Time 4 Hours   **Marks: 80**

Note:
   i)   **Q.1 is compulsory**
   ii)   Attempt **any three** out of remaining **Five** Questions.
   iii)   Figures to right indicates full marks.
   iv)   Assume Suitable data if required.

Q.1 Workout following quantities from given plan and section. (**Fig.01**).   **20**
   a) Excavation   for all footings.
   b) Brickwork in superstructure with cement mortar 1:5.
   c) Internal plastering of 12 mm thickness with cement mortar 1:4.
   d) Flooring and skirting

Q.2 A) Explain the meaning of specification. Draft general specifications for first class brickwork

   in cement mortar.   **10**

   B) Explain in brief rate analysis? Prepare rate analysis for Vitrified tile flooring work laid on

   25 mm thick base course in c:m 1:6.   **10**

Q.3 A) Prepare approximate estimate for estimate of (G+3) RCC framed building with 4 flats

   per floor each of 100m^2 carpet area. The building is situated in Mumbai suburb region.

   Consider the followings:

   i) Allow 18 % building cost for services such as lift, electrical and plumbing.

   ii) Allow 4 % overall cost for consultant's fee.

   iv) Consider   5% contingencies.   **10**

   B) Explain pre-qualification of contractor.   **04**

   C) Draft Notice inviting tender for construction of Primary School Building in Thane region
      estimated cost of Rs. 200 lacs time limit for work is two years. Contract will be having
      item rate type and tender fee Rs. 2000/- along with document   **06**

Q.4 A) A concrete mixer was purchased at Rs. 90,000/-Assuming salvage value of Rs.10,000/-after

   5 years. Calculate depreciation for each year adopting a) Straight line method, b) Constant

   percentage method, c) Sinking fund method.   **10**

   B) What are different types of contracts. Explain any two in detail.   **10**

Q.5 A) Calculate volume of earthwork in cutting and in banking for the road section whose details

are given below. Use mean area method:

Chainage	0	30	60	90	120	150	180	210
RL of ground(m)	161.50	160.95	160.55	161.55	161.85	162.95	162.35	162.80

Width of formation 10m. F.L. at zero chainage = 161.60m, rising gradient is 1:110. side slopes

=1.5:1 in banking and 2:1 in cutting. **10**

B) A rectangular beam 20 cm x 30 cm, 3m overall length with tor steel bar 3 Nos. And 16mm ϕ.
Wt. Of bar is 1.58 kg/m. Two outer bars are straight and L shaped hooks are provided at end.
One inner bar bent at 45° and L shaped hooks are provided at end. At the top two outer bars are
provided having 16mm ϕ and wt. 0.62 kg/m. These bars are straight and L shaped hooks are
provided at end. Stirrups are provided at distance of 20 cm c/c with 6mm ϕ and wt. 0.22 kg/m.
Consider 25mm cover. **10**

Q.6 Write short notes on (**any Five**). **20**
   a) Easement rights.   b) Mass Haul Diagram   c) EMD and SD
   d) Rules for deduction in plastering work & Brickwork.
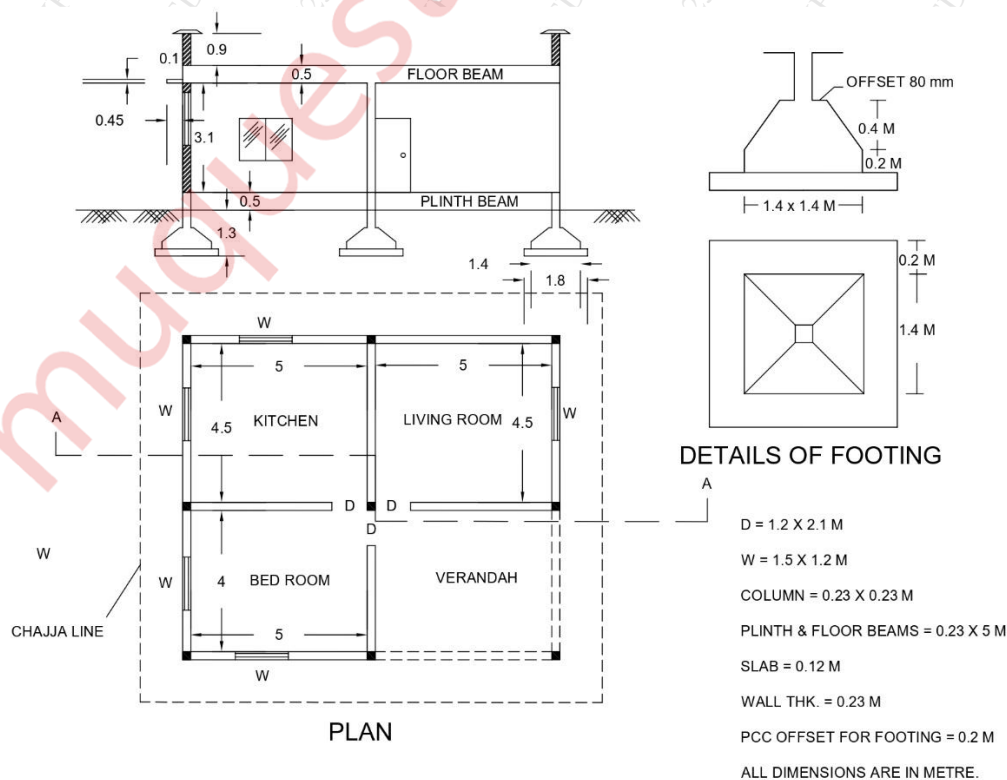   e) Technical Sanction   f) Balanced and unbalanced tender.

Fig.01