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09ARC6.6

Sixth Semester B. Arch. Degree Examination, Dec.2017/Jan.2018
Estimation and Costing

Time: 3 hrs.

Max. Marks:100

Note: 1. Answer any **FOUR** questions from question 2 to 7.
 2. Question ONE is compulsory.
 3. Missing data, if any, may be suitable assumed.

- 1 The accompanying Fig.Q1. Shows the details of three room small residential unit. Prepare detailed estimate for below mentioned items or works by "CENTRE LINE METHOD".
- Centre line calculation and number of junctions. (08 Marks)
 - Earthwork excavation for foundation. (08 Marks)
 - PCC 1 : 3 : 6 bed concrete for foundation. (04 Marks)
 - UCR masonry for footing/foundation in cm 1 : 6. (10 Marks)
 - 3 mt thk. BBM for super structure. (10 Marks)

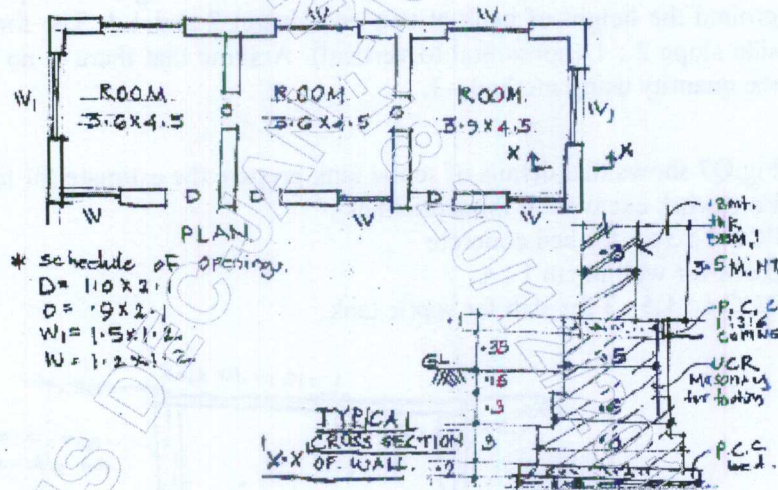


Fig.Q1

- 2 Write detailed technical specification for following items :
- What is specification? What is special specification?
 - Providing and constructing. BBM for super structure in cm 1 : 4.
 - Providing and laying plastering to internal walls in cm 1 : 6. (15 Marks)
- 3 Form the 1st principles arrive at the rate for below mentioned items of works.
- Providing and constructing PCC 1 : 3 : 6 for foundation bed
 - Providing constructing BBM for super structure in cm 1 : 6
 - Providing and constructing 20 mm thk external plaster in cm 1 : 4. (15 Marks)

- 4 Explain briefly :
- Explain briefly the types of estimate. (10 Marks)
 - Annual repair maintenance, annual maintenance AB and AM. (05 Marks)
- 5 a. The steel quantity is to be computed diameter wise from following data .
- Size of column footing $1.5 \times 1.5\text{m}$ in plan
Steel provided for footing – $10\text{mm} \nabla 15\text{cm}$ c/c both ways
Cross section of column – $30\text{cm} \times 30\text{cm}$
Main reinforcement of column – $4 - 20\text{mm} \nabla 4 - 16\text{mm} \nabla$
Ties $8\text{mm} \nabla @ 10\text{ cm c/c}$
Height of column – 5m
Weight of $8\text{mm} - 4\text{kg/mt}$
 $10\text{mm} - 6\text{ kg/mt}$
 $16\text{mm} - 1.6\text{ kg/mt}$
 $20\text{mm} - 2.5\text{ kg/mt.}$ (15 Marks)
- 6 Calculate the quantity of earth work for 400m length for a portion of road in a uniform ground the height of bank at two ends begin 7 and 1.4 . The formation width is 7.0m and side slope $2 : 1$ (horizontal to vertical). Assume that there is no transverse slope. Calculate the quantity using method – I. (15 Marks)
- 7 Fig.Q7 shows that details of septic tank prepare the estimate for following items of work.
- Earthwork excavation for septic tank
 - PCC $1 : 3 : 6$ for bed concrete
 - BBM for wall in cm $1 : 4$
 - RCC $1 : 1.5 : 3$ for slab for septic tank. (15 Marks)

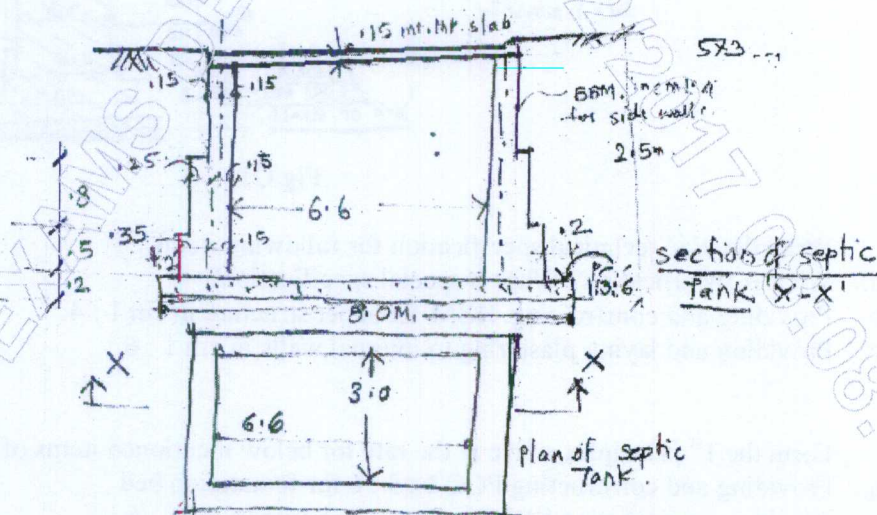


Fig.Q7
