

MANIPAL INSTITUTE OF TECHNOLOGY MANIPAL

A Constituent Institution of Manipal University

VII SEMESTER B.TECH. (CIVIL ENGINEERING)

END SEMESTER EXAMINATIONS, NOV/DEC 2016

SUBJECT: ESTIMATION, COSTING AND VALUATION [CIE 401]

REVISED CREDIT SYSTEM (23/11/2016)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

✤ Answer ANY FIVE FULL questions.

✤ Missing data may be suitable assumed.

1A.	Calculate the quantities of earthwork in making a proposed road from the chainage 0 to 6 using the trapezoidal (average end area) formula and prismoidal formula. The RL of ground points at each chainage is as given in the table shown below. The proposed road is having RL 99 at the chain age 2 and a uniform downward gradient 1in100 throughout its length from 0 to 6 chainage. Formation width of the proposed road is 10m and side slopes in cutting 1:1 and in banking 2: 1. Chainage(50m) 0 1 2 4 4 5 6 RL of ground 97.5 96.0 98.7 99.1 100.2 100.0 101.0	6М
1B.	Write a note on (i) Complete Estimate (ii) Mass Diagram with a neat sketch	4M
2A.	The accompanying sketch (Fig. 2.) Shows the plan of a residential building and a section through the walls. Workout the quantities of following items of work. Adopt long wall-short wall method. (i) CR stone masonry in plinth (ii) Floor finish	10M
3A.	Estimate the quantities of external plastering of for the residential building plan shown in Fig. 2.	3M
3B.	Fig.3 shows the reinforcement details for an isolated RCC footing. Prepare a bar bending schedule for column and footing reinforcements. Cover for footing is 50 mm and that for column is 25 mm.	7M
4A.	 Workout the valuation of a cinema house with the following data: Cost of land for life-time period of the house = Rs.12, 00,000/ Gross income per year = Rs.10,00,000/-, Expenses required per year: (a) To run the cinema including staff salary, electric charges, municipal taxes including licence fees, stationery and printing etc. is 30% of the gross income. (b) For repairs and maintenance of machinery, plants, equipment, furniture etc. @5% of their capital cost of Rs.5,50,000/- (c) Sinking fund for the machinery as in "b" whose life is 25 years@ 4% after allowing 10% scrap value. (d) Insurance premium is Rs.10,000/- per year. Assume year's purchase for 60 years@ 8% and redemption of capital @ 4%, Annual repair of the house @ 2% on gross income. 	6M

4B.	Explain the terms (1) Liquidated Damage, (2) Completion Certificate, (3) Unbalanced Tender (4) work order	4M
5A.	What are the different types of Specifications? Explain any two of them in detail.	5M
5B.	What is contract? Explain Cost plus percentage rate contract and cost plus fixed fee contract.	5M
6A.	 (i). Workout total rate for the PCC flooring bed of 100mm thick and 4mx4m in area in CC 1:2:4 and (ii).Workout unit rate for the 6 mm thick cement plastering (CM-1 : 4) to R.C. Ceiling 	3M+3M
6B.	Explain the factors affecting the valuation of an open land.	4M

