

MAY 2014

**P/ID 77511/PMBL/
PMB1L/PMBSN**

Time : Three hours

Maximum : 100 marks

PART A — (5 × 6 = 30 marks)

Answer any FIVE questions.

1. What is process planning? Explain.
2. Write a note on fish bone diagram.
3. What is reorder level? Explain.
4. What is JIT?
5. What are the features of workers safety?
6. Write a note on acceptance sampling.
7. Bring out the developments in allowance factors.
8. Write a note on vendor rating.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

9. Explain the use of cross over chart for selection processes.
10. What is a process chart? What are the symbols used in charting out operations? What are the uses process charts?
11. Explain the factors to be considered for plant location.
12. Write in detail on the types of plant layout.
13. ACE limited produces a microprocessor that has an average daily demand of 500 units. The production rate is 4,000 units per day. The set-up cost for each production run is Rs.490, and it requires a 4 days of equipment time. The company works for 250 days a year. The carrying cost per annum per item is assessed at Rs.7 per day. Find the optimum production run quantity.
14. Compare and contrast preventive and break down maintenance.
15. Explain the role played by ABC analysis in production management.
16. Trace the functions of a production manager in the changing technology era.

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PART C — (1 × 20 = 20 marks)

Compulsory.

17. Case Study :

You have the opportunity to invest INR 100 billion for your company to develop a jet engine for commercial aircrafts. Development will span 5 years. The final product costing Rs.500 million/unit could reach a sales potential, eventually of Rs.2500 billion. The new engine can be placed in service 5 years from now, but only if it qualifies four years from now for certification clearing commercial use and only if it meets America's Federal Aviation Administration's (FAA) ever tightening standards for noise reduction. Certification also has to be obtained from India's Director General of Civil Aviation (DGCA). There is competition from world-class manufacturers like Pratt and Whitney and Rolls Royce who are developing competing engines. If you decide to proceed with the project, you must also determine where the new engines will be produced and develop the manufacturing facilities.

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If you decline to proceed, your company could invest its resources elsewhere and based on its track record, get attractive returns.

- (a) What would be your line of action?
 - (b) In case of lengthy product design and development time, what kinds of risks are there?
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