,
- (iii) Fewer large scale repairs,
- (iv) Less standby or reserve equipment or spares,
- (v) Lower unit cost of the product manufactured,
- (vi) Better product quality,
- (vii) Increased equipments life and
- (viii) Better industrial relations.

(b) A. Break-even point

Let Q be the break-even point.

FC = Fixed cost, R = Revenue per unit, VC = Variable cost per unit

At, BEP, TR = FC + TVC

or, Revenue p.u. $\times Q = FC + VC p.u. \times Q$

Q(R-VC) = FC



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$$Q = \frac{FC}{R - VC}$$

Let Q1 be the break-even-point for one machine option

Then, $Q1 = \frac{12000}{(50-20)} = \frac{12000}{30} = 400$ units (Not within the range of 0 to 300)

Let Q2 be the break-even-point for two machines option.

Then, $Q2 = \frac{15000}{(50 - 20)} = \frac{15000}{30} = 500$ units (within the range of 301 to 600)

Let Q3 be the break-even-point for three machines option.

Then, $Q3 = \frac{21000}{(50 - 20)} = \frac{21000}{30} = 700$ units (within the range of 601 to 900)

B. The projected demand is between 600 to 650 units.

The break-even point for single machine option (i.e., 400 units) is not feasible because it exceeds the range of volume that can be produced with one machine (i.e., 0 to 300).

Also, the break-even point for 3 machines is 700 units which is more than the upper limit of projected demand of 600 to 650 units and hence not feasible. For 2 machines option the break- even volume is 500 units and volume range is 301 to 600.

Hence, the demand of 600 can be met with 2 machines and profit is earned because the production volume of 600 is more than the break-even volume of 500. If the manager wants to produce 650 units with 3 machines, there will be loss because the break-even volume with three machines is 700 units. Hence, the manager would choose two machines and produce 600 units.

4. (a) A Co. is engaged in manufacturing five brands of packed snacks. It is having five manufacturing set-ups, each capable of manufacturing any of its brands one at a time. The cost to make a brand on these set-ups vary according to the following table:

Set-ups Brand	S 1	S ₂	S ₃	S 4	S 5
B 1	4	6	7	5	11
B ₂	7	3	6	9	5
B 3	8	5	4	6	9
B 4	9	12	7	11	10
B 5	7	5	9	8	11

Time Taken (in minutes) by 4 Workers

Assuming five set-ups are S₁, S₂, S₃, S₄ & S₅ and five brands are B₁, B₂, B₃, B₄ & B₅. Compute the optimal assignment of products on these set-ups resulting in minimum cost. Use Hungarian method. [7]

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(b) 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/Day	Prob.	Production/Day	Prob.
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 bay, at the end of each day, by ferry. If the ferry has space for only 101 cars, calculate what will be the average number of cars waiting to be shipped, and also calculate what will be the average number of empty space on the boat?

Use following Random Numbers to simulate the data provided above - 20, 63, 46, 16, 45, 41, 44, 66, 87, 26, 78, 40, 29, 92, 21. [7]

Answer:

- (a) In order to find the proper assignments, we apply the Hungarian Method as follows:
 - Steps 1.

Row reduction – subtract the minimum element of each row from each element of that row. Table 1

Set-ups Brand	\mathbf{S}_1	S_2	S ₃	S_4	S ₅	
B_1	0	2	3	1	7	
B_2	4	0	3	6	2	
B ₃	4	1	0	2	5	
B4	2	5	0	4	3	
B 5	2	0	4	3	6	

Steps 2.

Column reduction – subtract the minimum element of each column from each element of that column.

Table 2						
Set-ups Brand	\mathbf{S}_1	S_2	S ₃	S_4	S 5	
B_1	0	2	3	0	5	
B_2	4	0	3	5	0	
B ₃	4	1	0	1	3	
B_4	2	5	0	3	1	
B ₅	2	0	4	2	4	

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Steps 3.

Apply line test – Draw minimum number of horizontal & vertical lines to cover all zeros. The number of lines to cover all zeros is 4 (< 5), we proceed to follow Step 4 and onwards.

