

Paper 9 – Operations Management & Strategic Management

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Full Marks : 100

Time allowed: 3 hours

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

This question paper has two sections.

Both the sections are to be answered subject to instructions given against each.

Section – I: (Operations Management)

1. (a) Choose the most correct alternatives: [1×10=10]
- (i) Application of technology or process to the raw material to add use value is known as:
- (a) Product,
 - (b) Production,
 - (c) Application of technology,
 - (d) Combination of technology and process.
- (ii) In Process Planning we plan:
- (a) Different machines required,
 - (b) Different operations required,
 - (c) We plan the flow of material in each department,
 - (d) We design the product.
- (iii) Example of production by disintegration is
- (a) Automobile,
 - (b) Locomotive,
 - (c) Crude oil,
 - (d) Mineral water.
- (iv) This aims at finding the best and most efficient way of using the available resources - men, materials, money and machinery:
- (a) Time Study
 - (b) Work Study
 - (c) Method Study
 - (d) Job Evaluation

- (v) Long range forecasting is useful in
- (a) Plan for Research and Development,
 - (b) To Schedule jobs in production,
 - (c) In purchasing the material to meet the present production demand,
 - (d) To assess manpower required in the coming month.
- (vi) Which one of the following standards is associated with the "Quality Assurance in Final Inspection Test"?
- (a) ISO 9001
 - (b) ISO 9002
 - (c) ISO 9003
 - (d) ISO 9004
- (vii) Regularly occurring periodic fluctuations are known as:
- (a) Regular trend,
 - (b) Random element,
 - (c) Seasonal component,
 - (d) Trend.
- (viii) In Operation Planning:
- (a) The planner plans each operation to be done at work centers and the sequences of operations,
 - (b) Decide the tools to be used to perform the operations,
 - (c) Decide the machine to be used to perform the operation,
 - (d) Decide the materials to be used to produce the product.
- (ix) One of the important charts used in Programme control is:
- (a) Material chart,
 - (b) Gantt chart,
 - (c) Route chart,
 - (d) Inspection chart.
- (x) The act of releasing the production documents to production department is known as:
- (a) Routing,
 - (b) Scheduling,
 - (c) Expediting,
 - (d) Dispatching.

MTP_Intermediate_Syllabus-2016_June 2019_Set -1

(b) Match the terms in Column I with the relevant terms in Column II [1×6=6]

Column I	Column II
(A) Furniture	(i) Assembly line
(B) Tools	(ii) Method study
(C) Television set	(iii) Carpentry
(D) Cement	(iv) Machine shop
(E) Aviation Fuel	(v) Rotary Kiln
(F) Motion Economy	(vi) Refinery

(c) State whether the following statements are True/False? [1×6=6]

- (i) Merit Rating is used to determine the cost of a product ()
- (ii) Increase in productivity leads to retrenchment of work force ()
- (iii) Project costs increase as the duration of the project increases ()
- (iv) Job Evaluation is a systematic approach to ascertain the labour worth of a job ()
- (v) Production planning and control is essentially concerned with the control of Finished goods ()
- (vi) Breakdown maintenance doesn't require use of standby machines ()

Answer any *three* questions form the following:

2. (a) Define plant layout. What are the factors influencing layout choices? [6]
- (b) The monthly requirement of raw material for a company is 3000 units. The carrying cost is estimated to be 20% of the purchase price per unit, in addition to ₹ 2 per unit. The purchase price of raw material is ₹ 20 per unit. The ordering is ₹ 25 per order.
- (i) You are required to find EOQ.
- (ii) What is the total cost when the company gets a concession of 5% on the purchase price if it orders 3000 units or more but less than 6000 units per month. [4+6]
3. (a) What does Product Design do? Discuss – Process design and selection. [6]
- (b) Machine A costs of ₹ 80,000. Annual operating costs are ₹ 2,000 for the first year, and they increase by ₹ 15,000 every year (for example, in the fourth year the operating costs are ₹ 47,000). Determine the lease age at which to replace the machine. If the optimal replacement policy is followed; what will be the average yearly cost of operating and owning the machine? (Assume that the resale value of the machine is zero when replaced, and that future costs are not discounted.
- (i) Another machine B costs ₹ 1,00,000. Annual operating cost for the first year is ₹ 4,000 and they increase by ₹ 7,000 every year. The firm has a machine of type A which is one year old. Should the firm replace it with B and if so, when?
- (ii) Suppose the firm is just ready to replace the machine A with another machine of the same type, just then the firm gets and information that the machine B will become available in a year. What should the firm do? [10]

