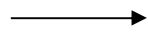


- Q5** a) Write the detailed specification for following items : **(10)**
 i. Reinforced cement concrete
 ii. Mosaic or terrazzo floor
 b) What is specification? Write General Specification of a first class building. **(5)**
- Q6** Prepare a detailed estimate for earthwork for a portion of a road from the following data:- **(15)**

Dist. In m	0	100	200	300	400	500	600	700	800	900	1000	1100	1200
R.L of ground	114.50	114.75	115.25	115.20	116.10	116.85	118.00	118.25	118.10	117.80	117.75	117.90	119.50

R.L of formation- 115

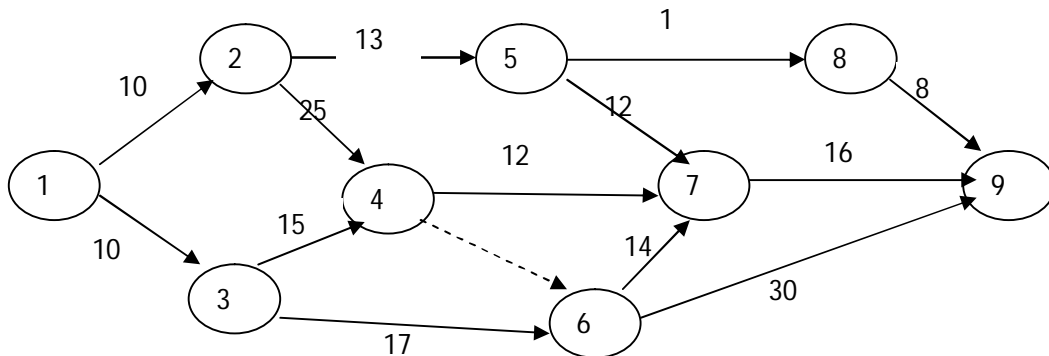
Upward Gradient 1 in 200 up to 600m



Downward gradient 1 in 400

Formation road is 100metre side slope 2:1 in banking and 1.5:1 in cutting.

- Q7** a) Work out the rate analysis of following two item: **(10)**
 i. First class brick work in cement mortar in 1:6 in super structure
 ii. RCC work with CC 1:1.5:3 proportion
 b) Find out the rate analysis of cement concrete with cement, coarse sand and 4cm gauge stone basalt 1:2:4 proportion. **(5)**
- Q8** a) Calculate all activity times of the following CPM network and hence obtain critical path and project duration(in days). **(10)**



- b) Discuss about all the steps in evaluation of a tender? **(5)**
- Q9** a) Draw a PERT network for the followings and find expected mean time, variance and standard deviation of the project. **(10)**

Activity	Three time Estimates (days)
1-2	6-9-18
1-3	5-8-17
2-4	4-7-22
2-5	4-7-10
3-4	4-7-16
3-5	2-5-8
4-5	4-10-22

