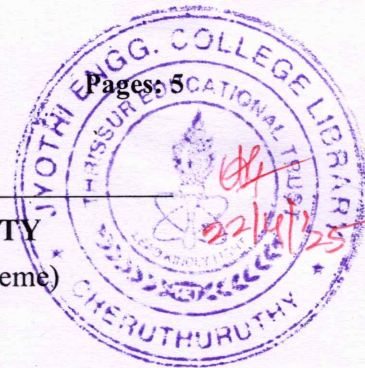Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech S8 (R,S) / S6 (PT) (R, S) Exam April 2025 (2019 Scheme)

Course Code: CET402
Course Name: QUANTITY SURVEYING AND VALUATION

Max. Marks: 100   Duration: 3 Hours

PART A
Answer two full questions, each carries 10 marks.   Marks

1	a	Which are the factors to be considered for the preparation of a Detailed Estimate?	(5)
	b	Explain the following terms i) Contingencies ii) Work Charged establishment iii)Tools and plants iv) Provisional Sum v) Overhead Cost	(5)
2	a	Explain the term specification and types of Specification.	(6)
	b	Explain the Specification of Cement Concrete work.	(4)

3   **Workout the unit rate of Ist class Brickwork in Superstructure with 20 x 10**   (10)
x 10 cm Brick with 1 :6 Cement Sand Mortar for 10 cu.m   (Also add water
charges and contractor's profit).

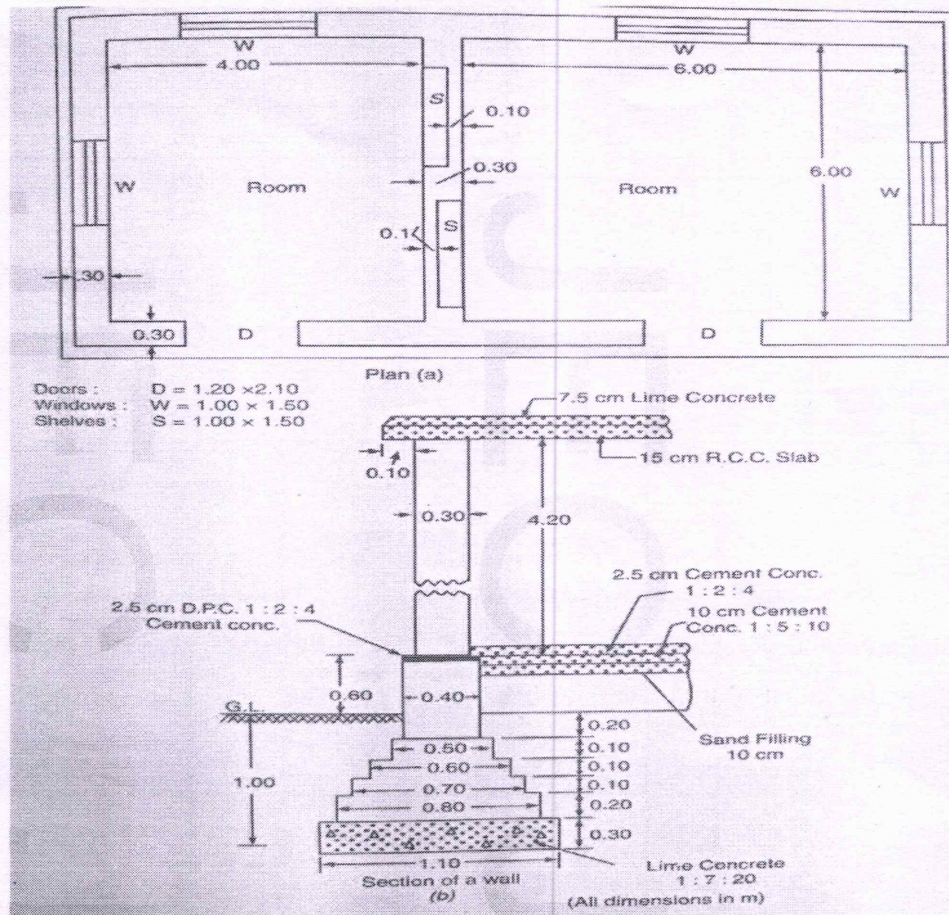| Sl.no	Particulars	Quantity	Rate
1	**Materials-**		
	Brick I - class (500 bricks per cu m)	5000 nos	4500 per nos
	Cement (13.5 bags)	0.45 cu m	7650 per cu m
	Sand (local)	2.7 cu m	700 per cu m
2	**Labour**		
	Mistri(Head mason)	½ no.	350 per day
	Mason	10 nos	300 per day
	Mazdoor	7 nos	220 per day
	Boy or woman coolie	10 nos	200 per day
	Bhisthi	2 nos	200 per day

	Scaffolding	Lump sum	280 L S
	Sundries, T And P , etc	Lump sum	90 L S

PART B

Answer any two full questions each carries 25 marks.

