IV- SEM

CET-405-ESTIMATION AND COST EVALUATION-I

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1.   2 Marks questions

(a) What is the actual and nominal size of modular brick ?

(b) What are the units of measurement for the following items ?

        (i)   Reinforcement
        (ii)   DPC
        (iii)   Honeycomb brick masonary
        (iv)   Brick on edge

(c) What is the standard weight of 8mm and 10mm dia bars for 1m length ?

(d) Estimate the quantities of brickwork in a wall 4m long, 3m high and 30cm thick.

(e) Define the term "floor area".

(f) What do you mean by contingencies?

(g) What do you mean by lead and   lift?

(h) Calculate the number of bricks required for 10cum brick work?

(i) How the labourers are classified as per scheduled of rate of Govt. of Odisha?

(j) What is the volume of a bag of cement available in the market?

2.   5 Marks questions

(a) Calculate the quantity of dry material for $10m^3$ of cement concrete with proportion 1:2:4?

(b) Estimate the quantities of 1st class brickwork in lime mortar in foundation and plinth from Figure-1.

(c) Mention the duties and responsibilities of Junior Engineer.

(d) Calculate the quantities of dry material required for 100sqm ,12mm plastering with proportion 1:6 ?

(e) Differentiate between Approximate Estimate and Detailed Estimate.

(f) Write down the proforma for" Details of Measurement form" and " Abstract of Estimated

    cost".

(g) Calculate the dry materials required for 450m^2 of 25mm thick DPC in cement concrete of

Proportion (1:1.5:3)?

10 Marks Questions

3.   Calculate the following items of work for fig-2
   (i) Earthwork in excavation in foundation.
   (ii) Cement concrete in foundation.

4.   Evaluate the following items form fig-2
   (i) First class Brickwork in Superstructure.
   (ii) 12mm plastering in ceiling

5.   Calculate the cost of 10cum of brickwork in foundation and plinth with 20×10×10cm brick with cement sand mortar 1:6?

6.   Estimate the quantities of the following items of a two roomed building from fig-3 by centre line   method.
   i. Earthwork in excavation in foundation.
   ii. Lime concrete in foundation.
   iii. 1st class brick in cement mortar 1:6 in foundation and Plinth
   iv. 2.5 cm C.C damp proof course.
   v . 1st class brickwork in lime mortar in superstructure.

7.   Write short notes on :
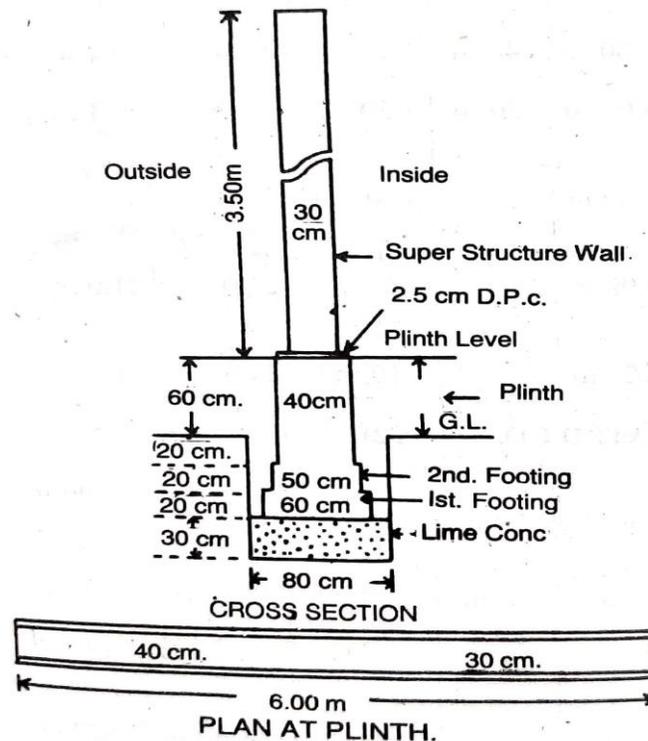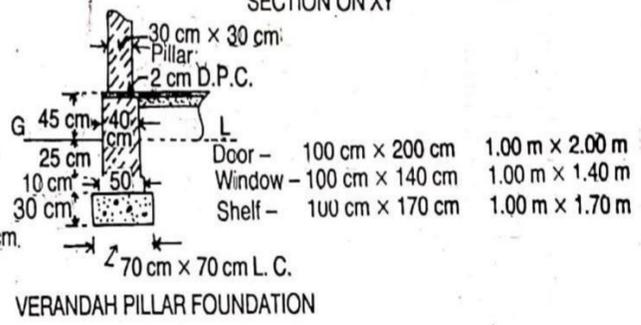   (a) Revised Estimate
   (b) Supplementary Estimate

