

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2017****Subject Code: 2170610****Date: 15/11/2017****Subject Name: Professional Practices & Valuation****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) A trapezoidal sloped square footing has top dimension 0.5 x 0.5 m & base dimension 1.2 x 1.2 m with height 0.7 m. Determine volume of concrete required for footing & surface area for sides.	03
	(b) Define following terms – Estimate, Contingencies, Spot Item	04
	(c) Determine the quantity of Steel, Concrete, Formwork for the beam shown in Figure – 1.	07
Q.2	(a) Differentiate between Estimation & Valuation.	03
	(b) Determine the quantity of various materials required for preparing M ₂₀ grade Concrete for the quantity of 12 m ³ .	04
	(c) Determine the following quantity of items of works by considering given drawing of a residential building in Figure – 2(A) & (B)	07
	1) Earthwork in excavation for foundation	
	2) P.C.C. Work (1:4:8) for foundation	
	3) Brick Masonry Work up to plinth level in Cement Mortar (1:6)	
	OR	
	(c) Determine the following quantity of items of works by considering given drawing of a residential building in Figure – 2(A) & (B)	07
	1) Brickwork in superstructure in Cement Mortar (1:6) up to bottom of slab & excluding steps in front & back	
	2) Smooth Plaster Work inside the rooms & Ceiling in Cement Mortar (1:4)	
	3) D.P.C. – 2.5 cm thick at Plinth Level	
Q.3	(a) Enlist different types of tenders & explain anyone them.	03
	(b) What do you mean by specification ? Also state different purposes of specification.	04
	(c) A machine is purchased for Rs-1,00,000. If after 5 years its scrap value is Rs-25,000. Calculate the amount of annual depreciation & book value at the end of every year in a tabular form by using following methods –	07
	1) Straight Line Method	
	2) Constant Percentage Method	

OR

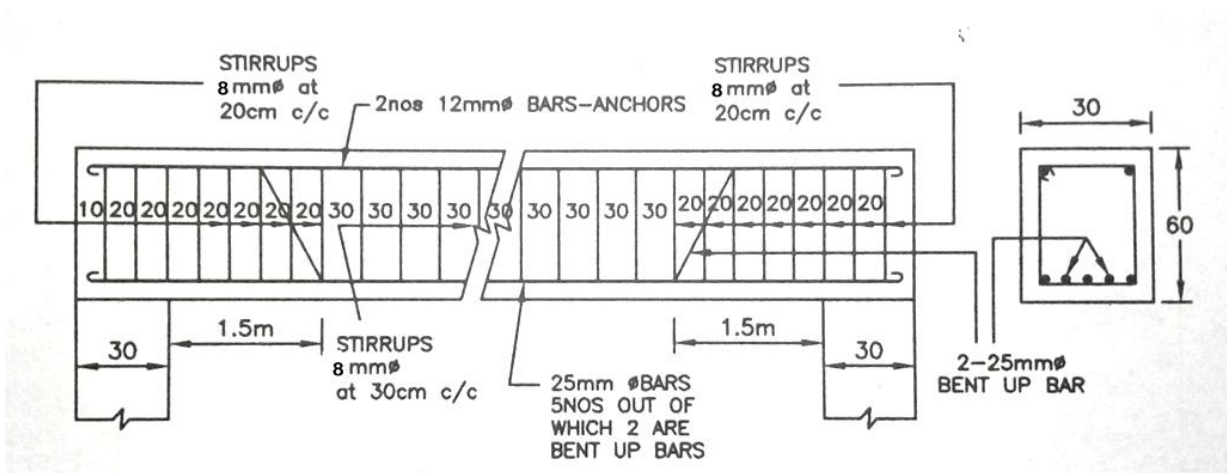
- Q.3** (a) A Right Circular Cone has base radius 0.8m & height 1.8m. Determine volume & curved surface area of the cone. **03**
- (b) Enlist essentials requirements of a valid contract & explain any two. **04**
- (c) The following are the details of a property – **07**
- 1) Cost of land =Rs-12,00,000
 - 2) Cost of construction = Rs-22,00,000
 - 3) Expected return on investment = 10%
 - 4) Interest rate for sinking fund = 7%
 - 5) Maintenance = Rs-15,000 per year
 - 6) Other outgoings = 25% of gross rent
 - 7) Expected life of building = 60 years
 - 8) Scrap value = 10% of construction cost
- Determine monthly rent of the property.
- Q.4** (a) Enlist different methods of preparation of approximate estimate for building works & explain any one. **03**
- (b) Differentiate between Earnest Money Deposit & Security Deposit. **04**
- (c) Carry out rate analysis of First Class Brick Work in superstructure in Cement Mortar (1:6). **07**