Table 3						
Set-ups Brand	\mathbf{S}_1	S ₂	S ₃	S_4	S_5	
B ₁	-0-	-2	-}	-0-	_5►	
B ₂	-4	•	-}	-5-	-0►	
B ₃	4	1	Ø	1	3	
B ₄	2	5	Ø	3	1	
B 5	2	0	4	2	4	

Steps 4.

Subtract smallest uncovered number (1) from each uncovered number and add it to number lying at the intersection of lines drawn in Step 3.

Table 4							
Set-ups Brand	\mathbf{S}_1	S_2	S ₃	S ₄	S_5		
B_1	-0-	-3-	4	-0	-\$►		
B_2	4	1	4	5	0		
B ₃	-3-	-1	-0-	-0	-₽►		
B_4	1	5	Ø	2	Ø		
B 5	-1	0	4	1	₿►		
			•		•		

Steps 5.

Since the number of lines is 5 (equal to matrix size), optimal assignment is possible.

Set-ups Brand	\mathbf{S}_1	S_2	S ₃	S_4	S ₅	
B_1	0	3	4	Ø	5	
B_2	4	1	4	5	0	
B_3	3	1	Ø	0	2	
B_4	1	5	0	2	Ø	
B_5	1	0	4	1	3	

Table 5

Steps 6.

Optimal assignments and their costs:

Т	<u> </u>	1_1	1 -	6
- 1	a	n	le.	0

	Cost
Brand B ₁ to Set-up S ₁	4
Brand B ₂ to Set-up S ₅	5
Brand B ₃ to Set-up S ₄	6
Brand B ₄ to Set-up S ₃	7
Brand B ₅ to Set-up S ₂	5
Total Cost	27

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(b)

Production/dayProbabilityCumulative ProbabilityRandom No. Range950.030.0300-02960.050.0803-07970.070.1508-14980.100.2515-24990.150.4025-391000.200.6040-591010.150.7560-741020.100.8575-841030.070.9285-911040.050.9792-961050.031.0097-99	Simulation of data of an Automobile Production line							
950.030.0300-02960.050.0803-07970.070.1508-14980.100.2515-24990.150.4025-391000.200.6040-591010.150.7560-741020.100.8575-841030.070.9285-911040.050.9792-961050.031.0097-99	Production/day	Probability	Cumulative Probability	Random No. Range				
960.050.0803-07970.070.1508-14980.100.2515-24990.150.4025-391000.200.6040-591010.150.7560-741020.100.8575-841030.070.9285-911040.050.9792-961050.031.0097-99	95	0.03	0.03	00-02				
97 0.07 0.15 08-14 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	96	0.05	0.08	03-07				
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	97	0.07	0.15	08-14				
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	98	0.10	0.25	15-24				
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	99	0.15	0.40	25-39				
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	100	0.20	0.60	40-59				
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 1.00 1.00 1.00 1.00	101	0.15	0.75	60-74				
103 0.07 0.92 85-91 104 0.05 0.97 92-96 105 0.03 1.00 97-99 1.00 1.00 1.00 1.00	102	0.10	0.85	75-84				
104 0.05 0.97 92-96 105 0.03 1.00 97-99 1.00 1.00 1.00 1.00	103	0.07	0.92	85-91				
105 0.03 1.00 97-99 1.00 1.	104	0.05	0.97	92-96				
1.00	105	0.03	1.00	97-99				
		1.00						

	Simulated data								
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 per day Average no. of empty space on the boat = 18/15 = 1.2 per day

(a) K Ltd. an Engineering firm is using a machine whose purchase price is ₹13,000. The installation charges amount to ₹ 3,700 and the machine has a scrap value of only ₹ 1,400 because the firm has a monopoly of this type of work. The maintenance cost in various years as is shown below:

Year	1	2	3	4	5	6	7	8	9
Cost	300	850	1300	1900	2600	3300	4200	6000	7500

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Required:

- (i) Determine after how many years should the machine be replaced on economic considerations (Assuming that machine replacement can be done only at the year-end).
- (ii) Compute what will be the average cost of Replacement?
- (b) B Ltd. has recently won a contract for the installation of a die casting machine and its associated building construction work at a local factory of large national firm of electronic engineers. Project manager has listed down the activities in the project as under:

Activity I	dentification	Preceding Activities	Duration (Days)
Α	1-2	-	1
В	2-3	Α	3
С	2-4	Α	15
D	2-5	Α	1
Ε	3-5	В	10
F	4-5	С	6
G	5-6	D , E , F	1
Н	6-7	G	1
Ι	6-8	G	15
J	7-8	Н	2

Required:

- (i) Prepare and draw the network for the project.
- (ii) Infer what are the possible paths with duration of the project.
- (iii) Examine and identify the critical path with duration of the project. [3+2+2=7]

Answer:

(a) (i) The machine may best be replaced every 7th year.

