

- 4 Explain briefly :
- Explain briefly the types of estimate. (10 Marks)
 - Annual repair maintenance, annual maintenance AB and AM. (05 Marks)
- 5
- 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 – $10\text{mm} \varphi 15\text{cm}$ c/c both ways
Cross section of column – $30\text{cm} \times 30\text{cm}$
Main reinforcement of column – $4 - 20\text{mm} \varphi 4 - 16\text{mm} \varphi$
Ties $8\text{mm} \varphi @ 10\text{ cm c/c}$
Height of column – 5mt
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 400mt 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 7.0mt 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 $1 : 4$
 - RCC $1 : 1.5 : 3$ for slab for septic tank. (15 Marks)

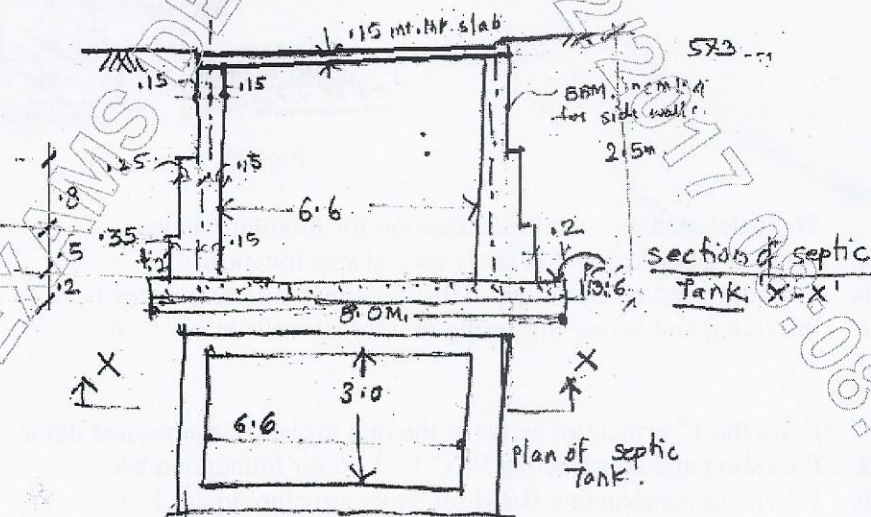


Fig.Q7