4   Prepare a detailed estimate of a building from the given plan and sections as   (25) shown in the figure.

(a) Earthwork in excavation for foundation.

(b) Lime concrete in foundation 1:7:20.

(c) 1st class brickwork in 1:6 cement sand mortar in foundation and upto plinth.

(d) Damp proof course of 2.5 cm thick of cement concrete 1:2:4.

(e) 1st class brick work in lime mortar in superstructure

(f) 12.5mm thick cement plaster with cement mortar (1:4) inside.

(Assume any missing data - State the assumption clearly)

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Plan (a)

Doors : D = 1.20 ×2.10
Windows : W = 1.00 × 1.50
Shelves : S = 1.00 × 1.50

7.5 cm Lime Concrete

15 cm R.C.C. Slab

2.5 cm D.P.C. 1 : 2 : 4
Cement conc.

2.5 cm Cement Conc.
1 : 2 : 4

10 cm Cement
Conc. 1 : 5 : 10

Sand Filling
10 cm

Lime Concrete
1 : 7 : 20

Section of a wall
(b)

(All dimensions in m)

5   Estimate the quantity of earthwork for a portion of a district road for 400 metre   (25)
length with the following data.

Formation width of the road = 10 metres

Side slopes in banking = 2 :1

Side slopes in cutting = 1½ : 1

Downward gradient = 1 in 200

Formation level at RL = 150

Distance in m	0	40	80	120	160	200	240	280	320	360	400
R.L of ground	149.00	148.90	148.50	148.80	148.60	148.70	149.20	140.40	149.30	149.00	148.60

6 a) Calculate the quantity of steel required for a R.C.C beam having clear span 5m (25)
      and sectional dimensions as 0.91 x 0.40 m from the given drawing and data;
      preparing a schedule of bars in a tabular form. The drawing is shown in the
      figure.
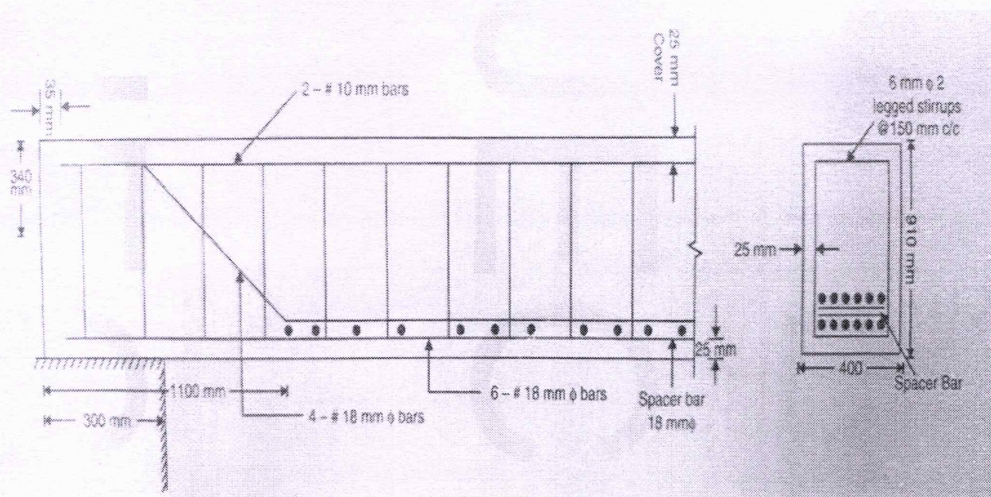
PART C

Answer any two full questions from each carries 15 marks.

7 a) Explain the different methods of depreciation.   (6)

   b) Differentiate freehold Property and Leasehold Property.   (5)

   c) Discuss any 2 methods of Valuation.   4

8 a) An R.C.C framed structure building having estimated future life 80 years fetches (9)

a gross annual rent of 2200/- per month. Work out its capitalized value on the basis of 6% net yield. The rate of compound interest for sinking fund may be taken 4%.The land plot of above building measure 1400 sq.m and cost of land may be taken to be 120/- per sq.m.

The other outgoings are:

(i) Repair and maintenance 1/12 th of gross income.

(ii) Municipal axis and property tax - 25% of gross income.

(iii) Management and miscellaneous charges- 7% of gross income.

The plinth area of a building is 800 sq.m and plinth area rate of the above type of building may be taken as Rs.150/ - per sq.m

b) Explain the following terms (6)

i) Obsolescence ii) Capitalised Value iii) Salvage Value .

9 a) List the factors affecting Valuation (5)

   b) Explain the significance of sinking fund. How it is calculated? (5)

   c) The total cost of machinery including the installation charges in a factory is 120,000/- .Calculate the depreciated cost of the above after 15 years .The salvage value is Rs.8,000/- .The span of life is 40 years. (5)

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