Sketch 'C' to accompany QP Code: 805

SECTION ON AB

PLAN

REFERENCE

DOORS	D - 1000 x 2000 ,FULLY PANELLED
	D1 - 900 x 2000 ,FULLY PANELLED
	D2 - 750 x 2000 ,FULLY PANELLED
WINDOWS	W1 - 1200 x 1200 ,FULLY GLAZED
	W2 - 900 x 1200 ,FULLY GLAZED
GRILL WINDOWS	GW1- 1500 x 1200 ,
	GW2- 900 x 1200 ,
VENTILATOR	V - 750 x 450 ,FULLY GLAZED
	V1 - 900 x 450 ,FULLY GLAZED
STEPS	WIDTH - 1400, (1000 + 2 X 200)
TREAD	300 LOFT - 600
RISE	160

ROOFING WITH C.C. 1:2:4, 120 THICK
BRICK WORK IN SUPER STRUCTURE WITH C.M. 1:5, 200 THICK
LINTEL, 120 THICK
SUNSHADE, 80 THICK
FLOOR FINISH WITH C.M. 1:3, 20 Tk
D.P.C. WITH C.M. 1:3, 20 THICK
BRICK WORK IN FOUNDATION AND BASEMENT WITH C.M. 1:5
CEMENT CONCRETE FOR FOUNDATION, 1:4:8, 200 THICK
FLOORING WITH CEMENT CONCRETE, 1:4:8, 150 THICK
SAND FILLING, 650 THICK

TWO ROOMS WITH R.C.C. ROOF
ALL DIMENSIONS ARE IN M.M.

TOILET
TOILET
BED 4000 X 3000
KITCHEN 3500 X 3000
LOFT
LIVING 3500 X 4500
VERANDAH 2200 X 2000

Register No.:

April 2018

Time – Three hours
(Maximum Marks: 75)

(Sketch 'C' to accompany)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B

(2) Answer division (a) or division (b) of each question in PART – C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. What are the different types of estimates?

2. What do you mean by typical bay method estimate?

3. What is specification?

4. What do you mean by degree of accuracy in measurement?

5. Define observed data.

6. Define annuity.

7. State the methods of taking off quantities.

8. State any two duties of quantity surveyor.

PART – B

9. Differentiate between main and sub-estimate:

10. What is the necessity of a specification?

11. Write any three points to be considered while writing a technical report for a project.

12. Write short notes on schedule of rates.

13. Mention the units of measurement for the following:
    (1) Earth filling   (2) Pointing   (3) Water closet
    (4) Electrification work   (5) Steel   (6) Floor tiles.

14. Define capital cost and economical rent.

15. State the advantages of group system.

[Turn over.....

16. An old building has been purchased at a cost of ₹.2,00,000 by a person, excluding the cost of land. Calculate the amount of annual sinking fund at 4% interest assuming the future life of the building at 20 yrs. and the scrap value of the building as 10% of the cost of purchase.

PART – C

17. (a) The actual cost of a single storey residential building of plinth area 85m² is found to be ₹.4,67,500 in which 70% is towards the cost of materials and 30% towards the labour. It is proposed to construct a similar building of same specification with a plinth area of 125m² at a place where the cost of materials to be 15% more and cost of labour 20% less. Estimate the rough cost of the proposed building.

(Or)

(b) (i) The cost of construction of a polytechnic building of yearly intake 360 students is found to be ₹.45 lakhs. Allowing 10% increase in the cost of materials and labours, determine the probable expenditure towards the construction of a new building for a polytechnic of yearly intake 480 students.

(ii) The carpet area of a proposed building to be constructed is 600m². Assuming the circulation and non-livable area as 20% and 10% of the builtup area respectively. Plinth area rate of the building is ₹.1500/m². Estimate the approximate cost of the building.

18. (a) (i) Write the steps involved in writing standard specifications.
(ii) Write detailed specification to brick masonry in CM 1:5 to be used for superstructure.

(Or)

(b) Write a report to accompany the estimate for the construction of a hospital building.

19. (a) (i) A brick masonry wall of 200m² area has to be plastered with 12mm thick 1:4 CM allowing 15% excess mortar for wastage and undulations in the surface. Calculate the quantities of cement and sand required for the work.
(ii) Write short notes on deduction for openings in masonry and plastering.

(Or)

(b) Prepare data for terrace flooring with one course of pressed tiles 200mm x 200mm x 20mm using CM 1:3 mixed with crude oil 10% by weight of cement and pointed with same oiled mortar -10m².

CM 1:3 – 1m³		Pointing with CM 1:3 – 10m²	
Sand	– 1m³	CM 1:3	- 0.4m³
Cement	– 480kg	Mason II Class	- 2.2 Nos.
Mixing charges	– 1m³	Mazdoor I Class	- 0.5 Nos.
		Mazdoor II Class	- 1.1 Nos.

Terrace flooring with one course of pressed tiles 200mm x 200mm x 20mm using CM 1:3 mixed with crude oil 10 percent by weight of cement and pointed with same oiled mortar – 10m²

Pressed tiles 200 x 200 x 20mm – 250 Nos.

CM 1:3	- 1.2m³	Mason I class	- 1.1 Nos.
Crude oil	- 5.8kg	Mason II class	- 2.1 Nos.
Pointing with CM 1:3 – 10m²		Mazdoor I class	- 2.2 Nos.
		Mazdoor II class	- 1.1 Nos.

Cost of materials and labour at site:

Cement	- ₹. 6500
Sand	- ₹. 300/m³
Pressed tiles 200 x 200 x 20	- ₹. 8100/1000 Nos.
Crude oil	- ₹. 60/kg.

Labour

Mixing cement mortar	- ₹. 40
Mason I Class	- ₹. 300
Mason II Class	- ₹. 270
Mazdoor I Class	- ₹. 200
Mazdoor II Class	- ₹. 180

20. (a) An owner occupied property is required to be valued for the wealth tax purpose on land and buildings. The following particulars are available. Find the present value of the property.

Value of the land	- ₹. 3,25,000
Cost of building	- ₹. 12,00,000
Age of the building	- 45 Yrs.
Estimated cost of repairs	- ₹. 90,000.

Depreciation to be allowed for the building = 0.7% per annum.

(Or)

(b) Work out gross rent and net rent per month of a building which is constructed at a cost of ₹. 3,00,000/- on a free hold property. The area of the land is 200m² and the cost of land is ₹.400/m². Assume the outgoings including sinking fund as ₹.15,000/annum. Expected net rent is 6% of land and 12% of cost of construction.

21. (a) (i) Write short notes on (1) Lumpsum provision (2)Contingencies.
(ii) What are the essential qualities of quantity surveyor?

(Or)

(b) Take out the quantity of brick work in foundation and basement for the residential building shown in Sketch 'C'.

[Turn over.....