CROSS SECTION

PLAN AT PLINTH.

FIG-1

PART SECTIONAL ELEVATION ON ABC

7.5 cm L.C.

30 cm

20 cm

10 cm Projection

15 cm R.B. Slab

60 cm × 30 cm R.C.C. Jaliwork

30 cm

10 cm R.B. Lintel

2.20 m

2.80 m

3.50 m

2.5 cm C.C. over 7.5 cm L.C.

2 cm D.P.C.

G

45 cm

40 cm

Earth

15 cm

50

filling

10 cm

60 cm

30 cm

80 cm

SECTION ON XY

30 cm

7.5 cm Lime Conc.

20 cm

20 cm

15 cm. R.B. Slab

10 cm Projection

30 cm

7.5 cm L.C. over 10 cm R.B. Slab.

10 cm Projection

20 cm R.B. Lintel

10 cm R.B. Lintel

30 cm

2.80 m

5 cm Precast R.C.C.

3.50 m

2.20 m

2.5 cm C.C. over 7.5 cm L.C.

2 cm D.P.C

30 cm Treads 15 cm Risers

G

20 cm

45 cm

Earth

filling

40 cm

45 cm

L

10 cm

15 cm

50 cm

15 cm

6 cm L.C.

65 cm

10 cm L.C.

10 cm

40 cm

60 cm -10 cm

30 cm

70 cm

80 cm

80 cm

VERANDAH PILLAR FOUNDATION

30 cm × 30 cm Pillar

2 cm D.P.C.

G

45 cm

40 cm

L

25 cm

10 cm

50

30 cm

70 cm × 70 cm L. C.

Door –	100 cm × 200 cm	1.00 m × 2.00 m
Window –	100 cm × 140 cm	1.00 m × 1.40 m
Shelf –	100 cm × 170 cm	1.00 m × 1.70 m

(Plan)

30 cm

Window

Window

30 cm

30 cm

4.20 m

5 cm

Shelf 1.00 m × 1.70 m

5 cm

A

B

Window

Room

3.00 m × 4.20 m

Chowkhat 10 cm × 8 cm.

Door

Door

30 cm

Chowkhat 10 cm × 8 cm

Verandah 2.00 m Wide

2.00 m

Pillar 30 cm × 30 cm

1.40 m

Treads – 30 cm
Rise – 15 cm

FIG-2

PLAN

Room 4m × 6m

Room 6m × 6m

30 cm

4.00 m

6.00 m

6.00 m

30 cm

W

W

W

W

S

S

D

D

A   A

7.5 cm L.C. Terrace Over 13 cm R.C.C.

4.20 m

30 cm

2 cm D.P.C.

2.5 cm c.c. Over 7.5 cm L.C.

