Code No. 9167

FACULTY OF ENGINEERING

B.E. 4/4 (Civil) I - Semester (Main) Examination, December/January 2014-15

Subject: Estimation and Specifications

Time: 3 Hours **Max. Marks: 75**

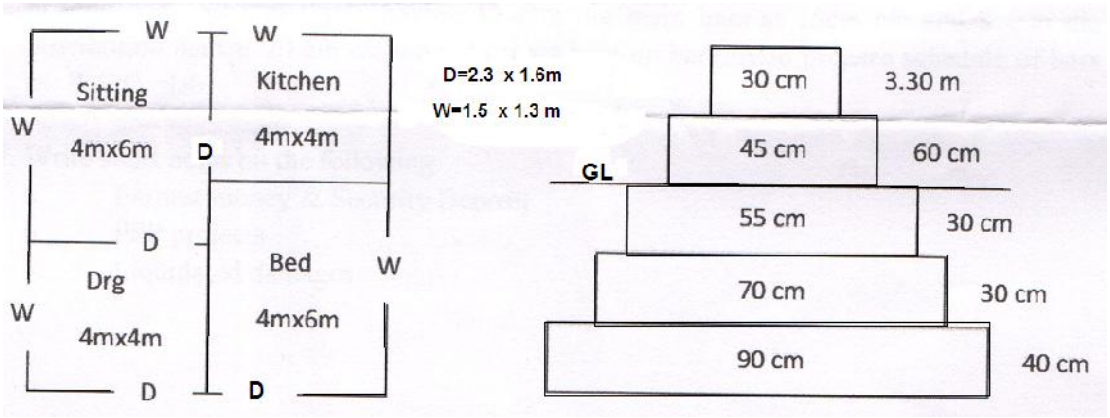
Note: Answer all questions of Part - A and answer any five questions from Part-B.

PART – A (25 Marks)

1 List out various types of estimate, which is the more accurate.
2 How do you compute earth work volumes?
3 Define the term Contract and list essentials of contract.
4 What is the significance of Measurement Book?
5 Explain the concept of BOOT projects.
6 Explain the purpose of rate analysis and how it is done.
7 Define the term lead and lift.
8 Differentiate between Drawing and Specifications.
9 What is tender notice?
10 What is Economical depth?

PART – B (50 Marks)

11 Prepare a detailed estimate for the following items of work for a residential buildings plan shown in figure 1 using center-line method.
(a) Earthwork excavation for foundation
(b) 1st class brickwork in superstructure with CM (1:6)



12 Estimate the quantity of earthwork for a portion of a road from the following data: Formation width of the road is 10 m, side slopes are 1.5 : 1 in filling and 1 : 1 in cutting R.L. of formation is 103.5 m in an uniform upward gradient of 1 in 250.

Chainage m	0	50	100	150	200	250	300
R.L. of ground	102.35	101.80	102.05	102.5	103.15	103.45	103

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13 Write the specifications for the following items of work:
   (a) D.P.C.
   (b) Cement concrete flooring

14 Work out unit rates of the following:
   (a) 1st class brickwork in superstructure in CM(1:6) for 1 cu.m.
   (b) 1:2:4 cement concrete required for slab and beam for 1 cu.m RCC work.
   Adopt the following rates of materials and labour at the site.

(i)	Cement	Rs. 250/- per bag
(ii)	Sand	Rs. 300/- per cu.m.
(iii)	Aggregate	Rs. 450/- per cu.m.
(iv)	Mixing mortar	Rs. 30/- per cu.m.
(v)	Standard Bricks	Rs. 2500/- per 1000 Nos.
(vi)	Steel	Rs. 35000/- per tonne
(vii)	Brick layer	Rs. 500/- per day
(viii)	Man Mazdoor	Rs. 300/- per day
(ix)	Woman Mazdoor	Rs. 250/- per day
(x)	Bar Bending	Rs. 40/- per day
(xi)	Centering & Shuttering	Rs. 800/- per day

15 Explain different types of contract with merits and demerits.

16 Compute the quantity of steel reinforcement in an R.C.C. roof slab of 4.5 m clear span, 7 m long and 180 mm thick, having 12 mm dia main bars at 15 cm c/c/ and 8 mm dia distribution bars at 20 cm c/c with alternate bent up bars. Also prepare schedule of bars of R.C.C. slab.

17 Write short notes on the following:
   (a) Earnest money and Security Deposits
   (b) PPP projects
   (c) Liquidated damages

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