

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER- VII EXAMINATION – SUMMER 2026

Subject Code:3170615

Date:03-06-2026

Subject Name: Engineering Economics, Estimation and Costing

Time:02:30 PM TO 05:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

	Marks
Q.1 (a) State and explain the purposes of estimating.	03
(b) Write a note on following. (1) Work charged establishment (2) Prime cost	04
(c) Determine the following quantity of items of works by considering given drawing figure -1 of a residential building. (1) Earthwork in excavation for foundation. (2) Providing and laying P.C.C for foundation (1:4:8). (3) Brick Masonry work up to plinth level in C.M. (1:6). Consider height=0.15 m. Assume the width.	07
Q.2 (a) Define the term cash flow. Explain with sketch cash flow diagram	03
(b) Give the types of estimates and explain any one in detail.	04
(c) Define break-even point. Draw a break-even chart and write break-even analysis assumptions.	07
OR	
(c) Write a short note on time value of money.	07
Q.3 (a) Define Specifications and mention their objectives.	03
(b) What are the essential principles of good specification writing?	04
(c) Define Tender and give detailed classifications of tenders.	07
OR	
Q.3 (a) Describe the factors affecting rate analysis.	03
(b) Write detail specifications for cement concrete (1:4:8) for foundation.	04
(c) Draft a tender notice for construction of Hospital, on behalf of R&B department, Government of Gujarat. The estimated cost of work is Rs. 10,32,58,000/-.	07
Q.4 (a) Write short note on schedule of rates.	03
(b) Calculate the material required for Cement concrete (1:4:8) for foundation for 10 m ³ .	04
(c) List and explain the essential requirements of a valid contract.	07
OR	
Q.4 (a) What do you mean by Task or Out turn of work? How is it calculated?	03
(b) Calculate the material required for 12mm thick plaster in wall for 100m ² (C.M. 1:4).	04
(c) Write note on: 1) Earnest Money 2) Security deposit.	07
Q.5 (a) Give the measurement units of the following: (1) Cement (2) Sand (3) Skirting (4) Bricks (5) Mild steel bars (6) Marble	03
(b) Differentiate between Estimating and Valuation.	04
(c) Explain the various types of outgoings.	07

OR

Q.5 (a) Define: 1) Cost 2) Price 3) Value.

03

(b) Distinguish between Book value and Market value.

04

(c) Explain the various types of rent.

07

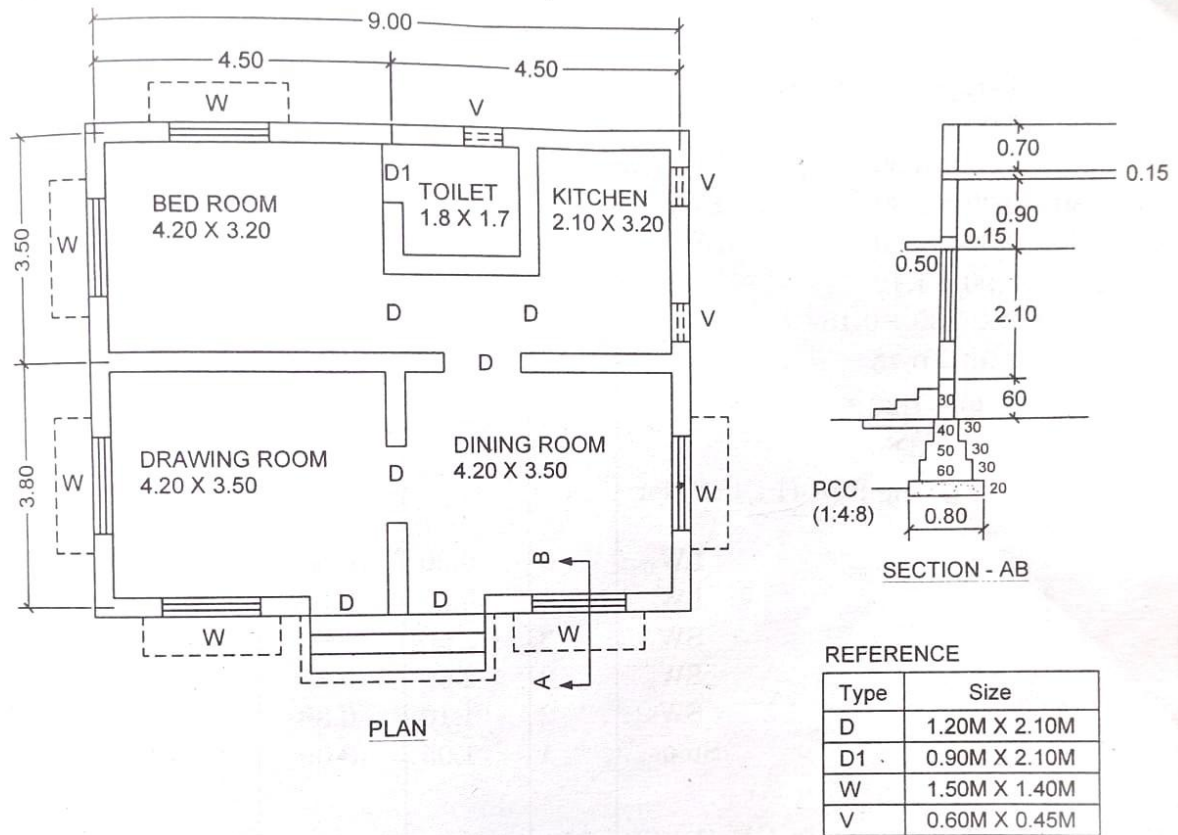


Figure-1 (All dimensions in Meter)