40 cm

60 cm

G

L

20 cm

50 cm

60 cm

70 cm

80 cm

10 cm

10 cm
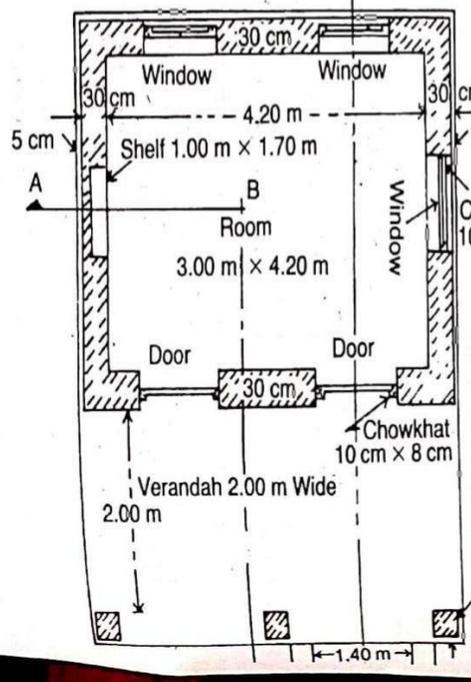
10 cm
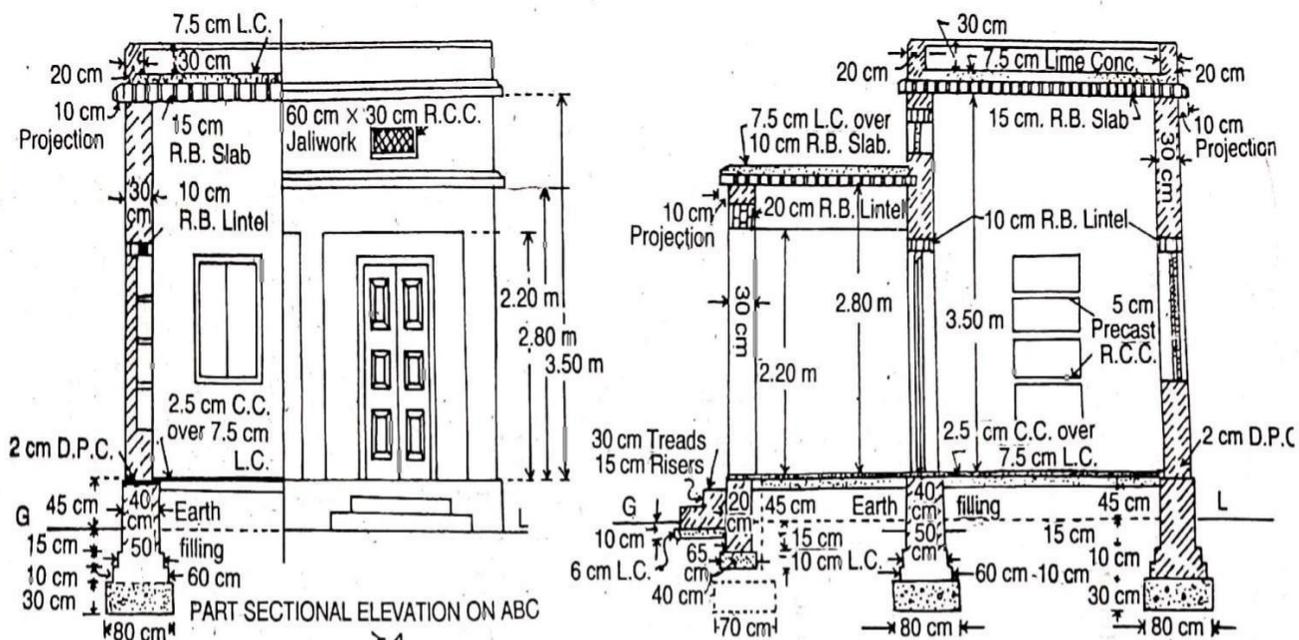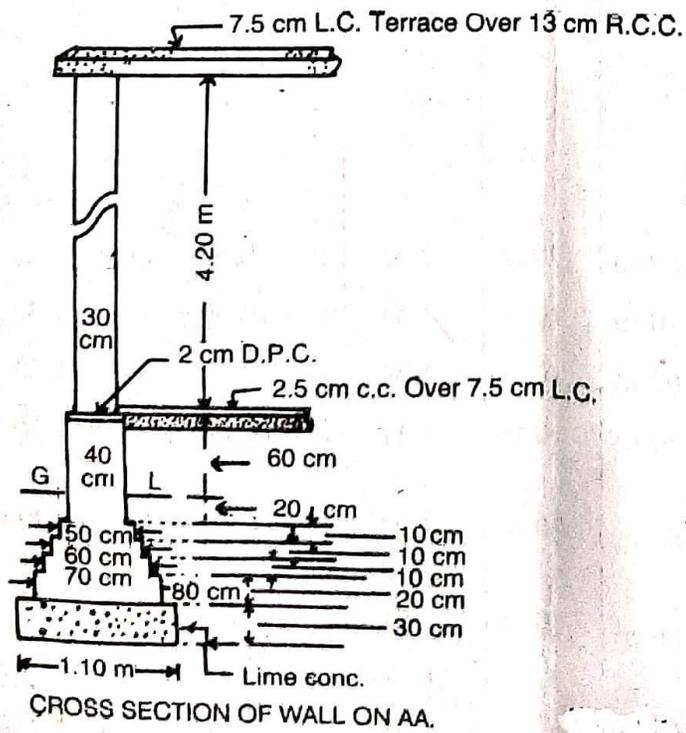
20 cm

