Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
A Constituent Institution of Manipal University

II SEMESTER M.TECH. (CONSTRUCTION ENGG. & MANAGEMENT)
END SEMESTER EXAMINATIONS, APRIL/MAY 2017
SUBJECT: **CONSTRUCTION MATERIALS MANAGEMENT [CIE 5232]**
REVISED CREDIT SYSTEM
(25/04 /2017)

Time: 3 Hours   MAX. MARKS: 50

Instructions to Candidates:
- ❖ Answer **ALL** the questions.
- ❖ Answer to the point.

1A.	Compare the characteristics of Transformational and Transactional leadership.	05
1B.	What is Economic Ordering Quantity? Derive the expression for it.	05
2A.	Explain Pre Purchase and Post Purchase Systems	05
2B.	What is Materials Requirement Planning (MRP)? Explain the methodology.	05
3.	Forecasted prices for 22 months for cement/bag is given below. Using forecasted prices compute the expenditure on cement for a project running for that period using Hind sight strategy. The requirement of cement each month is 200 bags and the maximum storage capacity is 4 months requirement. 315,309,261,280,296,306,312,298,264,312,300,272, 259, 278, 302, 255, 283, 260, 283, 256, 287, 308.	10

4.	Using Internal Return of Rates method decide which of the following two equipment's is : economically profitable with r at 5%:	10

Investment	Capital Investment (Lakhs of INR)	Gross Annual Returns, for respective years of Equipment (Lakhs of INR)	Annual Deductions for respective years for Life of Equipment (Lakhs of INR	Life of Equipment	Solvage Value
A	85	40,41,39,38,40, 38.5,39.5,37	25,23,25,25,24,22,23,22	8	10%
B	68	28,29,27,30,27,28	13,14,13,14,14,12	6	10%

5.	A Hallow block unit requires 90000 bags of cement for 300 working days, with a standard deviation of 18000 bags. The reliability factor k=1.65, Average lead time is 1 day and maximum lead time with 35% probability is 3 days. The unit cost of cement is Rs.325, carrying cost is 10% of unit cost and ordering cost is Rs.200 per order. Compute 5 cycles of Q-System.	10

Cycle	Daily Consumption	Lead Time
1	300	2
2	375	1
3	175	3
4	400	1
5	350	2