## Reg. No:

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# SIDDHARTH INSTITUTE OF ENGINEERING \& TECHNOLOGY:: PUTTUR (AUTONOMOUS) <br> <br> B.Tech III Year I Semester Regular Examinations March-2023 <br> <br> B.Tech III Year I Semester Regular Examinations March-2023 ESTIMATING, COSTING AND VALUATION 

(Civil Engineering)
Time: 3 hours
Max. Marks: 60
(Answer all Five Units $5 \times 12=60$ Marks)

## UNIT-I

1 a Briefly explain the different types of estimates discussing when each one is preferred.
b What are the different methods of estimate? Explain long wall and short wall methodand centre line method in detail.

## OR

2 A person constructs a building of a plinth area equal to 160 sq.m. on a plot of land in a certain locality at a rate of Rs. $25,50,000 /-$. The height of the building from ground level to the top of roof is 3.10 m and parapet wall of height equal to 75 cm is constructed on the terrace. Determine the cost of a similar building of a plinth area equal to $140 \mathrm{sq} . \mathrm{m}$. is to be constructed in the same locality by plinth area rate and volume rate method.

## UNIT-II

3 A hill road is to be constructed in side-long ground in cutting. Calculate the quantity of earthwork for two chain length in between $10^{\text {th }}$ to $12^{\text {th }}$ chainage, the length of chain being 30 m . The depth of cutting at the chainage 10 is 3.60 m at the centre and cross slope of ground is $8: 1(\mathrm{H}: \mathrm{V})$. The depth of cutting at the chainage 11 is 3.00 m at the centre and cross slope of ground is $12: 1(\mathrm{H}: \mathrm{V})$. The depth of cutting at the chainage 12 is 4.20 m . The depth of cutting at the chainage 12 is 4.20 m at the centre and cross slope of ground is $10: 1$ $(\mathrm{H}: \mathrm{V})$. Formation width is 10 m and side slopes of cutting $1.5: 1(\mathrm{H}: \mathrm{V})$. Estimate cost of earthwork using Mid-Sectional Area, Mean Sectional Area and Prismoidal Method if the rate of earthwork in exaction is Rs. $275 \%$ cu.m.


## OR

4 Detailed dimensioned sketch cross-section of a city street having mettled portion of 8 m for the carriageway is shown in figure. Prepare a estimate for constructing 500 m length of this street. Indicate also quantities of materials.

CO1 L1 6M CO1 L1 6M

CO1 L1 12M

CO2 L3 12M


## UNIT-III

5 Prepare a schedule of bars for the RCC lintel shown in figure assuming bearing of the lintel be 15 cm on walls at each side. Weight of 100 mm dia bar $=0.62 \mathrm{~kg} / \mathrm{RM}$ and 6 mm dia bar $=0.22 \mathrm{~kg} / \mathrm{RM}$.

cross section
AT MID SPAN

closs section AT SUPPRET
OR

CO2 L3 12M

CO2 $\quad$ L3 $\quad 12 \mathrm{M}$

CO4 L3 6M
CO4 L1 6M

CO4 L3 12M

CO5 L2 6M
CO5 L2 6M

CO6 L3 12M the following data -
(i) Cost of land -Rs.10,000.00
(ii) Cost of construction of the building -Rs. $40,000.00$
(iii) Cost of roads within the compound, and fencing -Rs.20,00.00
(iv) Cost of sanitary and water supply works - $8 \%$ of the cost of building
(v) Cost of electric installation including fans $-10 \%$ of the cost of building
(vi) Municipal House tax - Rs. 400.00 per annum
(vii) Water tax - Rs.250.00 per annum

Property tax - Rs. 140.00 per annum

