INTERMEDIATE EXAMINATION

December 2017

P–9(OMSM)
Syllabus 2016

Operations Management and Strategic Management

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.
This paper contains 2 Sections.
Both Sections are compulsory, subject to instructions provided against each.
All workings must form part of your answer.
Assumptions, if any, must be clearly indicated.

Section A

Operations Management

1. **(a)** Choose the correct answer: 1×10=10

   (i) The effective capacity is NOT influenced by which of the following factors:

     (a) Forecasts of demand

     (b) Plant and labour efficiency

     (c) Subcontracting

     (d) None of the above

   (ii) Key aspects in process strategy does NOT include which of the following:

     (a) Make or buy decisions

     (b) Capital intensity

     (c) Process flexibility

     (d) Packaging

   (iii) The example of worker involvement, as a recent trend in production/operations management is

     (a) SCM

     (b) Just-in-Time

     (c) Quality Circle

     (d) MRP

Please Turn Over

(iv) In an organization, the Production Planning and Control department comes under

   (a) Planning department

   (b) Manufacturing department

   (c) Personnel department

   (d) R & D department

(v) JIT stands for

   (a) Just In Time Purchase

   (b) Just In Time Production

   (c) Just In Time use of Materials

   (d) Just In Time Order the Material

(vi) In route sheet or operation layout, one has to show

   (a) a list of materials to be used

   (b) a list of machine tools to be used

   (c) every work center and operation to be done at that work center

   (d) the cost of product

(vii) One of the important charts used in Programme control is

   (a) Material chart

   (b) Gantt chart

   (c) Route chart

   (d) Inspection chart

(viii) Production planning in the intermediate range of time is termed as

   (a) Production planning.

   (b) Long range production planning.

   (c) Scheduling.

   (d) Aggregate planning.

(ix) Preventive maintenance is useful in reducing

(a) Inspection Cost

(b) Cost of premature replacement

(c) Shutdown Cost

(d) Set-up Cost of machine

(x) Which one of the following standards is associated with the "Quality Assurance in Production and Installation"?

(a) ISO 9001

(b) ISO 9002

(c) ISO 9003

(d) ISO 9004

(b) Match Column A with Column B: 1×6=6

Column A	Column B
(A) Fixture	(i) Conversion of Inputs into outputs
(B) Process layout	(ii) Network Analysis
(C) Capital Intensity	(iii) General purpose machines
(D) Operations Management	(iv) Mix of equipment and labour which will be used by the firm
(E) Crashing	(v) Appliance for holding the work
(F) Less prone to Obsolescence	(vi) Grouping together of similar machines in one department

(c) State whether the following statements are 'True' or 'False': 1×6=6

(i) Customer service is a key objective of operations management.

(ii) In general short term forecasting will be more useful in production planning.

(iii) If the total float value is zero, it means the resources are just sufficient to complete the activity without any delay.

(iv) Job Evaluation is a systematic approach to ascertain the labour worth of a job.

(v) Load control is typically found wherever a particular bottleneck machine does not exist in the process of manufacturing.

(vi) The term "aesthetics" which appeals to the human sense does not add value to the product.

Answer *any three* questions from the following: 16×3=48

2. (a) Briefly explain the characteristics of the modern production system.   7

   (b) A firm has four work centres, A, B, C & D, in series with individual capacities in units per day shown in the figure below.

Work Centres
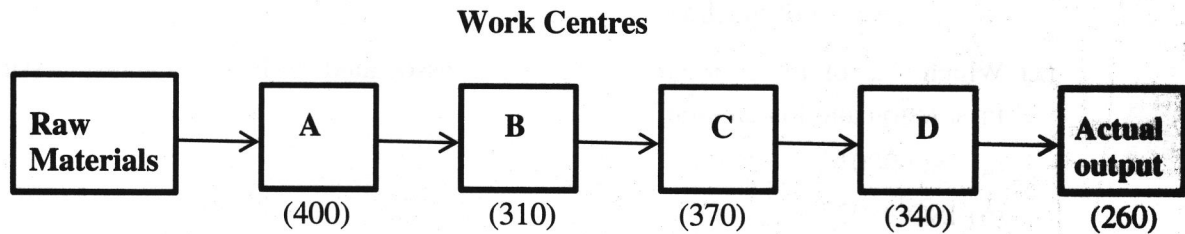
   (i) Identify the bottle neck centre.
   (ii) What is the system capacity?
   (iii) What is the system efficiency?   9

3. (a) Discuss about the following process types to be implemented by a Production Manager as a strategy: 3+4=7

   (i) Batch Process,
   (ii) Repetitive Process.