OR

- Q.4** (a) Explain following terms – Liquidated Damages, Unbalanced Tender, Arbitration. **03**
- (b) Define following terms – Book Value, Scrap Value, Salvage Value, Distress Value. **04**
- (c) Carry out rate analysis of 12mm thick Cement Plaster in Cement Mortar (1:4). **07**
- Q.5** (a) Discuss various reasons for rejection of the lowest tender. **03**
- (b) Write rules for deduction for following item of works – Brick Work, Concrete Work. **04**
- (c) Explain the following types of engineering contracts – **07**
- 1) Item Rate Contract
 - 2) BOT Contract
 - 3) Lump Sum Contract

OR

- Q.5** (a) What do you mean by value ? State the purposes of Valuation. **03**
- (b) Write unit of measurements for following items of works – **04**
- 1) Glazing work
 - 2) Removal of silt from canal
 - 3) Grouting of cement concrete
 - 4) Honeycomb brickwork
- (c) Write detailed specifications for following item of works – **07**
- 1) Earthwork in Excavation in Foundation
 - 2) Reinforced Cement Concrete Work



Note – Take Cover = 50mm (All round)
 Take size of stirrups = 8mm Dia. at 20cm & 30cm C/C
 Clear Span of Beam = 7m

Figure – 1 – R.C.C. Beam

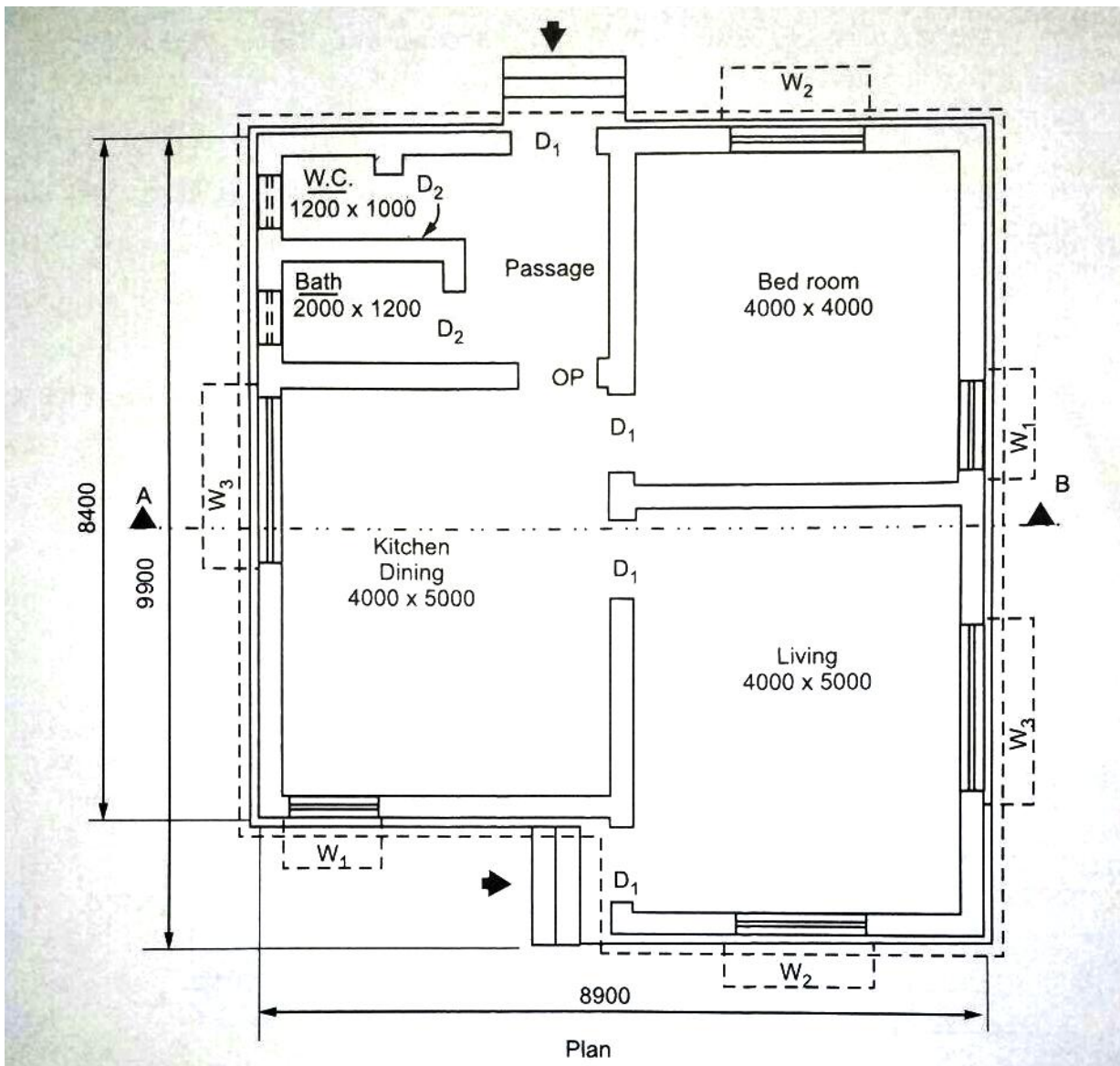
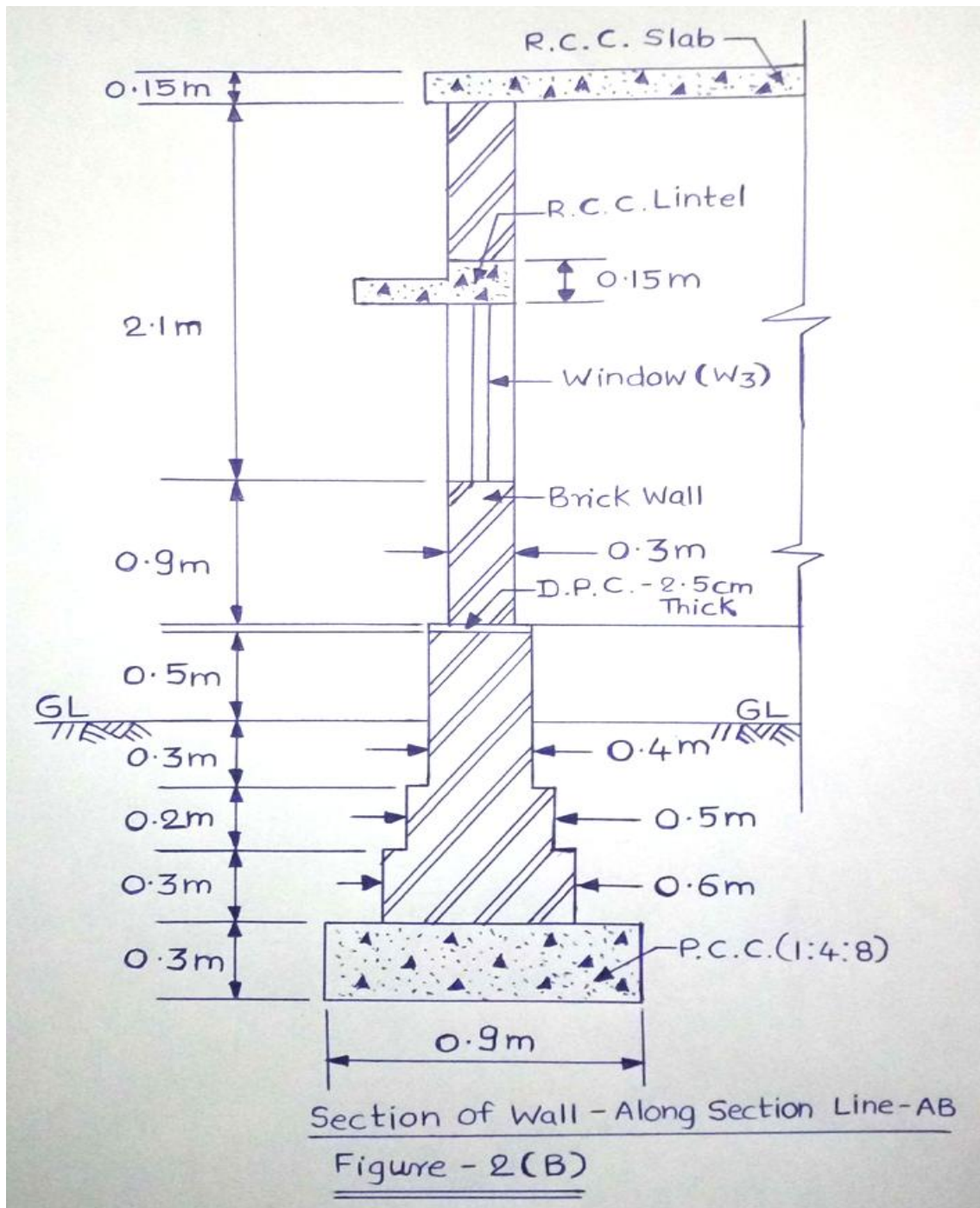


Figure – 2 (A) - Plan of Residential Building

Note - 1) Take bearing for lintel = 0.15 m at each end on lintel.



Schedule of Doors & Windows

Symbol	Numbers	Size (m)
D ₁	4	1 m x 2.1 m
D ₂	2	0.9 m x 2.1 m
OP	1	1 m x 2.1 m
W ₁	2	1 m x 1.2 m
W ₂	2	1.5 m x 1.2 m
W ₃	2	2 m x 1.2 m
V	2	0.6 m x 0.6 m