Registration No. :

Total number of printed pages – 4

Seventh Semester Back Examination – 2014
ESTIMATION, COSTING AND PROFESSIONAL PRACTICE
BRANCH (S) : MM, MME
QUESTION CODE : L 205
Full Marks – 70
Time : 3 Hours

Answer Question No. **1** which is compulsory and any **five** from the rest.
The figures in the right-hand margin indicate marks.

1. Answer the following questions :   2×10

    (a) What is plinth area estimate ?

    (b) What is the unit for earth filling in foundation and sun dried brick work ?

    (c) What are the advantages of centre line method of building estimate ?

    (d) Define overhead charges.

    (e) What are the purposes of rate analysis ?

    (f) What are the materials required for form work ?

    (g) Write two advantages of open specification ?

    (h) Find the no. of bricks in 10 cum brick masonry in cement mortar 1 : 6.

    (i) If an activity has its optimistic, most likely and pessimistic time as 3, 4 and 8 respectively, then its expected time and variance are respectively.

    (j) Define independent float.

2. Estimate the quantities of the following items of work for a building as shown in **Fig 1** :

    (a) Earth work in excavation in foundations.   5

    (b) First class brick work (1 : 6) in cement mortar in super structure.   5
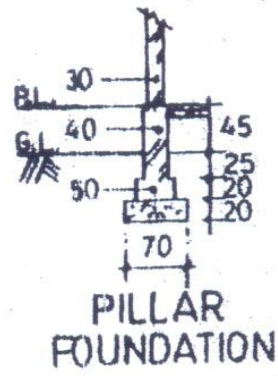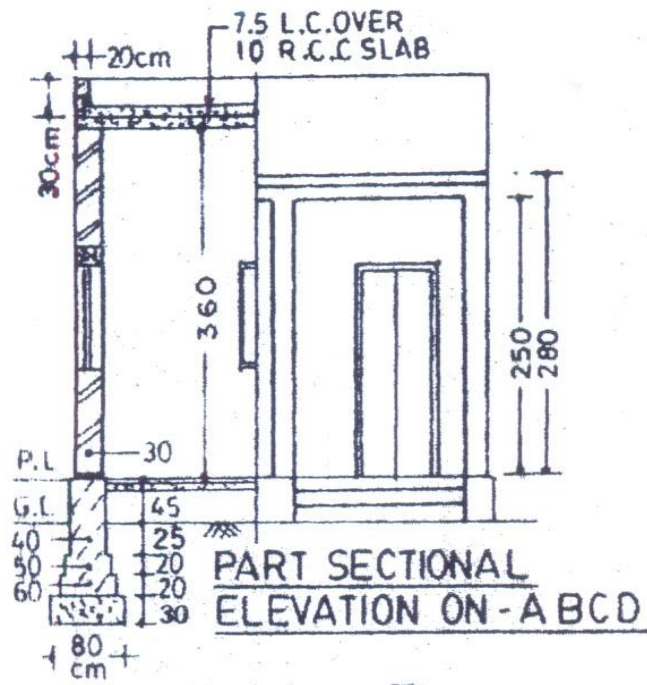
P.T.O.

3. Estimate the following quantities of a pipe culvert as shown in **Fig. 2** :

   (a) Earth work in excavation in foundations.   7

   (b) Cement concrete (1:3:6) in foundations.   3

4. (a) Draw the network of a project having seven activities. Activities A, B and C run concurrently. Activities predecessor relationships are as follows :