30 cm

1.10 m

Lime conc.

CROSS SECTION OF WALL ON AA.
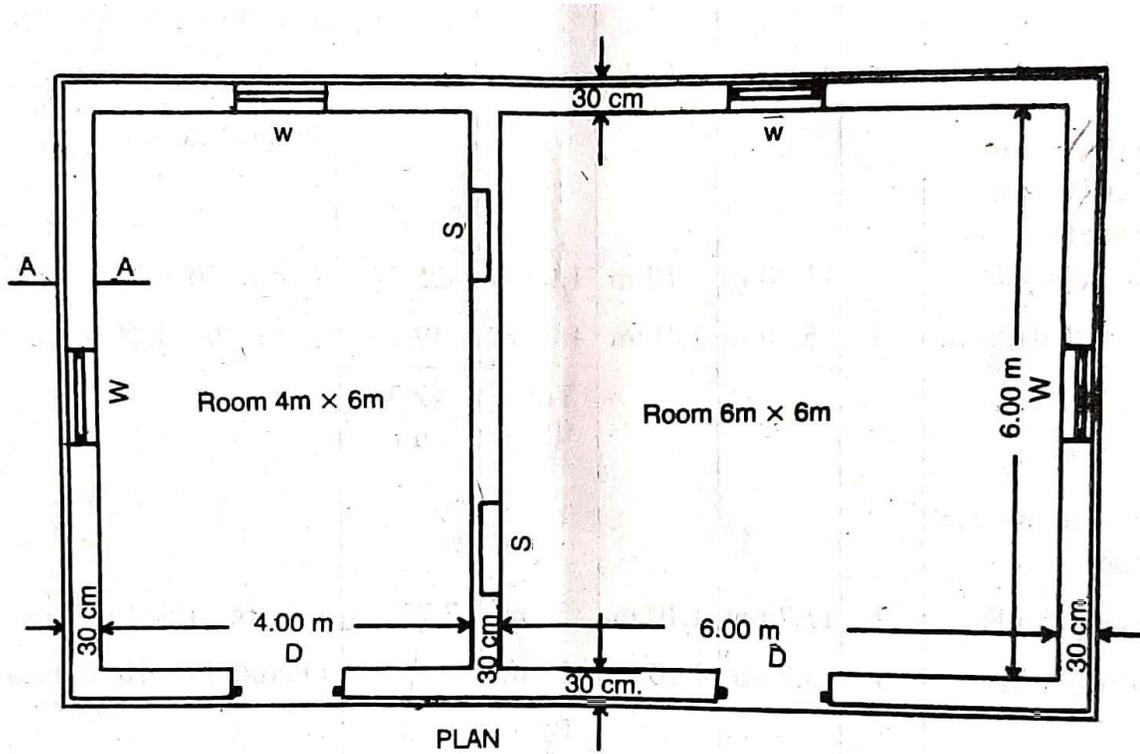
All Walls are of same section
Lintels over Doors. Windows and
Shelves are 15 cm thick R.B.

Doors D-1.20 m × 2.10 m
Windows W-1.00 × 1.50 m
Shelves S-1.00 m × 1.50 m

FIG-3