

Scheme – G
Sample Test Paper - I

Course Name: Diploma in Civil Engineering Group

Course Code: CE/CS/CR/CV

17501

Semester : Fifth semester for CE/CS/CR and sixth semester for CV

Subject Title : Estimating and Costing

Marks : 25

Time: 1.30 hours

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1. Attempt any three of the following.

(09)

- a) State different types of approximate estimate.
- b) What is detailed estimate? Give any two types of detailed estimate.
- c) State the service units for the following.
 - i. Hospital
 - ii. Cinema Hall
 - iii. Hostel
- d) State the mode of measurement of the following
 - i. Site clearance
 - ii. Iron gate
 - iii. Wooden door frame

Q2. Attempt any two of the following.

(08)

- a) Describe revised estimate and when it is prepared?
- b) What are the steps used in preparation of detailed estimate?
- c) Prepare approximate estimate for small residential building using following details.

Sr. No.	Room	Size	Number
1	Drawing Hall	4.5m x 5.5m	1
2	Bedroom	3.0m x 3.6m	2
3	Kitchen	3.0m x 3.3m	1
4	Toilet blocks	2.6m x 3.0m	1

Plinth area rate is Rs. 6500/m²

Q3. Attempt any two of the following.

(08)

- a) Draw standard format of measurement sheet and abstract sheet.
- b) What is check list prepare a check list for a residential building as per sequence of execution.
- c) State the rules for deductions for brickwork as per IS 1200.

Sample Test Paper - II**Course Name: Diploma in Civil Engineering Group****Course Code: CE/CS/CR/CV****17501****Semester : Fifth semester for CE/CS/CR and sixth semester for CV****Subject Title : Estimating and Costing****Marks : 25****Time: 1.30****hours****Instructions:**

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1. Attempt any three of the following.**(09)**

- a) Explain long wall & short wall method of taking out quantities
- b) What is bar bending schedule and give the format for that.
- c) Describe the factors affecting rate analysis.
- d) Define
 - i. Task work
 - ii. work charged establishments

Q2. Attempt any one of the following.**(08)**

- a) Prepare rate analysis for R.C.C M 20.
- b) Work out quantities of earth work for a section of a percolation tank as given in the table.

Formation level=112.0m

Top Width = 5.0m

Side Slope = 2:1

Chainage in meter	0	30	60	90	120	150
G.L. in meter	110	109	109.7	108.7	109.8	109.8

Q3. Attempt any one of the following.

(08)

- a) An RCC roof slab of overall size 6600 mm x 2500 mm & thickness 150 mm is provided with 10 mm diameter main bars bent up (45°) alternatively and placed at 150mm c/c .The distribution steel of 6mm diameter is provided @ 200mm c/c. Concrete cover is 15 mm on all sides. Find out the total quantity of plain steel. Prepare a bar bending schedule.
- b) Work out quantity of internal plaster in cement mortar (1:4) on B.B. masonry in superstructure in CM (1:5) for a room of size 6.2m X 4.8m having floor height up to ceiling 3.1m. Thickness of wall is 300mm.

Schedule of opening

D₁-1m X 2.1m---01 no

W₁-1.8m X -1.2m---01 no

W₂-1.5m X1.2m---02 no

Sample Question Paper

Course Name: Diploma in Civil Engineering Group

Course Code: CE/CS/CR/CV

17501

Semester : Fifth semester for CE/CS/CR and sixth semester for CV

Subject Title : Estimating and Costing

Marks: 100

Time: 4 hours

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1 A. Attempt any THREE of the following. (12)

- a) State the purpose of estimating and costing
- b) Enlist the types of estimates. Mention the situation when revised estimate is prepared
- c) State mode of measurements for following items of work
 - i. Barbed wire fencing
 - ii. Skirting
 - iii. Dado
 - iv. Purlins
- d) Prepare approximate estimate of a building using following data.
 - i. Proposed area of the buildings 140 sq.m.
 - ii. Similar type of building is recently constructed in nearby locality having built up area 100 sq.m. and the total cost of that construction is Rs.12 lakhs.

