

12. (a) The accompanying sketch with details (Fig. 1) refers to a residential building. Estimate in detail the quantities for the following items of work.
- (i) First class brick work in cm 1 : 5 in foundation. (8)
 - (ii) R.C.C. work in roof slab, lintel beam and sunshade slab. (8)

Or

- (b) Estimate the quantities for the following for the building given in Fig. 1.
- (i) Earth work in excavation in foundation. (8)
 - (ii) Brick work in cm 1 : 6 in super structure. (8)
13. (a) The accompanying sketch with details (Fig. 2) refer to a Box Culvert. Estimate in detail the quantities for the following items of work.
- (i) Reinforcement in cover slab using Bar-bending schedule. (8)
 - (ii) P.C.C. 1 : 5 : 10 in foundation. (8)

Or

- (b) Using Fig. 2, estimate the quantities for the following for the Box Culvert.
- (i) Brick work in cm 1 : 4 in foundation. (8)
 - (ii) Brick work in cm 1 : 5 in parapet wall. (8)
14. (a) (i) What is meant by the term specification? Explain its significance. (8)
- (ii) What are the merits and demerits of percentage bite rate of engineering contracts? (8)

Or

- (b) (i) What is Rate analysis? Discuss the various factors influencing the rate of a particular item of work. (8)
- (ii) Explain the different types of contract. (8)
15. (a) (i) Explain the different methods of calculating depreciations. (8)
- (ii) Discuss the methods of valuation for building with lands and how the fixations of rent in a building is done. (8)

Or

- (b) Calculate the value of a building at 12% interest basis from the following details :

Cost of land – Rs. 1,000/sq.m.

Cost of building – Rs. 6,000/sq.m

Plinth area of Building – 130 sq.m

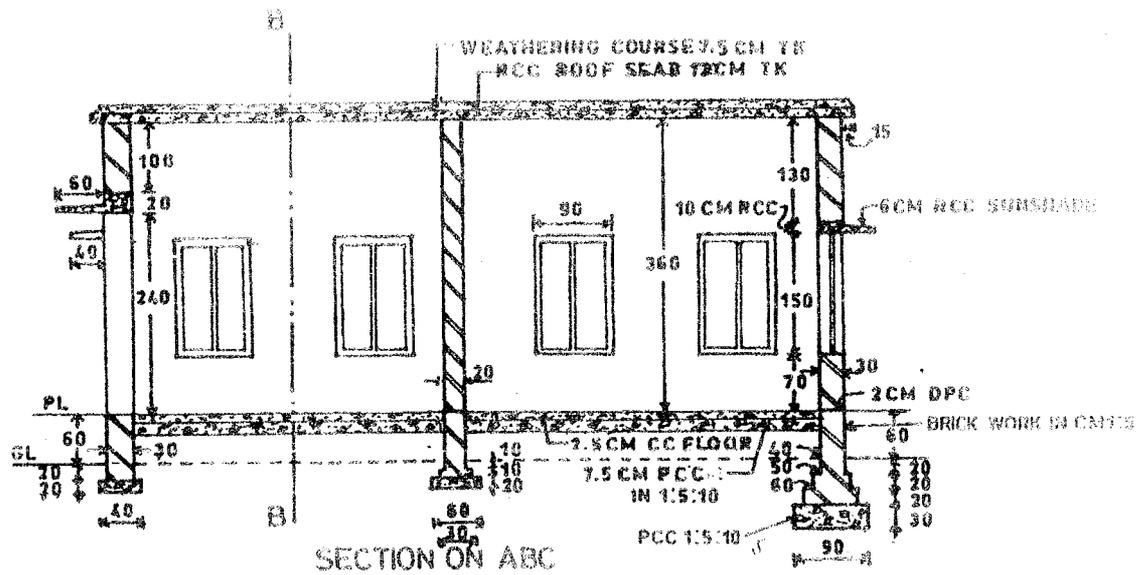
Area of land – Restricted to 1.5 times of plinth of building.

Cost of sanitary and water supply each – 7.50% of building cost.

