Registration No. :

Total number of printed pages – 4

B. Tech

PECI 5405

Seventh Semester (Special) Examination – 2013

ESTIMATION, COSTING AND PROFESSIONAL PRACTICE

BRANCH CODE : CIVIL

QUESTION CODE : D 477

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 work in hard soil and pre cast jail work ?

    (c)   What are the data required for preparation of an estimate ?

    (d)   Define 'head event' and 'tail event'.

    (e)   Differentiate between general over head and job overhead.

    (f)   What is the necessity of specification ?

    (g)   What are the disadvantages of open specification ?

    (h)   What do you mean by operating cost of an equipment ?

    (i)   What is the objective of project management ?

    (j)   State various resources of a project.

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 : 4) in cement mortar   5

P.T.O.

3. Estimate the quantities of following items of work for Culvert as shown in **Fig 2**.

    (a) Earthwork in excavation in foundation   5

    (b) Cement concrete $(1:3:6)$ in foundation   5

4.   (a) A project consists of eight events having predecessor relationships as under, Construct the network.   5

Event	Immediate predecessor	Event	Immediate predecessor
10	—	50	30,40
20	10	60	30,50
30	10	70	60
40	20,30	80	40,70

    (b) Sketch and explain the various errors in drawing a network diagram.   5

5.   (a) Find the rate analysis per sqm of white washing single coat.   5

    (b) Find the rate analysis per sqm of DPC, 4 cm thick of cement concrete 1:2:4 with one coat of bitumen.   5

6.   (a) Outline the detailed specification for Asbestos Cement Corrugated sheets.   5

    (b) Write the detailed specification for second class brick work on lime mortar.   5

7.   (a) Differentiate between Float and Slack.   5

    (b) Findout the quantity of cement and sand required for one square metre of cement plaster (1 : 6), 1.25 cm thick.   5