   (b) Workers come to a tool store room to enquire about special tools (required by them) for accomplishing a particular project assigned to them. The average time between the two arrivals is 60 seconds and the arrivals are assumed to be in Poisson distribution. The average service time (of the tool room attendant) is 48 seconds.

   Determine: 3×3=9

   (i) Average Queue Length
   (ii) Average Length of non-empty queues
   (iii) Average number of workers in system including the worker being attended

4. (a) The below Table shows the time remaining (number of days until due date) and the work remaining (number of days' work) for 5 jobs which were assigned the Letters A to E as they arrived to the shop. Sequence these jobs by priority rules viz.,   2×5=10

   (i) FCFS (ii) EDD (iii) LS (iv) SPT (v) LPT.

Job	Number of days until due date	Number of days' work remaining
A	9	5
B	4	7
C	5	3
D	6	6
E	8	2

(b) A department works on 8 hours shift, 285 days a year and has the usage data of a machine, as given below:

Product	Annual Demand (units)	Processing time (Standard time in hours)
A	360	7·0
B	435	5·0
C	570	6·0

Calculate:

   (i) Processing time needed in hours to produce products A, B and C,

   (ii) Annual production capacity of one machine in standard hours, and

   (iii) Number of machines required.   2×3=6

5. (a) A Public Transport Company 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	3	6	9	4	2

Each breakdown costs the company an average of ₹ 2,500. For a cost of ₹ 1,700 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 company?   10

(b) Draw the network for the following activities and find critical path and total duration of the project.   2+2+2=6

Activity	Duration (months)
1-2	2
2-3	3
2-4	1
3-4	2
4-5	3
5-6	2
5-7	4
6-8	1
7-8	3
8-9	4

Please Turn Over

Section B

Strategic Management

6. Choose the correct answer: 1×6=6

(i) Board of directors has certain basic tasks as follows:

(a) To monitor plans and programs of production.

(b) To design the course of strategic options and appointment of top management.

(c) To control utilization of resources.

(d) To monitor courses of actions for marketing management.

(ii) A Strategic Business Unit (SBU) is defined as a division of an organization:

(a) That helps in the marketing operation.

(b) That helps in the choice of technology.

(c) That enables managers to have better control over the resources.

(d) That helps in identifying talents and potentials of people.

(iii) Mckinsey's 7-s framework consists of:

(a) Structure, Strategy, Software, Skills, Styles, Staff and Supervision

(b) Structure, Strategy, Systems, Skills, Styles, Syndication and Shared values

(c) Structure, Strategy, Systems, Skills, Steering power, Styles and Shared values

(d) Structure, Strategy, Staff, Skills, Systems, Shared values, Style

(e) None of the above

(iv) What are enduring statements of purpose that distinguish one business from other similar Firms?

(a) Policies

(b) Mission statements

(c) Objectives

(d) Rules

(e) Nature of ownership

(v) Outsourcing is the

(a) spinning off of a value-creating activity to create a new firm.

(b) selling of a value-creating activity to other firms.

(c) purchase of a value-creating activity from an external supplier.

(d) use of computers to obtain value-creating data from the Internet.

(vi) For an actress in Bollywood, her pretty face would be a/an

(a) Asset

(b) Strategic asset

(c) Core competency

(d) Capability

(e) All of the above

Answer *any two* questions from the following: 12×2=24

7. (a) Explain, in one or two statements, a Company mission. State any three major objectives.

3+3=6

(b) Define the term 'Portfolio Analysis'. List the factors influencing Portfolio Strategy. 2+4=6

8. (a) Explain the terms: (i) Marketing Plan and (ii) Social Marketing. 3+3=6

(b) What is meant by a contingency plan? List its benefits. 2+4=6

9. Write short notes on *any three* of the following: 4×3=12

(a) Unrelated Diversification

(b) Hybrid Organization

(c) Strategy

(d) Time Frame of Objectives