Activity	Immediate Predecessor
D	A
E	B
F	C

        Activity G is the last operation of the project, and is also immediate successor to D, E and F.   7
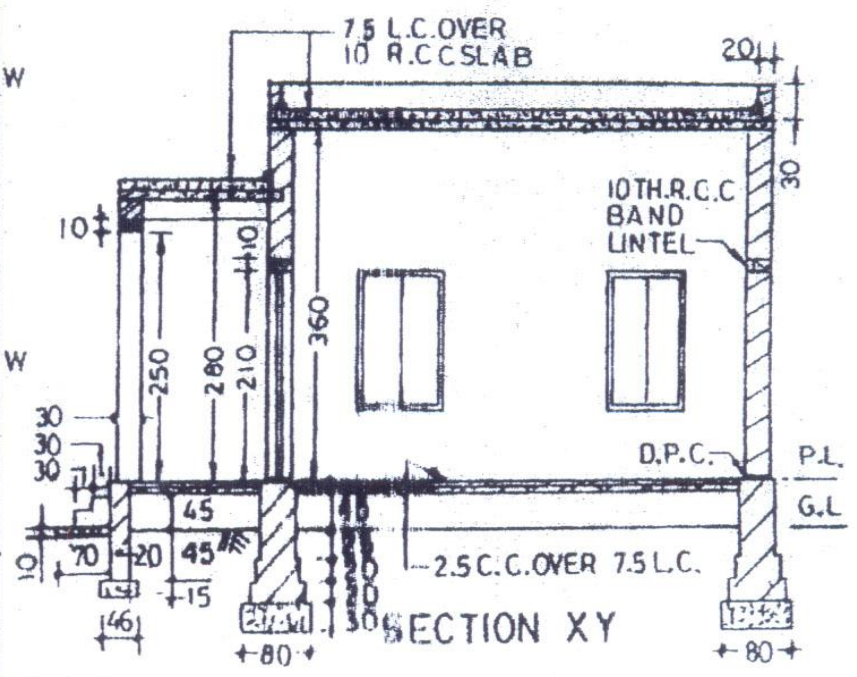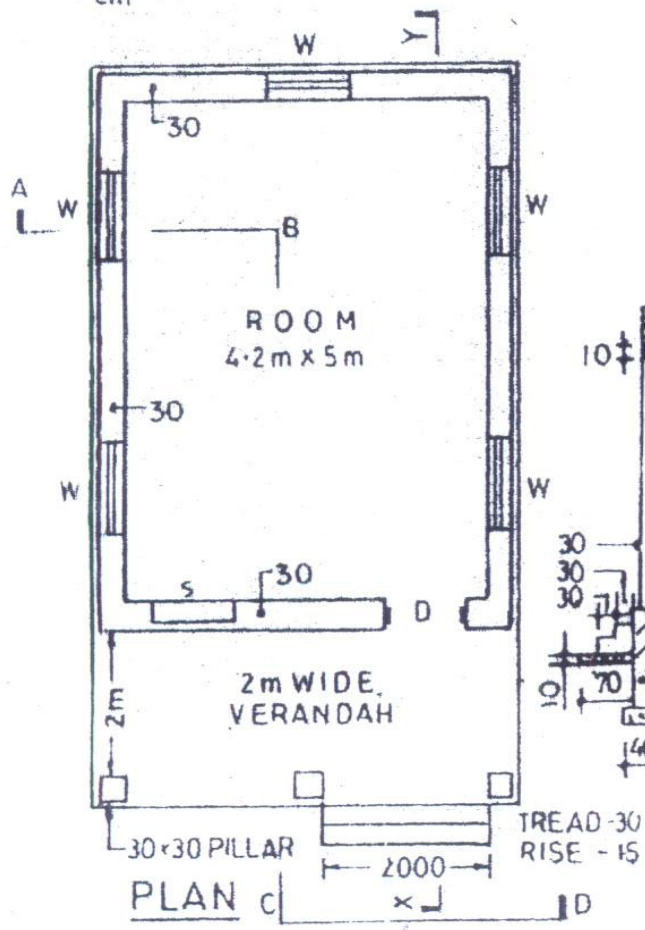
   (b) Differentiate between CPM and PERT.   3

5. (a) Find out the quantity of cement and sand required for one square meter of cement plaster, (1:6), 1.25 cm thick.   5

   (b) Find out the rate analysis per cum of cement concrete 1:4:8 with graded brick ballast 40 mm down in foundation.   5

6. (a) Outline the detailed specification for lime concrete in roof terracing.   5

