Reg No.:_____ Name:_____

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

SEVENTH SEMESTER B.TECH DEGREE EXAMINATION(S), MAY 2019

**Course Code: CE409**

**Course Name: QUANTITY SURVEYING AND VALUATION**

Max. Marks: 100 Duration: 3 Hours

## PART A

***Answer any two full questions, each carries 10 marks.*** Marks

1 a) List different type of estimates (4)

b) Work out the quantity of given materials required for 1:1.5:3 concrete and analyse the unit rate using the details given below: (6)

| **Description** | **Quantity** | **unit** | **Rate Rs.** | **unit** |
|---|---|---|---|---|
| 20mm (nominal size) broken stone | **?** | $m^3$ | 1300.00 | $m^3$ |
| Sand | **?** | $m^3$ | 1200.00 | $m^3$ |
| Cement | **?** | Tonne | 5700 | Tonne |
| Mason | 0.200 | Nos | 500.00 | Each |
| Man | 1.000 | Nos | 450.00 | Each |
| Women | 3.500 | Nos | 450.00 | Each |
| Man for lifting materials | 0.200 | Nos | 450.00 | Each |

2 a) List the essential documents to be accompanied with the detailed estimate (6)

b) What is mean by overhead charges? Give the percentage adopted for the contractor's profit and overhead in CPWD DSR 2016 rate analysis. (4)

3 Write the detailed specification for brickwork in cement mortar 1:5. (10)

## PART B

***Answer any two full questions, each carries 25 marks.***

4 Prepare detailed estimate for the following items of work for the construction of residential building **(25)**

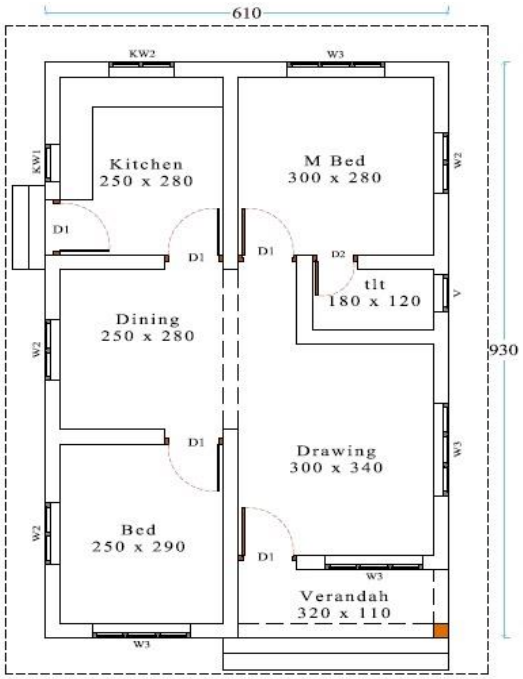
(a) RRM for foundation (75cm x 75cm) and basement50cm x 50cm , Wall thickness 20cm

(b) Quantity of earth filling inside the plinth

(c) RCC works for slab (12cm thick), lintel (15cm thick), and sun shade (60cm projection).

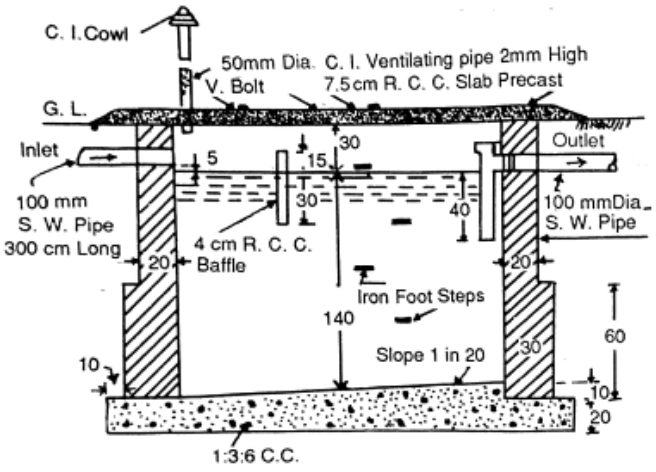
(d) Painting for walls, doors(D1-100x210; D2 80x210) and windows (W2-100x150; W3-150x150;KW1-50x100;KW2-100x100); V(90x60).

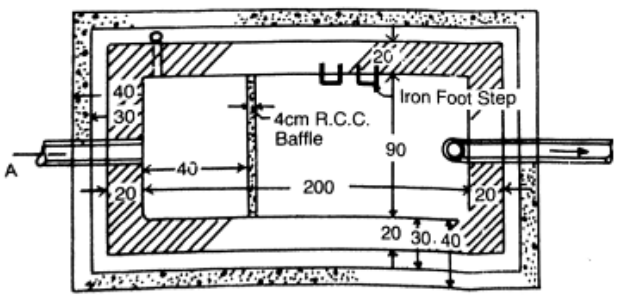
All dimensions are in centimetres. Any missing data may be suitably assumed.




5 Prepare a bar bending schedule and quantities of RCC and reinforcement of a simply supported beam of length 6.5 m , depth 50 cm, and width 30 cm reinforced with 3 Nos of 20 mm dia at bottom as straight bar, 2 Nos of 20 mm dia cranked at 45$^{o}$ , 2 Nos 16 Φ at top of beam and 8 mm Φ 2 legged stirrups @ 15 cm c/c (25)

6 Prepare a detailed estimate of a Septic tank from the given drawings. (25)



## PART C

***Answer any two full questions, each carries 15 marks.***

7 a) Explain valuation and its purpose? (5)

b) What are the methods for calculating depreciation? (10)

8 a) Discuss about different methods for finding valuation of a building (8)

b) The cost of construction of a new building according to present market rate is Rs. 80,000/- having a life of 70 years. But if the building is 15 years old determine the depreciation amount which should be deducted from the cost of the new building at 6% compound interest. (7)

9 a) A building is constructed at a cost of Rs.2,50,000 on a land purchased at Rs. 50,000. The owner of the property expects a return of 9% on the cost of construction and 8% on the cost of land. The building is estimated to have a future life of 60years at the end of which it requires Rs.3,25,000 for constructing a new building in its place. Determine the standard rent of the property given: (9)

i. Rate of interest for sinking fund at 6%

ii. Annual repairs at 1.5% of cost of the construction

iii. All other outgoings 28% of the net income of the property

Scrap value at the end of the useful life of the building as 10%.

b) Define salvage value, Scrap value, capitalised value and obsolescence (6)

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