Total No. of printed pages = 5

ESTIMATION AND COSTING

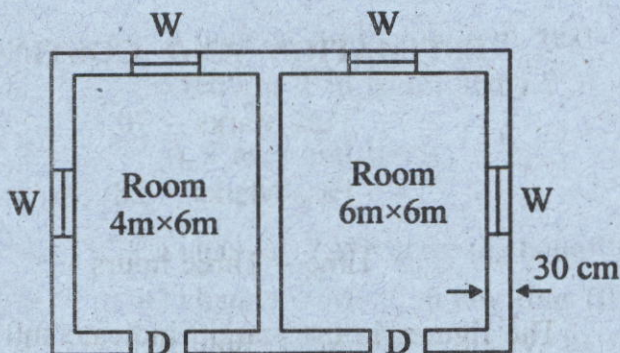Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer *all* questions.

1. Estimate the quantities of the following items of a two-roomed building from the given plan and section :   14

    (i)   Earthwork in excavation in foundation

    (ii) Lime concrete in foundation

    (iii) First class brickwork in cement mortar 1 : 6 in foundation and plinth
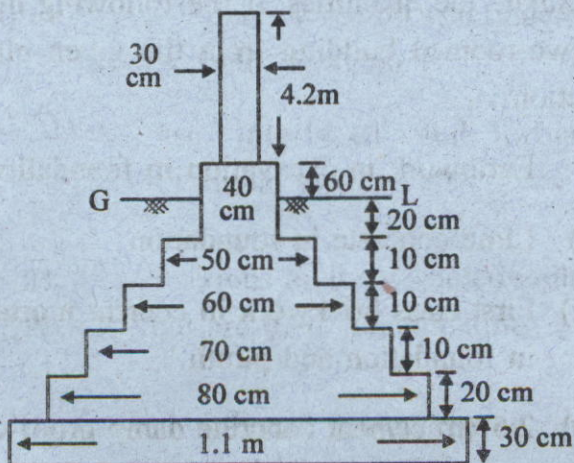
    (iv) 2.5 cm cement concrete damp proof course.

[Turn over

(v) First class brickwork in lime mortar in super structure.

Doors – 1.2m×2.1m

Windows – 1m×1.5m

2. Prepare a detailed estimate for a portion of a road from the following data – 14

Distance in 'm'	0	100	200	300	400	500	600
RL of ground	114.5	114.75	115.25	115.2	116.1	116.85	118
RL of 115 formation	← upward gradient 1 in 200 up to 600 →						

700	800	900	1000	1100	1200
118.25	118.1	117.8	117.75	117.9	117.50
← downward gradient 1 in 400 →					

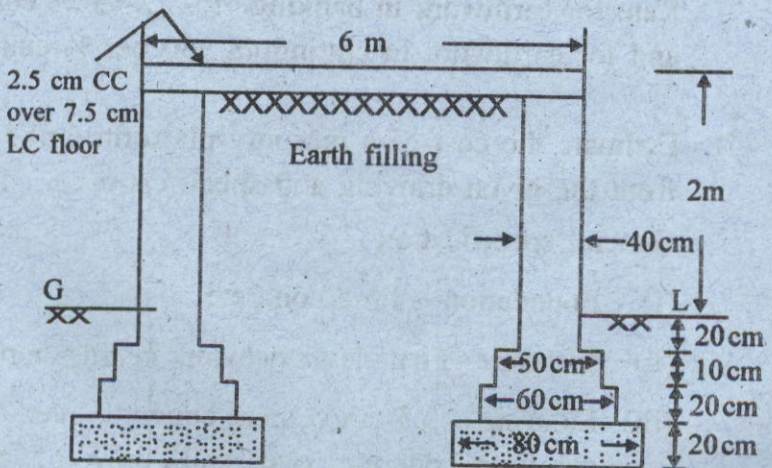Formation width of road is 10 metre, side slopes 2:1 in banking and 1½ : 1 in cutting.

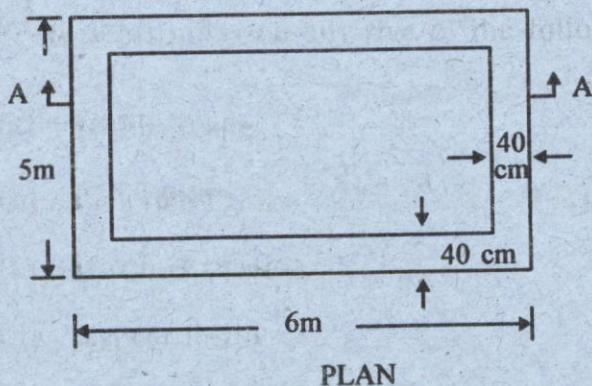Rate for earthwork in banking @ 275 per % cum and for earthwork in cutting @ 350 per % cum.

3. Estimate the cost of a masonry platform 6m×5m from the given drawing and specification. 14

General specification –

(i) Foundation – lime concrete

(ii) Masonry – First class brickwork in lime mortar

(iii) Flooring – 2.5 cm cement concrete over 7.5 cm lime concrete, over wall only 2.5 cm cement concrete

Rates :

(i) Earthwork in excavation in foundation @ 350 per % cum.

(ii) Earthwork in filling @ Rs. 275 per % cum.

(iii) Lime concrete in foundation @ Rs. 220 per cum.

(iv) First class brickwork in lime mortar @ Rs. 300 per cum.

(v) 12 mm cement-sand plastering 1:6 @ Rs. 7 per sq.m.

(vi) 2.5 cm cement concrete 1:2:4 floor over and 7.5 cm lime concrete @ Rs. 18.65 per sq.m.

(vii) 2.5 cm cement concrete 1:2:4 floor @ Rs. 18 per sq.m.

SECTION AA

PLAN

4. (i) Analyse the rate of cement concrete of 1:1:2 properties in 1 cum unit, take 10 cum. 7

   (ii) Analyse the rate of 20 mm plastering 1:6 unit 1 sqm, take 100 sqm. 7

5. Write detail specification of any *two* : 7×2=14

   (i) Damp proof course 2.5 cm cement concrete 1 : 1.5 : 3.

   (ii) Mosaic or terrazo floor.

   (iii) General specification of first class building.