

**B.Tech. Civil (Construction Management)**

**Term-End Examination**

00785

June, 2017

**ET-581(B) : INVENTORY AND STORES  
MANAGEMENT**

Time : 3 hours

Maximum Marks : 70

**Note :** Attempt any **ten** questions. All questions carry equal marks. Use of non-programmable scientific calculator is permitted.

1. What do you understand by Inventory Control ? Explain the purpose of maintaining inventory in any civil engineering project unit. 7
2. Explain the different costs involved in inventory models. Derive the expression for economic order quantity when the demand of the item is uniform, the production rate is infinite and no stock-outs are allowed. Explain the assumption. 7
3. Items purchased from a vendor cost ₹ 200 each. and the forecast for next year's demand is 1000 units. If it costs ₹ 50 every time an order is placed for more units and the storage cost is ₹ 40 per unit per year,
  - (a) what quantity should be ordered each time ?
  - (b) what is the total ordering cost for a year ?
  - (c) what is the total storage cost for a year ? 7

4. The annual demand for an item is 3200 parts. The unit cost is ₹ 6 and the inventory carrying charges are estimated as 25% per annum. If the cost of one procurement is ₹ 150, find the : 7
- (a) Economic order quantity
- (b) Time between two consecutive orders
- (c) Number of orders per year
- (d) Optimal cost
5. What do you mean by requisition ? How will you resolve the problem of pending requisition ? 7
6. Write down the various precautions to be taken for storing explosive chemicals. 7
7. (a) Discuss in brief the roles and responsibilities of the superintendent of stores.
- (b) What is codification of materials ? 7
8. The demand for a product is 500 units per month. Every production run requires a set-up cost of ₹ 1,000. It costs ₹ 1.00 to store unit product for one month. What should be the optimal number of units to produce in each production run ? 7

9. A company needs 6000 units of a product per month. The product is purchased from outside for which the set-up cost is ₹ 2,000 per order. The cost of holding inventory, in terms of capital tied up, amounts to ₹ 1.50 per unit. How frequently should the company place orders for the product ? 7
10. What are the advantages of sampling inspection over the practice of 100% inspection ? 7
11. Product M is made of two units of N and three of P. N is made of two units of R and four units of S. R is made of one unit of S and three units of T. P is made of two units of T and four units of U.
- (a) Show the bill of materials.  
(Product Structure Tree)
- (b) If 100 M are required, how many units of each component are needed ? 7
12. Write short notes on any **two** of the following : 7
- (a) A-B-C Analysis
- (b) Just-in-Time
- (c) Safety Stock and Reorder Level
- (d) e-Requisition