



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:

[15 x 2 = 30]

- (i). The starting point of Production cycle is
(A) Product design
(B) Production planning
(C) Routing
(D) Market Research
- (ii). 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
- (iii). Consider the following item that is being managed using a fixed time period model with Safety Stock:
Weekly Demand – 50 units;
Review Cycle – 3 weeks;
Safety Stock – 30 units.
What is the average inventory level?
(A) 100 units
(B) 25 units
(C) 105 units
(D) None of these.
- (iv). 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
- (v). Which one of the following ISO standards concerns minimization of harmful effects to the environment caused by the operations by the organization?
(A) ISO 9001
(B) ISO 14000
(C) ISO 9002
(D) ISO 9004



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- (vi). 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%
- (vii). Arrangement of machine depending on sequence of operations happen in:
- (A) Process Layout
(B) Product Layout
(C) Hybrid Layout
(D) Group Technology Layout
- (viii). Buffer stock is built to cater for
- (A) Fluctuating load
(B) Machine breakdown
(C) Import substitution
(D) Diversification
- (ix). 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
- (x). 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
- (xi). 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
- (xii). _____ specifies what is to be accomplished by focusing on the end result.
- (A) Output control
(B) Behavior control
(C) Premise control
(D) Implementation control
- (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



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(xiv) Which among the following is not a characteristic of Big Data?

- (A) Variety
- (B) Volume
- (C) Velocity
- (D) Invariability

(xv) _____ is similar to referral programs.

- (A) Influencer marketing
- (B) Affiliate Marketing
- (C) Pay-per-click
- (D) Content marketing

SECTION – B

Answer any five questions out of seven questions given. Each question carries 14 marks.

[5 x 14 = 70]

2. (a). Enumerate the characteristics of Modern Operations functions [7]

(b). Define Process Strategy? The Classical way of Categorizations includes 4 types of layouts – Discuss [3 + 4=7]

3. (a). What is Project Management? Project Quality Management consists of four process – Discuss [2 + 5=7]

(b). With the help of following data, project the trend of sales for the next 5 years: [7]

Years	2017	2018	2019	2020	2021	2022
Sales in Lakhs of Rupees	120	130	135	140	150	165

4. (a) A supervisor in his workshop is considering how he should assign the four jobs that are to be performed, to four of the workers under him. He wants to assign the jobs to the workers such that the aggregate time to perform the jobs is the least. Based on previous experience, he has the information on the time taken by the four workers in performing these jobs and the same is given in the table below.

Time Taken (in minutes) by 4 Workers [7]

Worker	Job			
	A	B	C	D
1	46	40	51	68
2	57	42	63	55
3	49	53	48	64
4	41	45	61	55

Solve the assignment problem for optimal solution using Hungarian Method [7]



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- (b) A retailer is dealing with FMCG items. The table, as given below, presents the past data of demand per week in hundred kgs with frequency.

Demand / Week	0	5	10	15	20	25
Frequency	3	7	5	11	18	6

Using the following sequence of the random numbers, generate the demand for the next 10 weeks. Also find out the average demand per week.

Random Nos.	27	43	50	11	16	36
	58	64	51	38	18	47

[7]

5. (a) A Cab operations company is experiencing the following number of breakdowns for months over the past 2 years in their new fleet cabs:

Number of Breakdowns	0	1	2	3	4
Number of months this incurred	2	8	10	3	1

Each breakdown costs the firm an average of Rs 2,800/-. For a cost of Rs 1,500 per month, preventive maintenance can be carried out to limit the breakdowns to an average of one per month. Which policy is suitable for the firm? [7]

- (b) Draw the network for the following activities and find the Critical Path and Total duration of the project.

Activity	Predecessor	Duration (months)
A	-	2
B	-	3
C	-	5
D	A	4
E	B	1
F	B	5
G	C	8
H	D	1
I	E	2
J	F,G	4
K	H,I	3
L	K,J	2

[7]

6. (a) “A typical business form usually considers three types of Strategy” – Discuss. [7]

- (b) “In spite of the fact that cloud computing has huge benefits yet, it has its own causes of concern”. Discuss [7]

7. (a) Explain the four sorts of business as given in the BCG Matrix. Identify the limitation of BCG Matrix [7]

- (b) Analyze the steps in a formal strategic planning process? [7]



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- 8.** (a) Categorize major reasons of SBU approach.
- (b) What do you mean by goal congruence? Discuss five areas that have the ability to create goal congruence. [7]