

IGRA NATIONAL UNIVERSITY
PESHAWAR

B. tech → civil
BATCH → 2015
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PAPE → Quantity of ~~document~~
Survey and conduct
Document.

MID TERM

Date - 24/6/2020

Question No 4

An Rcc room having
dimensions 15×16 feet
having height $10'$

Solution:-

$$\text{Excavation} =$$

$$= 2 \times 2 \times (30 + 20)$$

$$= 4 (50)$$

$$= 200 \text{ cft}$$

$$\text{PCC} = \frac{3}{12} \times (48) \times 2$$

$$= 24 \text{ cft}$$

$18''$ Brick work below

plinth beam by

$$= 2 (48) \times \frac{18}{12}$$

$$= 144 \text{ cft bricks}$$

work

here total No of brick used =

$$144 \times 12$$

$$[1 \text{ cft} = 12 \text{ bricks}]$$

Plinth beam of =
11" x 9"

concrete = 1:2:4

$$\text{Concrete} = 48 \times \frac{11}{12} \times \frac{9}{12}$$

$$\text{dry volume} = 33 \text{ cft}$$

$$\text{wet volume} = 1.54 \times 33$$
$$= 50.82 \text{ cft}$$

total No of cement

$$\text{bag} = \frac{1}{7} \times 50.82 = 7.26 \text{ cft}$$

$$= 5.8 \approx 9$$

Cement bag = 9

$$\text{Sand } \frac{2}{4} \times \frac{2}{7} \times 50.82 =$$

$$14.59 \text{ cft}$$

$$\text{crush} = \frac{4}{7} \times 50.82$$

$$= 29.4 \text{ cft} \checkmark$$

9" Brickwork above plinth beam

$$= 48 \times \frac{9}{12} \times 10 = 360 \text{ cft}$$

$$\text{Bricks} = 360 \times 12 = 4320 \text{ brick}$$

$$\text{Cement} = 8 \text{ cement bag}$$

plaster

Cement	18 bag
Sand	62 cft

Roof .

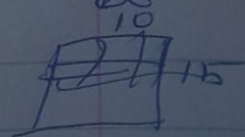
Rec work

① Reinforcement

$$\text{main bar} = \# 8 @ 10" = 13 \text{ bar}$$

② concrete

$$\text{roof thickness} = 6" (12:4)$$



$$\frac{6}{12} \times 10 \times 15 = 75 \text{ cft} = 1.54 \times 75 \\ = 115.5 \text{ cft}$$

$$\text{Cement bag} = \frac{1}{7} \times 115.5 = \\ 14 \text{ bag}$$

$$\text{Sand} = \frac{9}{7} \times 115.5 = 33 \text{ cft}$$

$$\text{crush} = 66 \text{ cft.}$$