



INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management
Graduate Diploma in Materials Management
PAPER No. 8(New)
Operations Management

Dec 2015

Date: 15.12.2015
Time: 10.00 a.m. to 1.00 p.m.

Max. Marks: 100
Duration: 3 Hrs.

Instructions:

1. From Part A – answer all questions (compulsory). Each sub questions carries 1 mark. **Total: 32 Marks**
 2. From Part B – Answer any 3 questions out of 5 questions. Each sub-question carries 16 marks. **Total : 48 Marks**
 3. Part C is a case study (compulsory) with questions. Read the case study carefully and answer the questions. **Total: 20 Marks**
 4. Please read the instructions given in the answer sheet.
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Part – A

32 Marks

(Attempt all questions Each sub questions carries 1 mark)

Q. 1 State True or False (Write S. No. and answer)

- i) Production means a process of converting some form of inputs to some form of output.
- ii) Productivity means more production.
- iii) If we follow any one of the several Demand Forecasting models , it is sufficient for the business.
- iv) Batch production is low volume low standardization.
- v) Good lighting and ventilation are included in the Factor's act.
- vi) Master production schedule specifies what end products are to be produced and when.
- vii) Bill of materials means the document of monetary amount to be paid for the materials purchased.
- viii) Line of balance and Balancing lines is same.

Q. 2 Fill in the blanks (Write only what is being filled up with S. No.)

- i) Low volume and low standardization are typical of -----type of production system.
- ii) For Plant Location -----theory gives two alternatives –Primary and secondary.
- iii) Human factor engineering is called -----.
- iv) Capacity Planning is an integral part of -----.
- v) Production based on Market Demand in known as -----type.
- vi) The system capacity is governed by the facility having ----- capacity.
- vii) MRP II stands for -----.
- viii) Better utilization of resources will lead to better -----.

Q. 3 Match the following (Write only S. No. and Alphabets)

	Column A		Column B
1	PERT	A	Material Handling
2.	Standard Hours	B	Scheduling
3.	Productivity	C	Demand forecast
4.	Ventilation	D	Plant layout
5.	Johnson's Rule	E	Time study
6.	Fork lift	F	Net working
7.	Aisle	G	Output to input ratio
8.	Moving average	H	Building design.

Q. 4 Expand the following :-

- i) PPC ii) MTM iii) BEP iv) EOQ
 v) FMS vi) ASRS vii) CAD viii) ERP

Part – B

48 marks

(Answer any 3 questions out of 5 questions. Each sub-question carries 16 marks.)

- Q. 5** a) Describe at least 4 methods of Demand Forecasting.
 b) Discuss why any one method of Demand forecasting will not give right results in today's business environment.
- Q. 6** a) Explain how PPC can improve productivity .
 b) Draw a typical Factory Layout indicating position of various departments and facilities like canteen, crèche, parking ,DG set A.C. Plant, Transformer etc.
- Q. 7.** a) Why scheduling is important ? Discuss.
 b) Sequence the following jobs using John's Rule :

Time taken is in hours

	A	B	C	D	E	F
Machine 1	6	4	5	7	3	8
Machine 2	4	6	2	7	8	5

- Q. 8** a) Describe focus Manufacturing.
 b) Explain in brief the Purchase procedure.

Q. 9 Write short notes on any FOUR of the following :

- i) Lean Manufacturing
- ii) TPM (Total Productive Maintenance)
- iii) Statistical Quality Control.
- iv) Learning Curve
- v) Scientific Inventory Control.
- vi) Waste elimination.
- vii) Concept of Drum Buffer Rope.

Part – C

Q. 10 Case study: (compulsory)

20 marks

Gama Industries is a medium scale industry manufacturing various components for number of industries. It has got a well established PPC department. Amongst others, they are supplying components to Godrej, Mahindra etc.. worth about Rs. 3 Crores. The plant is running with 90 % utilization. The sequencing is by Least Slack method. Suddenly there is additional demand from Godrej, which will require 20 % capacity. They can take up the work in 3 ways.

- a) Working overtime – rate being 3 times daily wages.
 - b) Outsourcing which will be at 1.2 times the cost of the job.
 - c) Working in additional shift – requires men and utilization will be only 20 %.
- Which works out to 1.5 times the cost.

As an expert , please suggest :

- i) Whether usual system be broken for Godrej and why ?
- ii) Will working overtime be proper ? Why ?
- iii) Whether additional shift working will be suitable ?
- iv) Can the work be given on Outsourcing ? Alternately can this work be taken up and some other jobs be given on outsourcing ?