Q1 B. Attempt any ONE of the following. (06)

- a) State the rules of deductions as per IS 1200 for
 - i) Masonry work in superstructure
 - ii) Plastering

b) Describe the following terms and state the purpose of each

- i) Contingencies
- ii) Work charged establishments
- iii) Centage charges

Q2. Attempt any TWO of the following

(16)

- a) Describe the procedure for calculating approximate estimate of a highway project.
- b) Prepare approximate estimate of a bridge having 8 spans of 50m each using following data.
 - i) Cost of existing recently built bridge= Rs1000 lakh
 - ii) Existing bridge is having 5 spans of 60 m each.
- c) Given data

Chainage in meter	0	20	40	60	80	100
G. L. in Meter	101.50	101.00	99.00	98.00	98.50	99.50

R. L. of formation level =100.00 m

Top width = 10 m

Side slope is 2:1(H:V) on both sides.

Calculate the quantity of earthwork for road using mid sectional area method.

Q3. Attempt any FOUR of the following

(16)

- a) State the desired accuracy in taking measurement of work as per IS : 1200.
- b) State four factors affecting the rate analysis?
- c) Define :
 - i) Lead & Lift
 - ii) Taskwork
- d) Give the market rates for the following materials:
 - 1) Cement bag
 - 2) Steel
 - 3) Brick
 - 4) Teakwood
- e) Prepare check list of items of work for preparing estimate of community well.

Q 4 (A) Work out quantities of following any THREE items of work from Fig.no.1 (12)

- a) Excavation for foundation
- b) U. C. R. masonry in foundation and plinth
- c) Internal plastering (1:4)

d) Concrete for slab (1:2:4)

Q 4 (B) Attempt any ONE of the following.

(06)

- a) Work out the quantities of M. S. reinforcement for the following and tabulate in a bar bending schedule format

Member	Overall size	Details of reinforcement
Beam	2000mm long (230x230) mm section.	a) Main bars 12mm Ø 4 Nos. 2 straight and 2 bentup (45°) b) Anchor bars 10mm Ø 2 Nos. c) Stirrups- 6mm Ø at 150 mm c/c

- b) Calculate the quantities of cement, sand and coarse aggregate for 50m³ cement concrete having proportion (1:2:4).

Q 5. Attempt any TWO of the following.

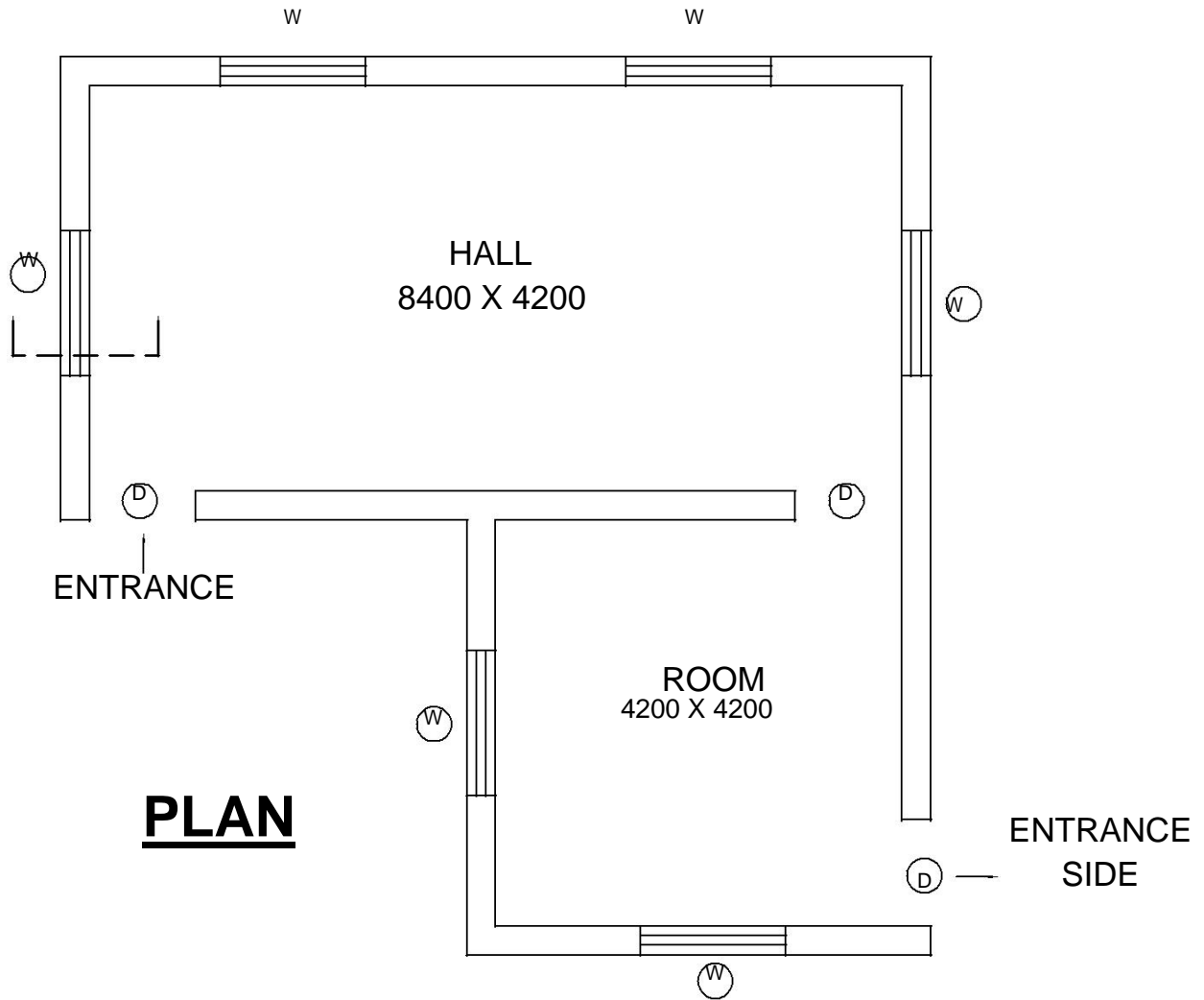
(16)