- (ii) The average cost of Replacement is ₹4,250 approximately
- (b) (i)





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Critical Path & Duration:

1-2-4-5-6-8 and duration is 38 Days

(a)	"A typical business firm usually considers three types of Strategy" – Explain.	[7]
(b)	Explain various application areas of Internet of Things (IOT).	[7]

Answer:

(a) A typical business firm usually considers three types of strategy

- (i) Corporate strategy: It is concerned with the overall purpose and scope of an organisation and how value will be added to the different parts (business units) and product lines of the organisation. Corporate strategies typically fit within the three main categories of stability, growth and retrenchment. Decisions include investment in diversification, vertical integration, acquisitions, new ventures, the allocation of resources between the different businesses of the firm and divestments.
- (ii) Business strategy: It is about how to compete successfully in particular markets. It emphasizes improvement of the competitive position of an organisation's products or services in the specified industry or market segment served by that business unit. These strategies fit within the two overall categories namely, competitive and cooperative strategies.
- (iii) Functional strategy or Operational Level Strategy: It is concerned with how the component parts of an organisation deliver effectively the corporate and business level strategies in terms of resources, processes and people. It is concerned with developing and nurturing competence to provide a business unit with a competitive advantage. These strategies are taken at the functional level directed towards maximising resource productivity.

It may be mentioned that organisations use all the three types of strategies simultaneously. The term 'hierarchy of strategy' is commonly used to explain the nesting of one strategy within another so that they complement and support one another. It also refers to the grouping of strategies by level in the organisation. Functional strategies support business strategies, which in turn support the corporate strategy

- (b) Application areas of Internet of Things (IoT):
 - Increasingly, organisations in a variety of industries are using IoT to operate more efficiently, better understand customers to deliver enhanced customer service, improve decision-making and increase the value of the business.
 - Access to low-cost, low-power sensor technology: Affordable and reliable sensors are making IoT technology possible for more manufacturers.
 - **Connectivity:** A host of network protocols for the internet has made it easy to connect sensors to the cloud and to other "things" for efficient data transfer.
 - Machine learning and analytics: With advances in machine learning and analytics, along with access to varied and vast amounts of data stored in the cloud, businesses can gather insights faster and more easily. The emergence of these allied technologies continues to push the boundaries of IoT and the data produced by IoT also feeds these technologies.



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- **Conversational artificial intelligence (AOI):** Advances in neural networks have brought natural-language processing (NLP) to IoT devices (such as digital personal assistants Alexa, Cortana, and Siri) and made them appealing, affordable and viable for home use.
- Smart Lighting: This is another one of the Internet of Things examples that have gradually been coming into common usage. Bulbs and battens connected to Wifi can be turned on and off remotely. Schedule for usage can be set for these devices along with their brightnesses controlled and their power consumption monitored. Using other IoT devices, smart lighting devices can also be turned on and off by voice alone. The power consumption of these devices can also be easily monitored using IoT.
- Smart Parking: It is hard to regulate the occupancy and parking coverage in large multistory car parking facilities. Among the many Internet of Things examples is the use of IoT in such facilities for counting the number of cars that have driven into the facility and the number that have driven out. Specific devices can also give you the exact location where you have parked your car so you are not lost.
- **Medical Fridges:** Medical fridges are a grand entry to the Internet of Things examples list and can be used for regulatory compliance and safety purposes. Vials of vaccines and medicines can often be spoiled if they are not kept at the correct temperatures. Medical refrigerators cannot be monitored throughout the day, especially in person. Having IoT sensors inside medical fridges can enable them to be monitored remotely, and their temperature changed as per requirement.
- 7. (a) Robert Linneman and Rajan Chandran have suggested that a seven step process in contingency planning. In this context, discuss in brief what are the said steps in contingency planning. [7]
 - (b) Analyze the four sorts of business as given in the BCG Matrix. [7]

