

GANPAT UNIVERSITY

B.Tech. Semester VI (Civil), Regular Examination – May / June: 2013

2CI-604: Estimating and Costing

Max. Time: 3 Hours

Max. Marks: 70

Exam. No. of the candidate: \_\_\_\_\_

- Instructions: -
- (1) Answer to the two sections must be written in separate answer books.
  - (2) Figures to the right indicate full marks.
  - (3) Assume suitable data if required.

Section - I

- Q.1 (A) Define 'Estimate' and explain in detail various types of estimations. (12)  
(B) Write a note on 'Principle of units of various items of works'

OR

- Q.1 Prepare rate analysis for following items. (Any Four) (12)  
(A) Rubble Masonry (1:6)  
(B) Earthwork in excavation not exceeding 1.5 m in width  
(C) Cement concrete 1:5:10

- (D) 2.5 cm thick DPC with CC 1:2:4  
(E) 12mm thick cement plastering 1:6

- Q.2 (A) Explain the deductions made for opening or bearing in Masonry work with neat sketch (6)  
(B) Write a note on 'Septic Tank' and 'Soak Pit'. (6)

OR

- Q.2 (A) Discuss different cases for finding out earth work of Irrigation Canal. (6)  
(B) Calculate the area of the side slopes of portion of a bank for a length of 300 meter the heights of banks at the two ends being 3.0 m and 4.0m and the ratio of side slope 1.5:1. If the side slopes are to be provided with 15 cm thick stone pitching, calculate the cost of pitching at the rate of Rs. 150/-per cum

- Q.3 Reduced level of ground along the centre line of a proposed road from chainage 10 to chainage 20 are given below. The formation level at 10 th chainage is 108 and the road is in downward gradient of 1 in 150 up to the chainage 15 and thae the gradient changes to 1 in 100 downward. Formation width of road is 10 m and side slopes of banking are 2:1. Length f the chaine is 20m. Draw longitudinal section of the road and a typical cross section and prepare an estimate of earthwork at the rate of Rs. 375 per cum. (11)

Chainage	Distance (m)	RL of Ground (m)	RL of Formation (m)
10	300	106.20	107
11	320	106.40	106.90
12	340	105.90	106.45
13	360	105.80	106.20
14	380	105.65	106.00
15	400	104.95	105.80
16	420	104.60	105.60
17	440	104.65	105.35
18	460	104.30	104.90
19	480	104.10	104.60
20	500	103.90	104.15