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

    (a) General specification for second class building

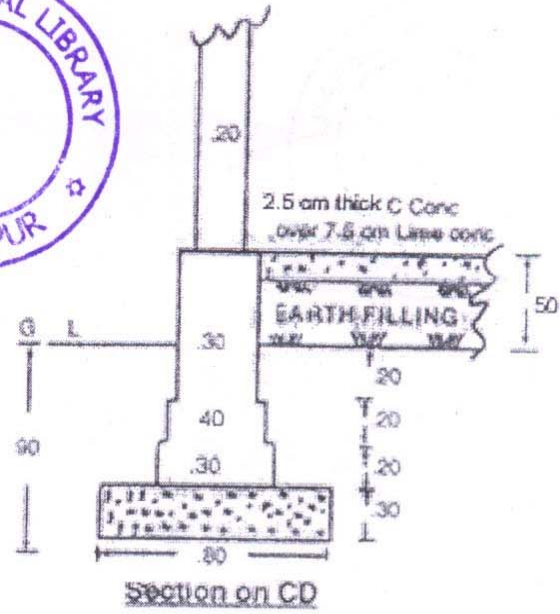   (b) Construction schedules for jobs
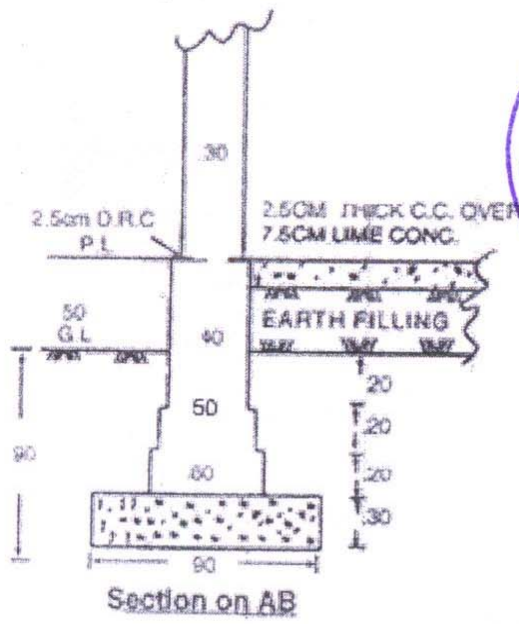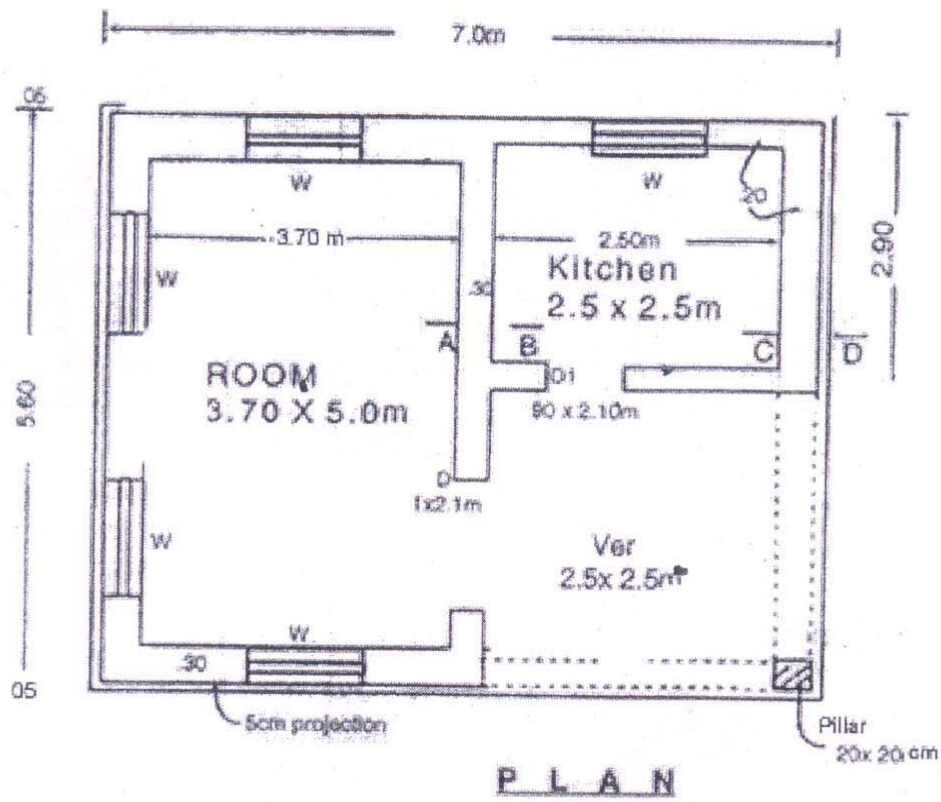
    (c) Special repair estimate
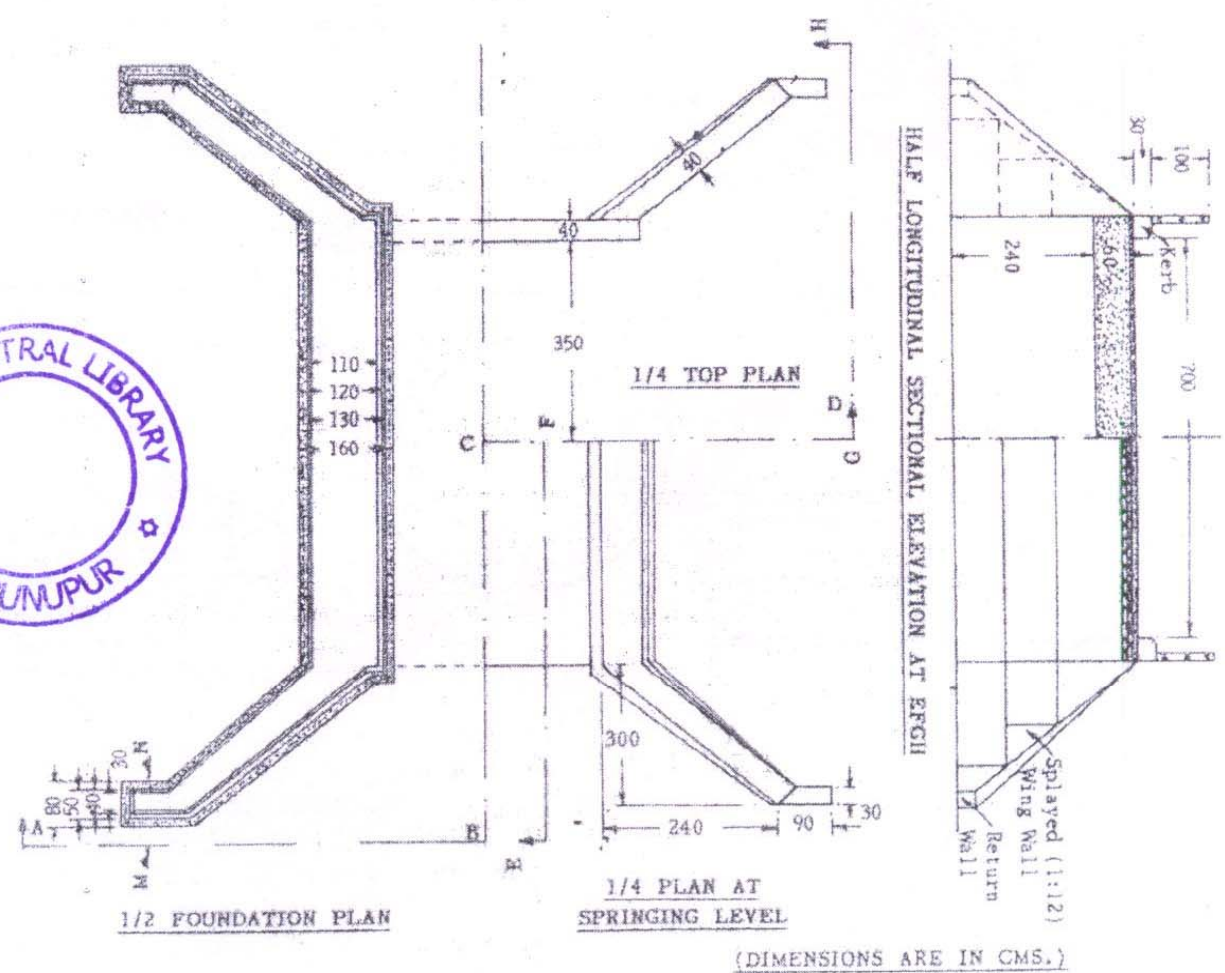
7.0m

