Reg. No: | | | | | | | | | | |

MANIPAL INSTITUTE OF TECHNOLOGY

(Constituent Institute of Manipal University)

Manipal – 576 104.

SECOND SEMESTER M.Tech.

(CONSTRUCTION ENGINEERING & MANAGEMNET)

END SEMESTER EXAMINATION MAY-2016

ELECTIVE IV- MATERIALS MANAGEMENT (CIE – 569)

(Revised Credit System)

TIME: 3 HRS.] [MAX. MARKS: 50

Note: ***1. Answer any TWO FULL questions from PART-A and THREE FULL questions from PART-B***

2. Answers should be precise and to the point

PART-A

Q.No. 1.A. Write note on (i) Brisch Sytem of coding (ii) Price forecasting **(06)**

B. What is an Inventory? What is it's importance in Material Management **(04)**

Q.No. 2.A. Explain the Planning functions of Purchase Department. **(04)**

B. What is Material planning? What are it's Objectives? Give methodology of Preparing Explosion Chart. **(06)**

Q.No. 3.A. What are the significant differences between purchasing consumables and capital goods? **(04)**

B. What is of Source Selection? Why it is it's importance to Materials Management? Explain stage by stage process of Source Selection. **(06)**

PART-B

Q.No.4. Time series for 2 years prices of cement/bag are given below. Which is better method of forecasting between Moving Average method with N=4 and Exponential Smoothening with N=4, alpha= 0.15. **(10)**

Y1: 320, 309, 270, 280, 290, 310, 312, 300, 275, 308, 305, 295

Y2: 285, 270, 280, 300, 315, 313, 320, 309, 285, 297, 308, 302

Q.No.5. 24 prices forecasted prices of steel bars per ton are given below. Using those forecasted prices compute the budgeted expenditure for bars using Conservative strategy and Optimal Strategy for a project period of 24 months. Constraints are: Monthly consumption of 50 tons and maximum storage capacity at site is 200 tons. I.D. prices: 19100,18700, 17800,15300

18500 17000 16700 18600 18900 15800 18600 17400 19000 16500 17300 19000 16600

17500 15250 18450 16700 16500 17500 18400 19000 17350 19900 17800

(10)

Q.No. 6. 30,000 m^3 of coarse aggregate has to be provided for a RCC work of a project scheduled for 600 days. The unit cost of coarse aggregate at given site is Rs.300. Ordering cost is Rs.100 per order and Carrying cost is 5% of unit cost. The Standard deviation of demand is estimated at 6000 m^3 and Reliability Coefficient k= 1.65. The average lead time is 3 days and maximum lead time with probability of 45% is 6 days. Compute 5 cycles of Q-System

(10)

Cycle	Daily Consumption	Lead Time
1	50	4
2	60	3
3	40	5
4	55	4
5	65	3

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