

QUESTION NO 1

External wall = 13.5"

internal wall = 9"

cost of construction = 300/ft

Solution

External length of a Building

$$= 14' + 14' + 2(1.125) + 0.75$$

$$= \frac{13.5}{12} = 1.125$$

$$\frac{9}{12} = 0.75$$

External length of a Building

$$= 31.5'$$

External Breadth of a Building

$$12' + 8' + 2(1.125) + 0.75$$

$$= 23\text{ft}$$

Plinth area of a Building

$$31 \times 23 = 713\text{ft}^2$$

Rate of Construction

$$= 300\text{ft}$$

$$= 713 \times 300 = 213900\text{RS}$$

Cost of Construction

$$= \text{RS } 213900/-$$

Water Supply and Sanitary
= 10%

of electric Supply
= 10%

Gas Supply = 5%

Water Supply and Sanitary =

$$213900 \times 10/100$$

$$213900 \times 0.1 = \underline{\underline{RS 21390}}$$

Cost of Electric Supply

$$213900 \times 10/100 =$$

$$213900 \times 0.1 = \underline{\underline{RS 21390}}$$

Gas Supply =

$$= \frac{213900 \times 5}{100}$$

$$= \text{Rs } 10695$$

Total Cost

$$213900 + 21390 + 21390 + 10695$$

$$\text{Total Cost} = \text{Rs } 267375/-$$

Contingencies

$$267375 \times \frac{3}{100}$$

$$\text{Rs} = 8021.25/-$$

Grand Total

$$267375 + 8021.25$$
$$= \text{Rs } 275396.25/-$$

QUESTION No 1

Step 1

part II

for 100m

$$14 + 14 + 12 + 12$$

$$= 52 \text{ ft} = 15.8496 \text{ m}$$

Step 2

(Total area of wall)

$$52 \times 3$$

$$= 15.8496 \times 3$$

$$47.5488 \text{ m}^2$$

Total area of Door = 24
= 2.89 m

Step 3

plaster area
Area of wall - area of Door

$$47 \cdot 5488 - 2$$

$$45 \cdot 5488 \text{ sqm}$$

$$\therefore 4 \text{ sqm} = 10.76 \text{ sq ft}$$

for Second Room.

Same Step should be followed.

for Bathroom and kitchen

Step 2 (Total wall length)

$$\text{Bath} = 4 + 8 + 4 + 8 \\ = 24 \text{ ft}$$

$$\text{kitchen} = 8 + 8 + 8 + 8 \\ = 32 \text{ ft} = 9.75 \text{ m}$$

Step 2

(Total area of wall door)

Total area of wall door
kitchen L x L.

$$9.75 \times 3$$

$$29.25 \text{ Sqm}$$

Total area of wall for Bath-lav

$$7.31 \times 3$$

$$21.93 \text{ Sqm}$$

Step 3

(plaster area for
kitchen)

Area of wall. Area of door

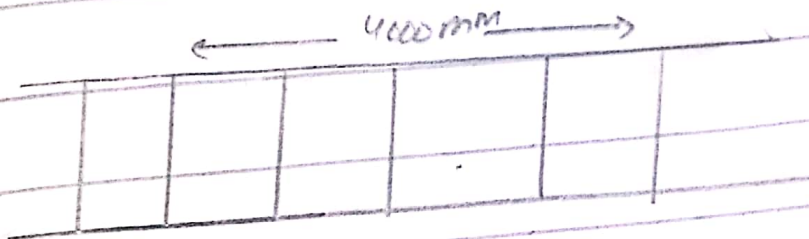
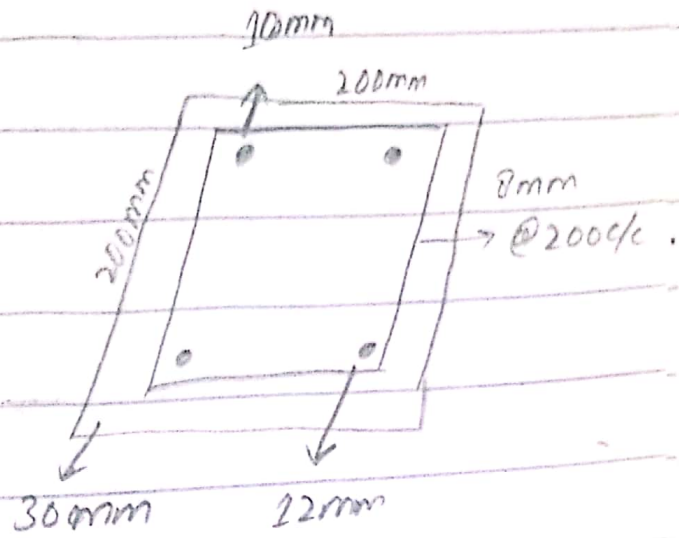
$$= 29.25 - 2$$