05

W

3.70 m

2.50m

Kitchen
2.5 x 2.5m

2.90

W

W

A | B | C | D

ROOM
3.70 X 5.0m

5.60

D1
90 x 2.10m

W

D
1x2.1m

Ver
2.5x 2.5m²

W

.30

05

5cm projection

Pillar
20x 20 cm

P L A N

.30

.20

2.5cm D.R.C
P L

2.5CM THICK C.C. OVER
7.5CM LIME CONC.

2.5 cm thick C Conc
over 7.5 cm Lime conc

EARTH FILLING

EARTH FILLING

50
G.L

.50

40

.20

G L

.30

.20

50

.20

.40

.20

90

80

.20

90

.30

.30

.20

.30

90

.80

Section on AB

Section on CD

Figure - 1

5 Nos. L 130mm x 6mm Posts
40mm ∅ Pipe Railings

10mm C.C. Wearing Coat
60 Th. Deck Slab
with 60 Bearing

Front Face of
Abutment
Batter 1:12

HALF CROSS SECTIONAL ELEVATION AT ABCD

SECTION OF RETURN
WALL ON MN

1/4 TOP PLAN

1/2 FOUNDATION PLAN

1/4 PLAN AT
SPRINGING LEVEL

HALF LONGITUDINAL SECTIONAL ELEVATION AT EFGH

Kerb

Splayed (1:12)
Wing Wall

Return
Wall

(DIMENSIONS ARE IN CMS.)

SLAB CULVERT

Figure - 2