- b) What are the difference between PERT and CPM? **(5)**

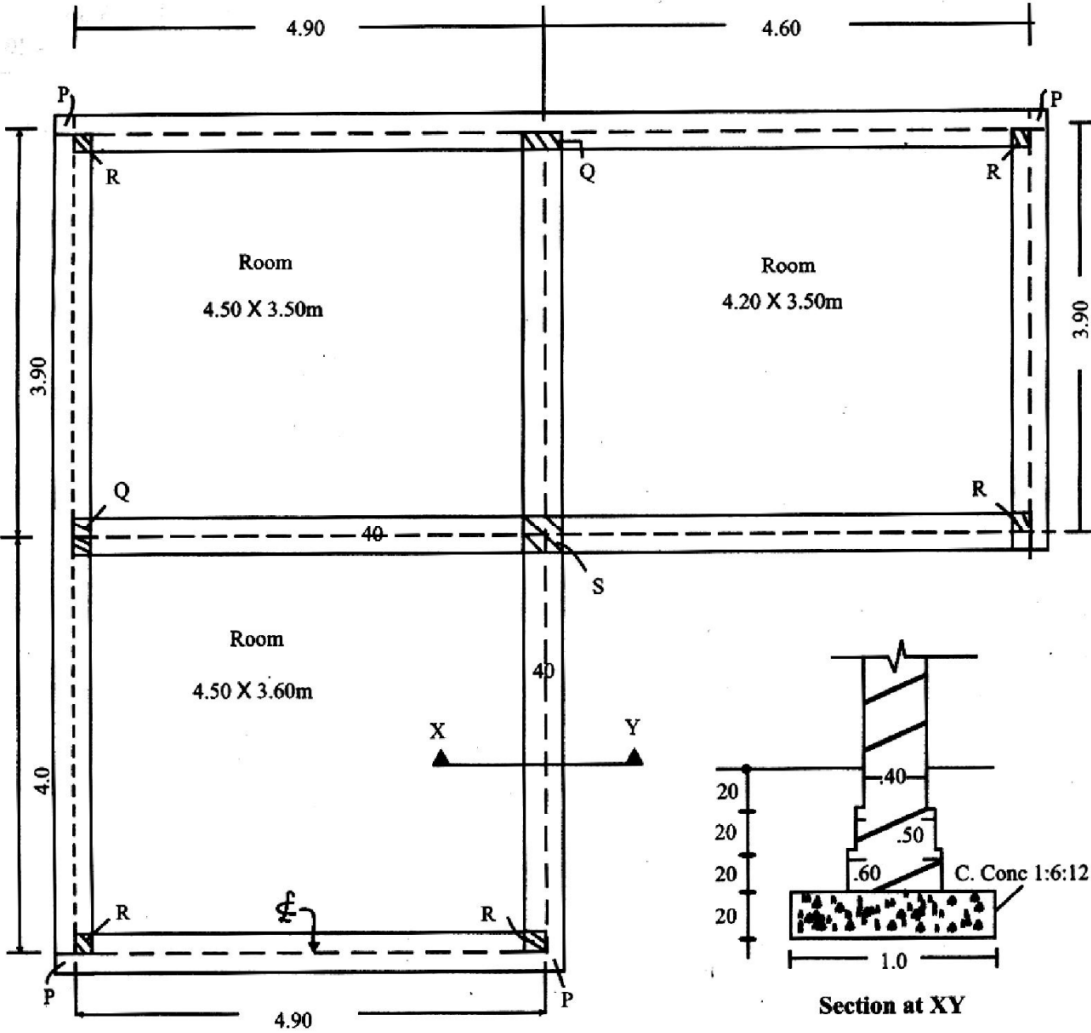


Fig-1

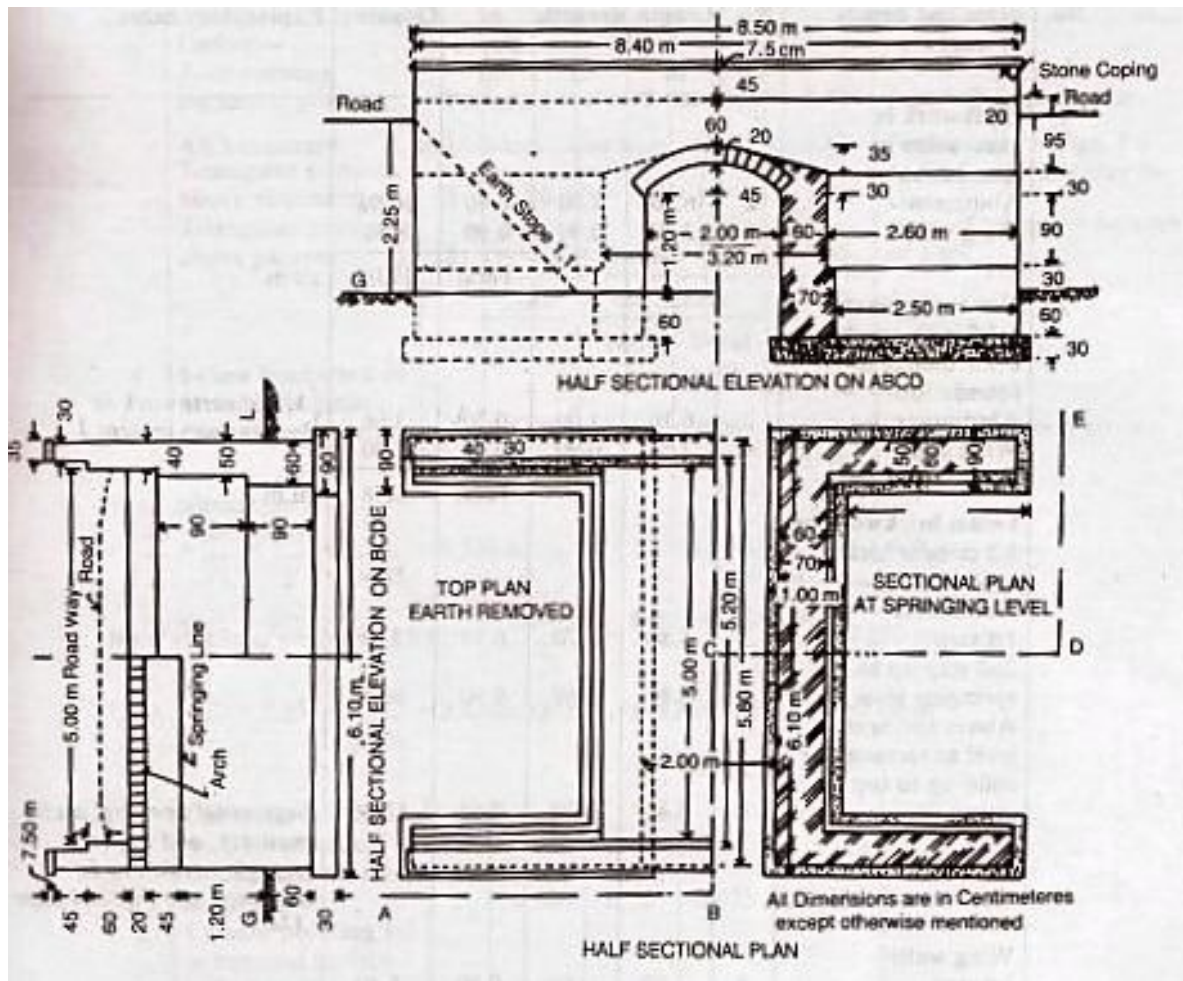


Fig-2