[01 – 3115]

III/IV B.E. DEGREE EXAMINATION.

First Semester

Civil Engineering and Environmental Engineering

ESTIMATING AND QUANTITY SURVEYING

(Common with Civil Environmental Engineering and Dual Degree Program in Civil Engineering)

(Effective from the admitted batch of 2006–2007)

Time : Three hours Maximum : 70 marks

Question No. 1 and 2 are Compulsory and answer any THREE from remaining questions. All bits of question No. 1 should be answered at one place in the same other as they answer.

1. (a) What is Plinth area estimate?

(b) Express the units of measurement of

(i) Flooring

(ii) Painting

(c) Explain general item of mark of earth work in excavation in foundation?

(d) Explain general item of mark of Damp Proof Course (DPC).

(e) Mention general rules in estimating items of work.

(f) Explain principle of centre line method.

(g) What is lead and lift?

(h) Formulate volume of earthwork for one level section?

(i) What indicates standard data book?

(j) What is lumpsum contract?

(k) What is contract document?

(l) What is market value?

(m) What is sinking fund?

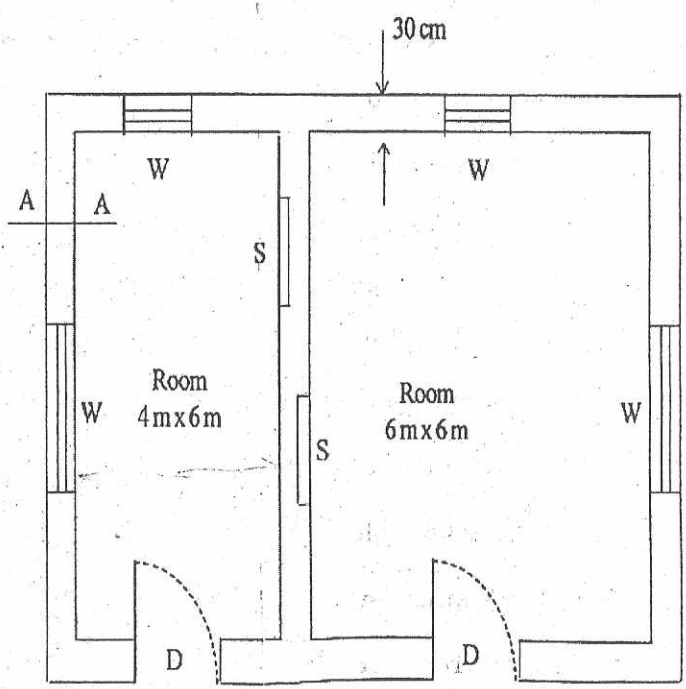
(n) What are errors in estimate?

2. Estimate the quantities of the following items of a two roomed building from the given plan and section as shown in Figure 1.

(a) Earthwork in excavation in foundation

(b) Damp proof course

(c) 1st class brick work in lime mortar in superstructure.




PLAN

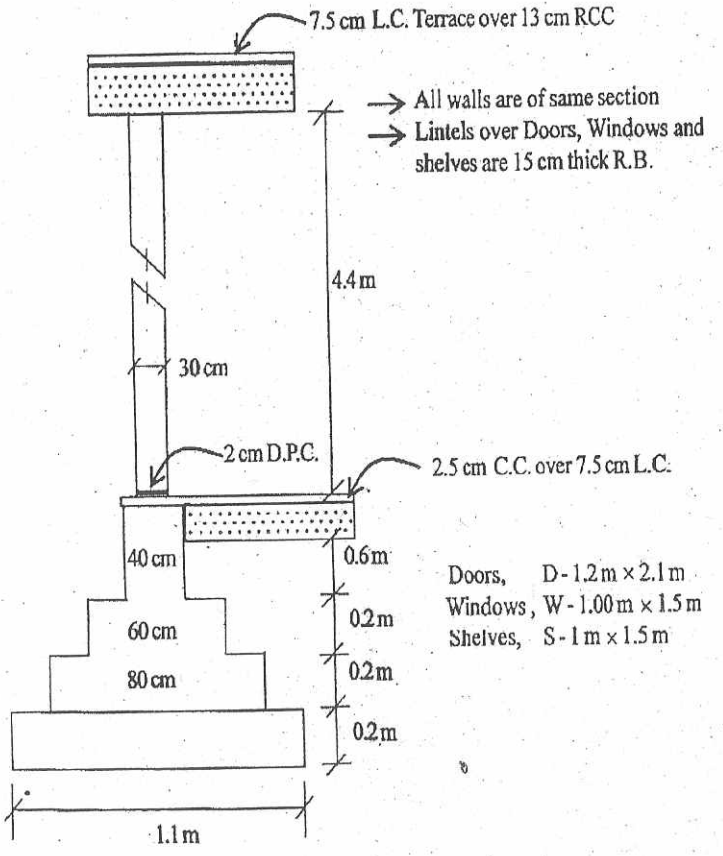

7.5 cm L.C. Terrace over 13 cm RCC
All walls are of same section
Lintels over Doors, Windows and shelves are 15 cm thick R.B.
4.4 m
30 cm
2 cm D.P.C.
2.5 cm C.C. over 7.5 cm L.C.
40 cm
0.6m
0.2m
60 cm
0.2m
80 cm
0.2m
1.1 m
Doors, D - 1.2 m × 2.1 m
Windows, W - 1.00 m × 1.5 m
Shelves, S - 1 m × 1.5 m
Section - A-A

Figure 1

3. Explain the detailed specifications for the following items of works :

(a) Line concrete in foundation.

(b) Woodwork for door and window frames.

4. Work out the unit rates for the following item of works.

(a) Lime concrete in foundation

(b) Earthwork in excavation

(c) Brickwork in CM (1:4)

5. The ground level along the centre line of mad are given below :

| Chain age in 'm' : | 0 | 50 | 100 | 150 | 200 |
|---|---|---|---|---|---|
| RL of ground : | 97.0 | 96.5 | 95 | 96 | 99 |

The road is to be formed in embankment with the formation level at 100.0 throughout the 200 m length. If the width of the road is 10 m and side slopes 2 : 1, calculate the quantity of earthwork required by any method.

6. A building is situated by the side of a main road in a town on a land of 800 sq m. The built up portion is 20 × 18 m. The building is first class type and provided with Water supply, sanitary and electric fittings, and the age of building is 15 years. Workout the valuation of the property.