- a) Prepare rate analysis for P.C.C. (1:3:6)
- b) Prepare rate analysis for 12mm thick cement plastering in cement mortar (1:4)
- c) Work out the quantity of following items for septic tank having internal size 1.4mx 3.2m and height 1.4m..
- 1) Earthwork in excavation
 - 2) P. C. C. (1:3:6) 15 cm thick
 - 3) B.B. Masonry. in cement mortar (1:6) (300mm thick)
 - 4) M15 slab on septic tank 12cm thick
 - 5) The top of slab of septic tank is 15 cm above G.L.

Q6. Attempt any FOUR of the following.

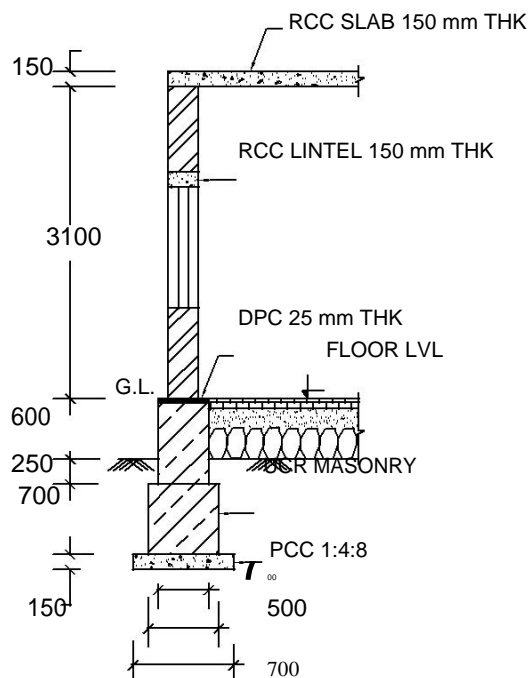
(16)

- a) Draw standard format of face sheet.
- b) Describe centre line method for calculating quantities of items of work.
- c) Calculate the quantity of excavation and enter in standard measurement sheet with brief description of item of work for community well shown in fig. No. 2
- d) Calculate the quantity of brickwork and enter in standard measurement sheet with brief description of item of work for community well shown in fig. No. 2
- e) Calculate the quantity of shahabad flooring and enter in standard measurement sheet with brief description of item of work for community well shown in fig. No. 2



NOTE :

1. All dimensions are in mm.
2. Reveal is same on both sides.
3. External side Pointing
4. D = 1100 x 2100
5. W = 1500 x 1200



Q. 4 A