**Section - II**

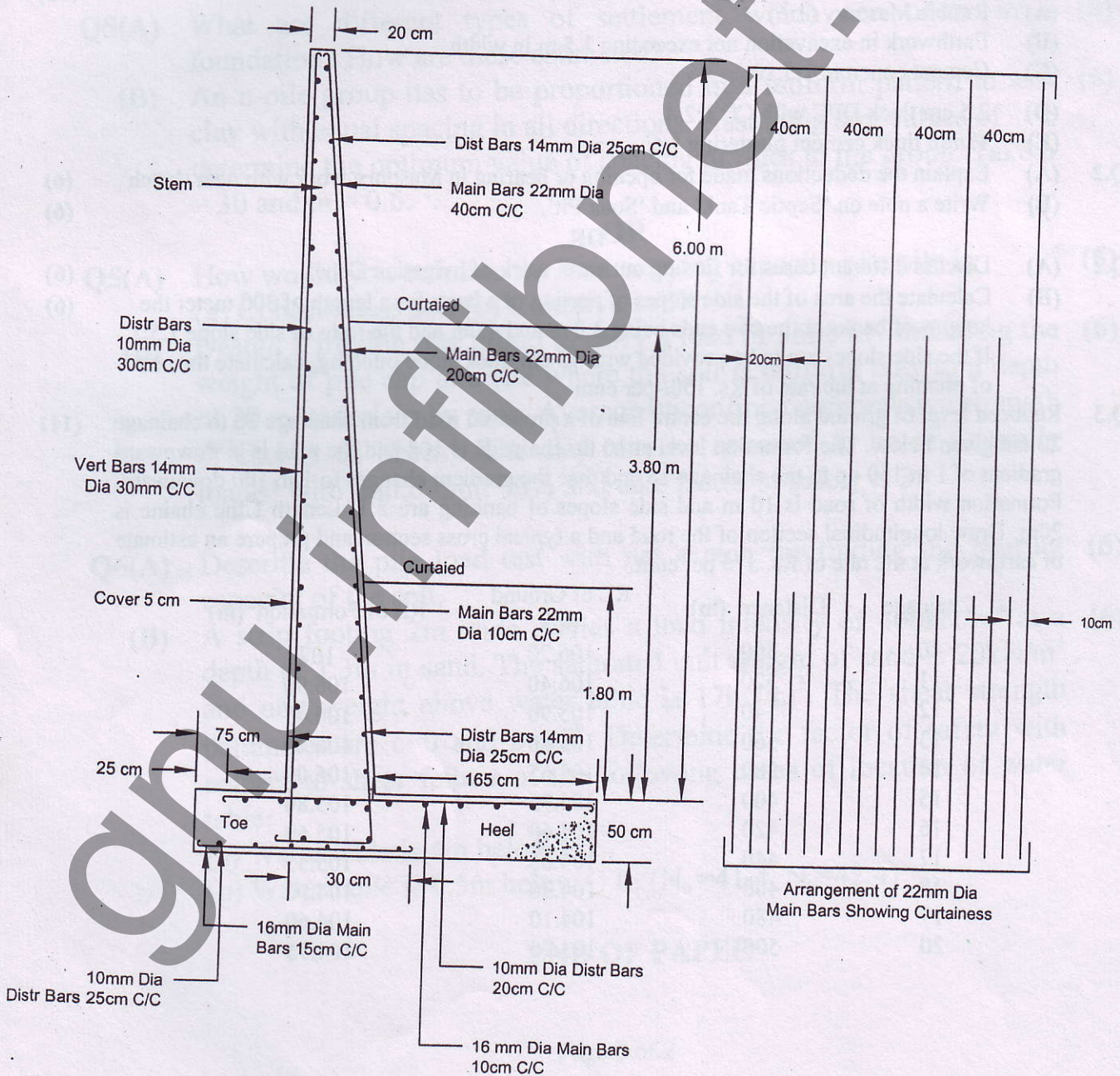
- Q.4** Write Specification for following items. (Any Two) (8)
- (A) Lime concrete for foundation
  - (B) Door and Window
  - (C) Whitewashing

- Q.5** Prepare a detailed estimate of a RCC retaining wall of 30 m in length whose cross section is as under. Steel bars in reinforcement shall have to be taken separately. Assume suitable rates. (9)
- ( Please see Drawing of the Retaining Wall)