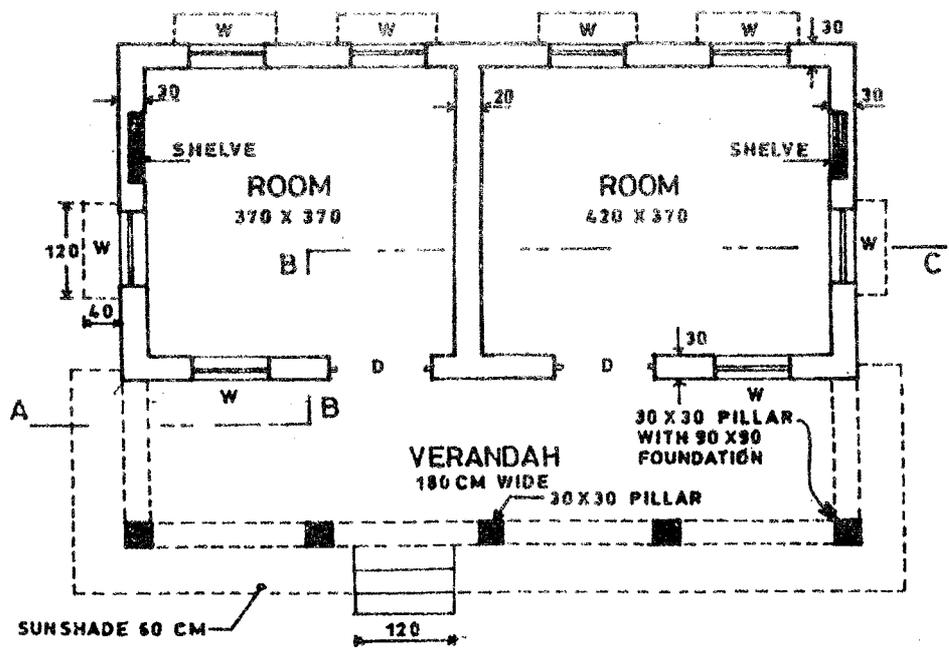
Cost of electrification – 10% of building cost.

Age of the Building – 17 years.

Rate of depreciation – 1.50%.



SECTION ON ABC



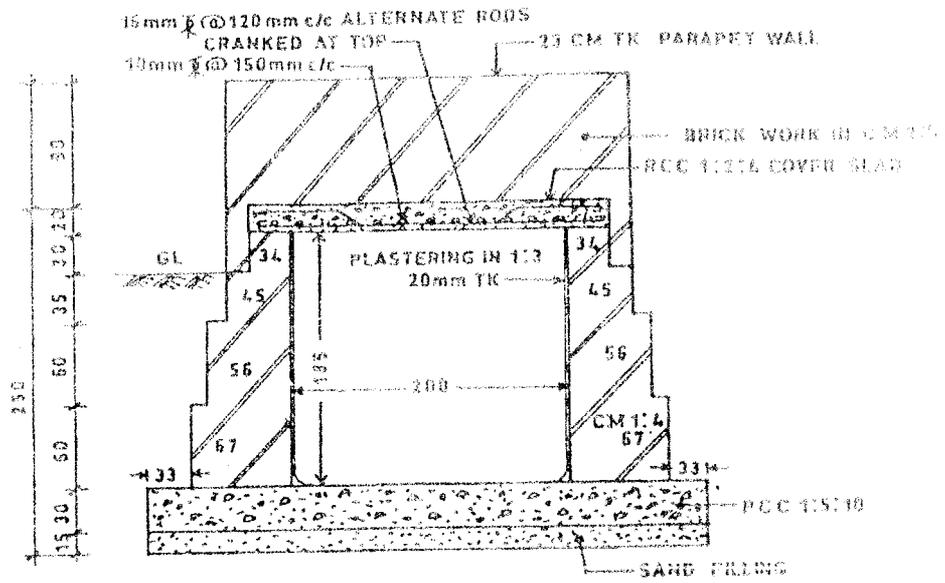
PLAN

PILLAR FOUNDATION SQUARE SECTION SIMILAR TO 30 CM WALL.
TREAD - 30 CM
RISER - 15 CM

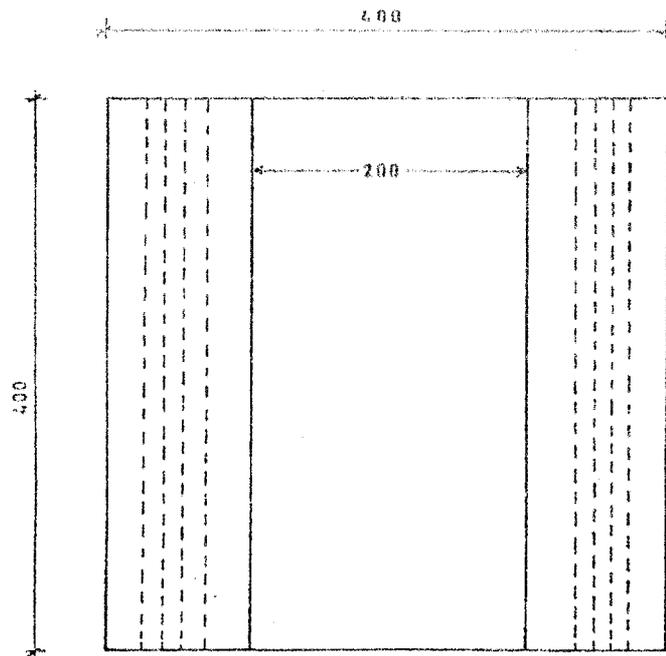
D. DOORS - 120 X 220
W. WINDOW - 90 X 150
SHELVE - 90 X 180

ALL DIMENSIONS ARE IN CENTIMETERS.

Fig. 1



Cross section of Box culvert



Plan

BOX CULVERT

ALL DIMENSIONS ARE IN CMs.

Fig. 2