

## **Production management and material management**

**FY. BEM, sem II**

QPCode :64920

**Q. 1. Answer any two of the following (15 Marks)**

- a. Explain factors influencing the product design.  
Performance, reliability, simplicity, safety in use, aesthetics, reparability, colour, features, ...etc(7 ½ marks)
- b. Production and HR functions are interrelated and are equally important in achieving organizational goals. .(7 ½ marks)
- c. Role of Production Manager : low cost purchases, good relations with good suppliers, new product development decisions, giving training, make or buy decisions, standardization of inputs, forecasts, favorable reciprocal relations, selection of system, selection of equipments...etc .(7 ½ marks)

**Q. 2. Answer any two of the following (15 Marks)**

- a. Types of Continuous System of production : Mass and process (7 ½ marks)
- b. Types of maintenance system : Breakdown, preventive, predictive and total productive maintenance.(7 ½ marks)
- c. Factors influencing plant layout - Type of industry, nature and size of building, space available in the plant, plant location, facilities required by workers, size of output, systems, etc

**Q. 3. Answer any two of the following (15 Marks)**

- a. Decentralized materials management- 2M  
Merits- tighter control, less wastages, better training, quick response, stimulates improvements in products and process, improves productivity, better accountability (5 ½ marks)
- b. Forecasting methods : qualitative methods : Delphi, Market research, Product life cycle analogy, expert judgment, etc., Quantitative methods : Time series, Moving averages, Mathematical models, Exponential smoothing, Trend, Box-Jenkins method, etc.(7 ½ marks)
- c. Types of purchases – Tender system, subcontracting, capital equipment, petty cash system, rate contract method, blanket order, stockless purchasing, order or telephone, electronic order, (7 ½ marks)

**Q. 4. Answer any two of the following (15 Marks)**

a. LIFO merits : cost reflects current cost of materials, better quality, working capital is conserved, profits are depressed (7 ½ marks)

Demerits : complicated, old materials keeps lying in stores, deterioration of materials, comparison of job becomes difficult

b. Just in time - JIT philosophy is based on the simple idea that wherever possible no activity should take place in a system until there is a need for it.

Ex- Toyota

Dell computers (7 ½ marks)

c. EOQ - EOQ is the size of the order for which both ordering and carrying cost are minimum. (7 ½ marks)

**Assumption for calculation of EOQ:**

Ordering cost per order and carrying cost per unit per annum are known and they are fixed.

Anticipated usage of material in units is known.

Cost per unit of material is constant and is known.

The quantity of material ordered is received immediately i.e. lead time is zero.

**Q. 5. Write short notes (any three)**

**(15 Marks)**

- Kaizen,
- ABC analysis,

| Items | % OF ITEMS | % OF VALUE |
|-------|------------|------------|
| A     | 10         | 70         |
| B     | 20         | 20         |
| C     | 70         | 10         |

- Types of inventory – Raw material, WIP and finished goods, spares
- Waste management - waste management techniques : recycling and processing of waste, waste disposal projects, establish controls to prevent recurrence of waste, recognize waste for whole system and amount of salvaging, etc.
- Fixed/Static layout