Answer:

- (a) The Seven Steps in Contingency Planning are enumerated below:
 - **Step 1** Identify the beneficial and unfavourable events that could possibly derail the strategy or strategies.
 - Step 2 Specify trigger points. Calculate about when contingent events are likely to occur.
 - Step 3 Assess the impact of each contingent event. Estimate the potential benefit or harm of each contingent event.
 - Step 4 Develop contingency plans. Be sure that contingency plans are compatible with current strategy and are economically feasible.
 - Step 5 Assess the counter impact of each contingency plan. That is, estimate how much each contingency plan will capitalize on or cancel out its associated contingent event. Doing this will quantify the potential value of each contingency plan.
 - Step 6 Determine early warning signals for key contingency event. Monitor the early warning signals.
 - Step 7 For contingent event with reliable early warning signals, develop advance action plans to take advantage of the available lead time.

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(b) Boston Consulting Group (BCG) matrix.

One of the most common and long-standing ways of conceiving of the balance of a portfolio of businesses is the Boston Consulting Group (BCG) matrix.



Figure 9.5: The Growth Share (or BCG) matrix

Here market share and market growth are critical variables for determining attractiveness and balance. High market share and high growth are, of course, attractive. However, the BCG matrix also warns that high growth demands heavy investment, for instance to expand capacity or develop brands. There needs to be a balance within the portfolio, so that there are some low growth businesses that are making sufficient surplus to fund the investment needs of higher growth businesses. The market growth/market share axes of the BCG matrix define four sorts of business:

- A star is a business unit which has a high market share in a growing market. The business unit may be spending heavily to keep up with growth, but high market share should yield sufficient profits to make it more or less self-sufficient in terms of investment needs.
- A question mark (or problem child) is a business unit in a growing market, but not yet with high market share. Developing question marks into stars, with high market share, takes heavy investment. Many question marks fail to develop, so the BCG advises corporate parents to nurture several at a time. It is important to make sure that some question marks develop into stars, as existing stars eventually become cash cows and cash cows may decline into dogs.
- A cash cow is a business unit with a high market share in a mature market. However, because growth is low, investment needs are less, while high market share means that the business unit should be profitable. The cash cow should then be a cash provider, helping to fund investments in question marks.
- Dogs are business units with a low share in static or declining markets and are thus the worst of all combinations. They may be a cash drain and use up a disproportionate amount of company time and resources. The BCG usually recommends divestment or closure.



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8. (a) Discuss what do you understand by BPR. Examine what are the important reason to lead an organization to undertake re-engineering. [7]

(b) Examine with examples, why do we need the Strategic Business Unit. [7]

Answer:

(a) **Business Process Re-engineering:**

Business Process Re-engineering may be considered to be radical redesign of the business processes often used by companies to cut costs and return to profitability. If is fundamental re-thinking and radical re-design of business processes to achieve dramatic improvements in critical contemporary measures of performances such as cost, quality, service and speed.

Three Important reasons:

- 1. An organisation needs dramatic improvement to sustain itself and is already in deep trouble. High failure rates of products and repetitive customer complaints ca n be one of the reasons that can cause huge disruption in functioning of an organization.
- 2. The need for re-engineering can be felt by management keeping in mind the eminent problems that the organisation is expected to face in the future due to some dramatic changes in the environment both internal and external.
- 3. There can be situations when re-engineering can help organisations to be in better position than they are currently in.
- (b) A Strategic Business Unit is a relatively autonomous division of a large company that operates as an independent enterprise with responsibility for a particular range of products or activities. These strategic business units are responsible for their own profit or loss but are answerable to the top management.

SBU or a Strategic Business unit mostly targets a particular market segment and it provides expertise in product management and operations which help the parent company manage and track the different products that are produced in the company. The SBU is given the authority to make its own strategic decisions within corporate guidelines as long as it meets corporate objectives. A big organization like Unilever etc. has many SBUs for their different categories of products like Cosmetics, Food products, Beverages, etc., and each is managed through a separate unit head. It promotes accountability.

Since units' heads are responsible for individual SBU profitability. Career development opportunities are further higher in this structure.

It allows better control of categories of products manufacturing, marketing, and distribution.