

M.E. First Semester (Civil Engg. (Construction Engg. & Managt.)) (CGS)
13063 : Construction Materials & Material Management : 1 CM 02

P. Pages : 2

Time : Three Hours



AW - 3784

Max. Marks : 80

- Notes :
1. Answer **three** question from Section A and **three** question from Section B.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answer necessary with the help of neat sketches.

SECTION - A

1. a) Explain different levels of standards used for material management? 6
- b) Discuss the role of material management for effective project management of construction project? 7

OR

2. a) Discuss the Necessity of classification of materials used for construction as per condition and usability of material. 6
- b) What are the advantages and disadvantages of codification & material. 7
3. a) Explain the procedure of "Stock Taking" for material management? 6
- b) Discuss how operational research is utilized for material planning process? 7

OR

4. a) Demand for a product is shown in below table. Calculate the demand in period 5. 8

X = Time period	1	2	3	4	5
Y = Forecasted Demand	10	14	16	19	?

- b) Draw the flow chart for material planning? 5
5. a) Explain importance and scope of inventory control? 6
- b) A supplier has to supply 12000 units of a product per year to his customers. The demand is fixed and the shortage cost is assumed to be infinite and production is instantaneous. The inventory holding cost is Rs. 0.50 per unit per month and the setup cost per run is Rs. 300/- Determine 8
 - a) The optimal Run size (q_{opt})
 - b) Optimum scheduling period (t_{opt})
 - c) Minimum total expected cost per year.

OR

6. a) Discuss the benefits of ABC classification? 6

- b) A contractor has to supply 10,000 bearings per day to an automobile manufacturer. He finds that when he starts a production run, he can produce 25000 bearings per day. The cost of holding bearing in stock for one year is Rs. 2 per unit and setup cost of production run is Rs. 1800/-
Calculate
a) The optimal run size (q_{opt}) and
b) Optimum scheduling period (t_{opt}). 8

SECTION - B

7. a) What are the duties and responsibilities of purchase Department? 6
b) Enlist various methods of purchasing and Describe any three of them? 7

OR

8. a) Explain the terms 6
i) Quality of Design
ii) Quality of conformance &
iii) Quality of performance?
b) Explain six sigma quality concept for effective material management? 7
9. a) Explain various factors of make or buy decision? 6
b) The following are the extracts from the monthly financial statements of a small pharmaceutical company in city. 8

	Jan	Feb	Mar	April
Opening stock	3000	3500	3250	2750
Purchase	12800	12600	12000	12700
Closing stock	3500	3250	2750	3750

Calculate stock turnover ratio for each of months & comment on these ratios?

OR

10. a) Explain how choice of type of Buyer-Seller relationship is done to suit best for various situations? 7
b) What are the factors which may weaken the Negotiations? 7
11. a) Explain the Role of Inventory control software in material management? 6
b) What is "Material Audit"? What is its importance. 7

OR

12. a) Describe organization structure of Government Buying mechanism? 6
b) What are the documents used in International trade? 7