   (b) Write the detailed specification for DPC of cement concrete 1:2:4.   5

7. (a) Write network rules. Explain Fulkerson's rule of node numbering.   5

   (b) What do you understand by a 'dummy' ? What are its uses ?   5

8. Write short notes on any **two** of the following :   5×2

   (a) Long wall and short wall method of building estimate

   (b) General specifications of a first class building

   (c) Prime cost

   (d) Item rate contract.
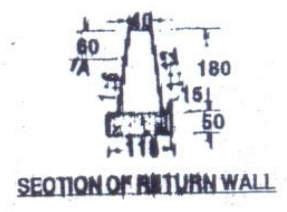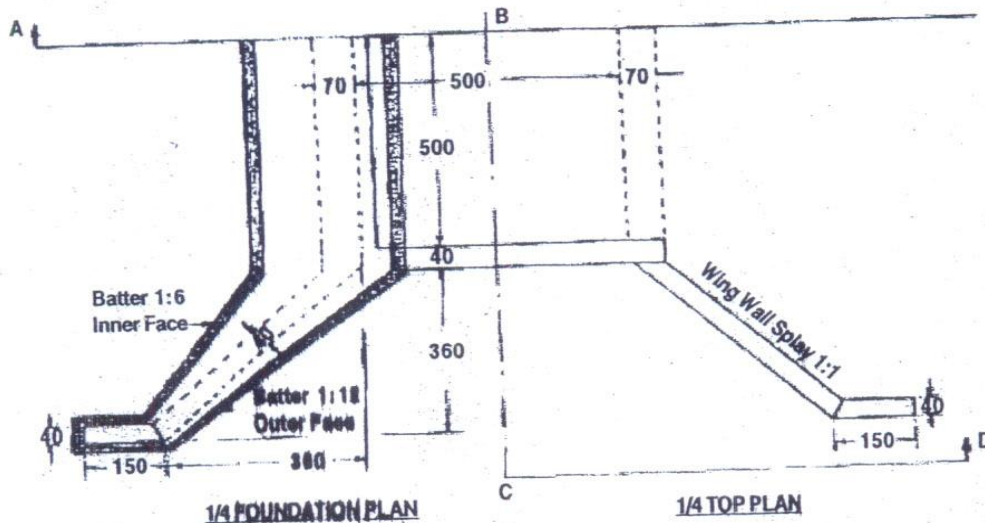
PART SECTIONAL ELEVATION ON - A BCD

PILLAR FOUNDATION

SCHEDULE
DOOR   D = 110×210
WINDOW W = 90×150
SHELF   S = 90×150

ROOM
4·2m × 5m

2m WIDE VERANDAH

30×30 PILLAR

TREAD-30
RISE - 15

PLAN

7.5 L.C.OVER 10 R.C.C SLAB

10TH.R.C.C BAND LINTEL

2.5 C.C.OVER 7.5 L.C.

SECTION XY

DIMENSIONS ARE IN CMS

Fig. 1

10 mm ⌀ Distribution Bars @ 20 apart
16 mm ⌀ Main Bars @ 10 apart
7.5 Cam. Conc.
Wearing Coat over
R.C.C. Decking

640

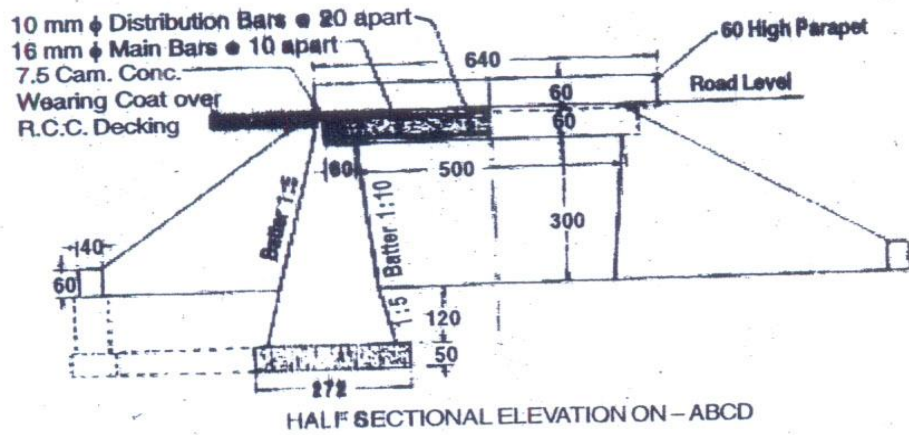60 High Parapet

Road Level

60

60

500

300

Batter 1:10

120

50

272

HALF SECTIONAL ELEVATION ON – ABCD

SECTION OF ABUTMENT

360

23

120

23

272

A

B

70

500

70

500

40

360

Batter 1:6
Inner Face

Batter 1:18
Outer Face

Wing Wall Splay 1:1

150

360

150

D

C

1/4 FOUNDATION PLAN

(Portion above bed level are
shown in dotted lines)

1/4 TOP PLAN

All dimensions are in cms.

SINGLE SPAN SLAB CULVERT

SECTION OF RETURN WALL

40

60

180

15

50

110

Fig. 2