ET-581(B)

# B.Tech. Civil (Construction Management)

## Term-End Examination

00999 **June, 2014**

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

*Time : 3 hours* *Maximum Marks : 70*

**Note :** *Attempt any five questions. All questions carry equal marks. Use of scientific calculator is permitted.*

1. (a) What are the responsibilities of purchase department ? Describe the key factors in the selection of suppliers of stores. 7

 (b) The annual demand of an item is 3200 units. The unit cost is ₹ 6 and inventory carrying charges are 25% per annum. If the cost of one procurement is ₹ 150, determine
 (i) Economic Order Quantity (EOQ)
 (ii) No. of orders per year
 (iii) Time between two consecutive orders
 (iv) The optimal cost 7

**2.** (a) Write down the precautions to be taken for the storage of explosive materials and for the storage of chemicals. 7

(b) A company purchases 9000 parts of a machine for its annual requirements, ordering one month's usage at a time. Each part costs ₹ 20. The ordering cost per order is ₹ 15 and the carrying charges are 15% of the average inventory per year. Suggest a more economical purchasing policy for the company. What advice would you offer and how much would it save the company per year? 7

**3.** (a) Explain A-B-C control policy of Inventory. Bring out the salient features and various advantages obtained by it. 7

(b) The demand rate for an item in a company is 18000 units per year. The company can produce at the rate of 3000 per month. The set-up cost is ₹ 500 per order and the holding cost 0·15 per unit per month. Calculate

(i) Optimum manufacturing quantity

(ii) The maximum inventory

(iii) Time between orders

(iv) The number of orders per year

(v) The time of manufacture

(vi) The optimal annual cost if the cost of an item is ₹ 2 per unit 7

**4.** (a) Discuss various considerations for smooth store operations in a storage building for a large construction company. 7

(b) Product A consists of three B type sub-assemblies and one C type sub-assembly. The sub-assembly B consists of one D, one E sub-assembly and one F type. The sub-assembly C consists of a G and an F type. The sub-assembly E consists of a G and a K type.

(i) Prepare a product tree.

(ii) Prepare a bill of materials.

(iii) Determine the number of each sub-assembly/components required to produce 25 units of item A. 7

**5.** (a) What are stockout costs and capacity associated costs ? How are these costs related to inventory ? 7

(b) Discuss the importance of periodic stock verification. 7

**6.** (a) When do you apply the double sampling method in an organization ? Justify your answer with a suitable example. 7

(b) A company is presently ordering on the basis of an EOQ. The demand may be taken as 10,000 units a year, unit cost as ₹ 100, ordering cost as ₹ 300 and the cost of carrying inventory as 20%. The supplier offers a discount of 3% on an order of 1000 units or more. What will be the saving (or loss) of accepting the discount ? 7

**7.** Write short notes on any **two** of the following : *2×7=14*

    (i)   Types of inspection

    (ii)  Suspense account

    (iii) Store efficiency

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