**OR**

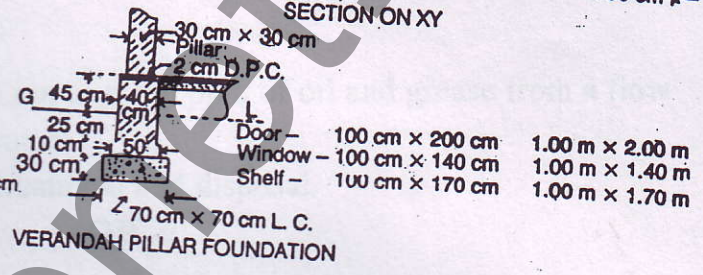
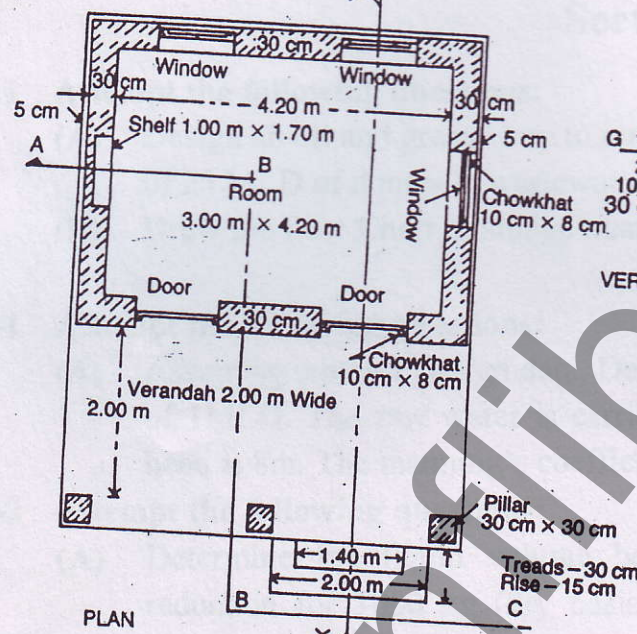
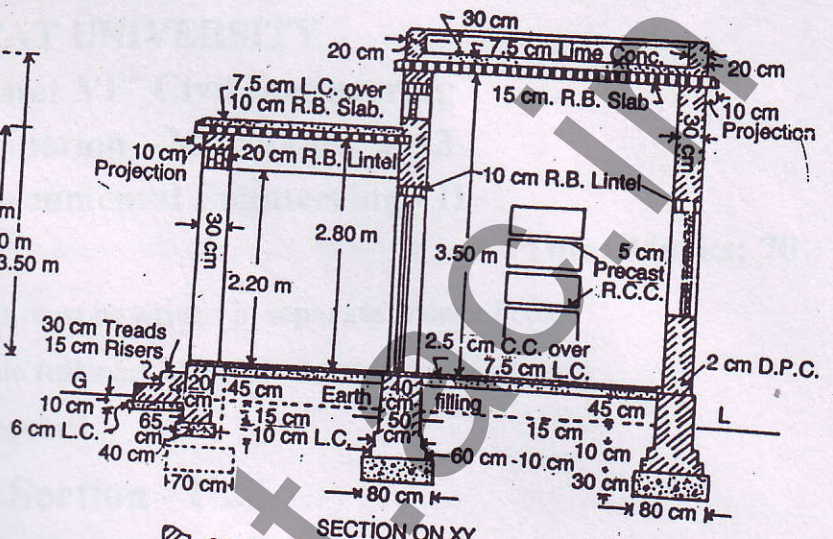
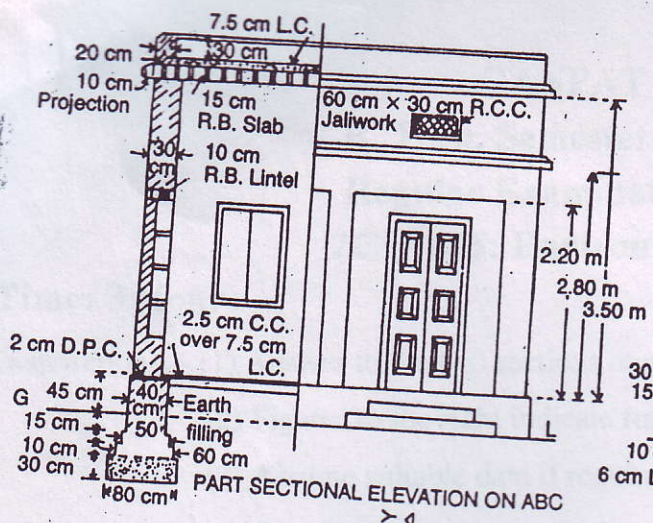
- Q.5** Prepare plan and detail drawing of Servant Quarter (Out House) and estimate quantity for following items(1) Excavation (2) CC 1:5:10 in foundation (3) Masonry work in foundation (9)
- NOTE: Draw neat sketch of plan and required details (Assume Suitable Data)**

- Q.6** Prepared detailed estimate of building for following items.(1) Excavation in foundation (2)10 cm sand filling in foundation (3) 10 cm thick CC in Foundation (4) Masonry work up to plinth level.(5) Plastering outside.(6) 2.5 cm thick DPC (18)
- ( Please see Drawing of the Building)



Que. 5

Details of Retaining Wall



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

Que. 6

gnu.rib