Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

VI SEMESTER B.TECH (CIVIL ENGINEERING)
END SEMESTER EXAMINATIONS, MAY/JUNE 2022

SUBJECT: **ESTIMATION COSTING AND VALUATION PRACTICE [CIE 3252]**

REVISED CREDIT SYSTEM

(_ / / 2022)

Time: 3 Hours Max. Marks: **50**

Instructions to Candidates:

- Answer ALL the questions
- Missing data may be suitable assumed.

Q.No		Marks	CO
1A.	The accompanying sketch (Fig. 1.) shows the plan of a building and a section through the walls. Workout the quantity of earthwork excavation and CR masonry below ground level in main wall using long and short wall.	05	1
1B.	Estimate quantity for construction of substructure of a bus stand with plinth outer-to-outer size 6.3m x 3.3m. The width of SS masonry plinth portion is 0.45m and depth above ground level is 0.3m. Width of RR masonry foundation is 0.6m and depth of foundation is 0.6m. A 100mm thick PCC 1:4:8 is to be laid having width 0.75m. Estimate the quantity of PCC and RR Masonry using Center line method.	03	1
1C.	Explain the method of measurement for first class brick work in wall masonry in super structure as per IS 1200.	02	1
2A.	The accompanying sketch (Fig. 1.) shows the plan of a residential building and a section through the walls. Workout the quantities of RCC slab having thickness 150mm.	03	1
2B.	Prepare a bar bending schedule for the TMT bent-up bar for detail drawing of slab shown in Fig-2. Consider crank bend at 45° and cover 25mm.	04	3
2C.	Write a note on (i) Work Charged Establishment (ii) Spot Levelling in earthwork computation.	03	1
3A.	Write a short note on administrative approval and technical sanction.	03	1
3B.	What are the different types of estimates and explain any two of them.	03	1
3C.	Calculate the quantities of earthwork in making a proposed road from the chainage 11 to 18 using the prismoidal formula and draw longitudinal section. The RL of ground points at each chainage is as given in the table shown below. The proposed road is having RL 81.00m at the station 13 and a uniform upward gradient 50:1 from station 11 to 18. Formation width of the proposed road is 10m and side slopes in cutting 1:1 and in banking 2:1. Prepare an Abstract of earthwork at the rate of Rs. 75 / Cum (cutting) and Rs. 100 / Cum (Filling).	04	1
4A.	Write the detailed specification for cement concrete.	05	2
4B.	Workout the unit rate of 6mm thick cement plastering with 1:4 proportion on R. C Ceiling.	03	4
4C.	Differentiate between Salvage value and Scrap value.	02	5

Stations/Chainage(30m)	11	12	13	14	15	16	17	18
RL of ground	80.0	82.8	84.1	83.5	81.4	80.6	79.9	81.0

5A.	What is contract? Explain Cost plus percentage rate contract and cost plus fixed fee contract.	03	6
5B.	Workout the valuation of a hotel with the following data: Present market value of the land = Rs.12,00,000/- Gross income per year = Rs.10,00,000/-, Expenses required per year: (a) To run the hotel including staff salary, ration, electric charges, municipal taxes including license fees, stationery and printing etc. is 30% of the gross income. (b) For repairs and maintenance of physical assets like cooking utensils, equipment, furniture etc. (c) 5% of their capital cost of Rs.5,50,000/- and sinking fund for the above mentioned physical assets 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 hotel@ 2% on gross income.	04	5
5C.	Explain the terms (l)Liquidated Damage (2) Completion Certificate (3)Unbalanced Tender	03	6

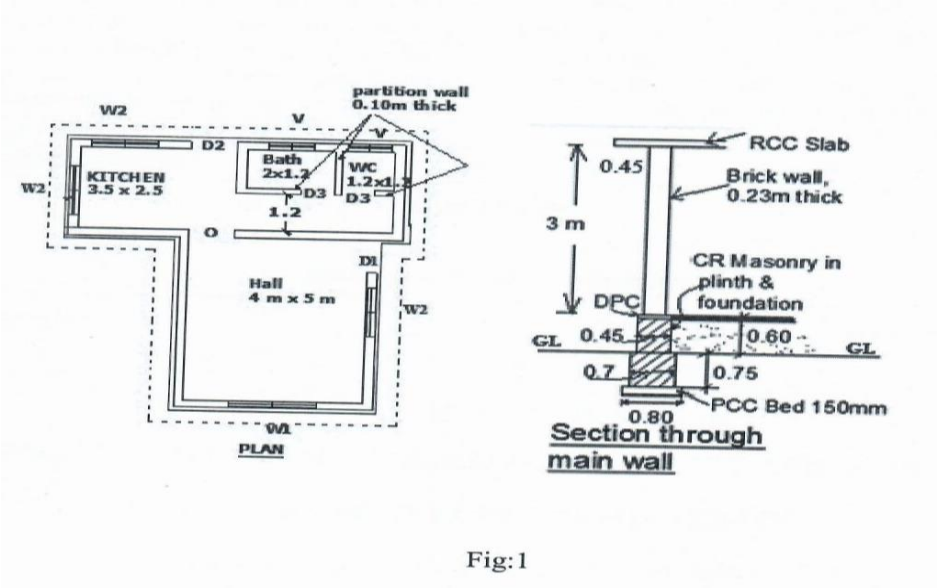

Fig:1

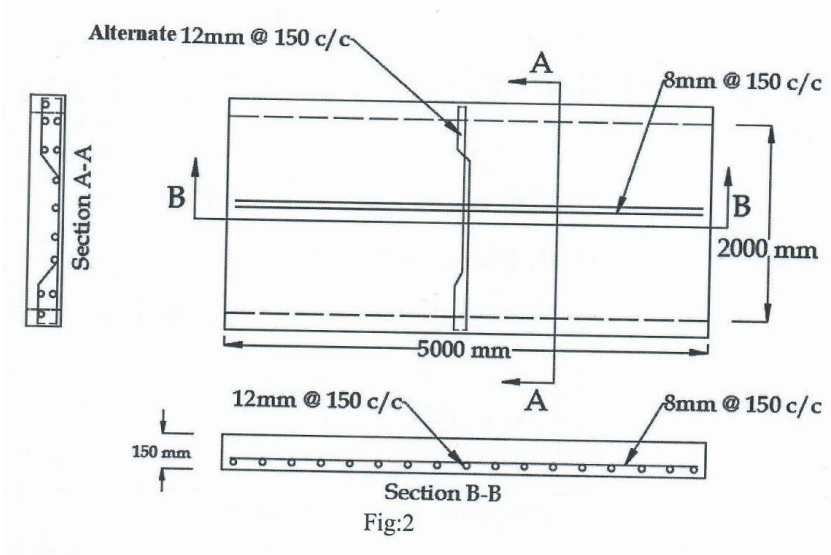

Fig:2