MTP_Intermediate_Syllabus-2016_June 2019_Set -1

4. (a) Without standby equipment, a shutdown will cost ₹ 200 a day. It is estimated that an average of 2.5 days a year can be lost due to shutdowns. A standby machine can be purchased for ₹ 4,000 with an economic life of 10 years and ₹ 500 salvage value at that date. Its annual costs including 2.5 days of actual operation would be ₹ 100. Make a choice. [6]
- (b) Describe the objective of Time Study. [6]
- (c) What are the elements of lean production? [4]

5. (a) Draw the network for the following activities and find critical path and total duration of project.

Activity	Duration (months)	Activity	Duration (months)
1-2	2.5	4-5	2.0
2-3	2.5	5-6	3.0
2-4	1.5	6-7	1.5
3-4	1.0	5-7	1.5
3-5	1.0		

[8]

- (b) A public transport system is experiencing the following number of breakdowns for months over the past 2 years in their new fleet of vehicles:

Number of breakdowns	0	1	2	3	4
Number of months this occurred	2	8	10	3	1

Each break down costs the firm an average of ₹ 2,800. For a cost of ₹ 1,500 per month, preventive maintenance can be carried out to limit the break-downs to an average of one per month. Which policy is suitable for the firm? [8]

Section – II: (Strategic Management)

6. Choose the correct answer from the given alternatives: [1×6=6]
- (i) Business Process Re-engineering is
- (a) Eliminating loss-making process;
 - (b) Redesigning operational processes;
 - (c) Redesigning the product and services;
 - (d) Recruiting the process engineers.
- (ii) Strategic choice makes a statement about the corporate strategy as well as business strategy:
- (a) They are one and the same;
 - (b) One is an external planning and another resources planning statement;
 - (c) Corporate strategy is a general statement and business strategy defines how a SBU shall operate;

- (d) Both states certain course of action – one for the total unit and another for a particular business agent;
 - (e) One refers to the whole business and another helps in the formulation of marketing decisions.
- (iii) Benchmarking is:
- (a) The analytical tool to identify high cost activities based on the 'Pareto Analysis'.
 - (b) The search for industries best practices that lead to superior performance;
 - (c) The simulation of cost reduction schemes that help to build commitment and improvement of actions;
 - (d) The process of marketing and redesigning the way a typical company works;
 - (e) The framework that earmarks a linkage with suppliers and customers.
- (iv) The conditional of Low share, Negative growth and negative cash flow indicates -
- (a) Dogs.
 - (b) Dodos.
 - (c) Donkey.
 - (d) Dinosaurs.
- (v) Offensive strategy is a strategy:
- (a) For small companies that consider offensive attacks in the market.
 - (b) For those companies that search for new inventory opportunities to create competitive advantage.
 - (c) For the market leader who should attack the competitor by introducing new products that make existing ones obsolete.
 - (d) For those companies who are strong in the market but not leaders and might capture a market share from the leader.
 - (e) None of the above.
- (vi) A strategic business unit (SUB) is defined as a division of an organization:
- (a) That help in the marketing operation;
 - (b) That enable managers to have better control over the resources;
 - (c) That help in the choice of technology;
 - (d) That help in the allocation of scarce resources;
 - (e) That help in identifying talents and potentials of people.

Answer any two question form the following:

7. (a) Discuss the advantages of Strategic Management?
(b) Discuss "Strategic levels in the organizations" [6+6]
8. (a) Discuss the differences in Strategic Management & Strategic Planning.
(b) Define SBU. What are its merits & demerits? [6+6]
9. Write short notes on any *three* of the following four questions: [4×3=12]
(a) Structural Driver's of Change;
(b) Approaches in Strategic Planning;
(c) SWOT Analysis;
(d) Plant location.