$$= 27.25 \text{ Sqm}$$

OR

$$296.1152 \text{ ft}^2$$

QUESTION 2



Solution

Step 1

= length of steel 12mm

length of Beam-cover
x NO of Bars

$$4000 - 2(30) \times 2$$

$$\frac{77.0^{mm}}{1000} \text{ or } 7.56m$$

Step 2

(length of Bar 10mm top Bars)

length of steel = 10m

$$4000 - 2(30) \times 2$$

$$\frac{77.0^{mm}}{1000} \text{ or } 7.56m$$

Step 3

Weight of Bars
12mm Bottom Bars

$$(d^2/162) \times L$$

$$= (12^2 / 162) \times 7.76 =$$

$$0.8 \times 7.76 = 6.208 \text{ kg}$$

Step 4 weight of 10mm Bar

$$(d^2 / 162) \times L$$

$$(10^2 / 162) \times 7.76 \text{ m}$$

$$= 4.790 \text{ kg}$$

Step 5 = (No of stirrups)

$$(\text{Length of Beam / spacing}) + 1$$

$$= (400 / 200) + 1$$

21 NO'S Bars

Step 6
(cutting length of stirrups)

$$= (2 \times 1.2^3) + (2 \times 1.2^3) + (2 \times 10 \times 8) - (5 \times 2 \times 8)$$

$$= 2.4 + 160 + 24 - 80$$

$$= 590 \text{ mm} \quad \text{or} \quad 0.59 \text{ m}$$

Step 7
(Total length of stirrups)

cutting length \times no of stirrups

$$0.648 \times 21 = 13.608 \text{ m}$$

Step 8

weight
(weight of stamps)

$$(d^2/162) \times 13.608$$

$$= 5.376 \text{ kg}$$

Type of Bar	Diameter (mm)	No's	Length (m)	Total length (m)	Unit weight (kg)	Total weight
TOP Bar	10mm	2	7.76m	4m	0.89	7.268 kg
Bottom Bar	12mm	2	7.76m	4m	0.61	4.990 kg
Stirrups		21	12.768	13.608 (m)	0.39	5.376 kg
				16.86	0.843	17.70 kg

$$Q = 3$$

Step = 1 :-

Effective length :-

$$\text{Effective length (x)} = \text{length} - b/\text{side}$$

$$= 2000 - 2 \times 50 = 1900 \text{ mm}$$

$$\text{Effective length (y)} = 2000 - 2 \times 50 = 1900 \text{ mm}$$

Step 2

No of Bars

$$\text{Effective length} / \text{Spacing} + 1$$

$$(1900 / 150) + 1 = 13.6$$

$$= 14 \text{ nos}$$

no's of Bars (y) =

eff length / spacing + 1

$$(1900 / 150) + 1 = 13.6$$

14 no's

Step 3:-

cutting length

$$\text{Along (x)} = [\text{eff length} + (\text{bars})]$$

$$1900 + 2 [300 - 50 - 50] + 2(2 \times 12)$$

$$= 2252 \text{ mm}$$

$$\text{or } 2.25 \text{ m}$$

$$\text{Along } (y) = [\text{left} + \text{right} + (\text{bed})]$$

$$1900 + 2(300 - 50 - 50) - (2(2 \times 12))$$

$$2252 \text{ mm}$$

$$= 2.5 \text{ m}$$

s no
 Type of Bar
 Dia (mm)
 nos
 length (mm)
 Total length
 Volume (kg/cm)
 Total weight (kg/y)
 Total weight

1
 R-direct
 12
 14
 2.25
 22.5
 0.89
 20
 $\frac{12^2}{162} = 0.$

2
 Direct
 12
 14
 2.25
 22.5
 0.89
 20
 $\frac{12^2}{162} = 0.$

42 kg
 2%
 44 kg

4 Q part 1

cutting length of for the

circular strips

Dia of Column = 500mm

Dia of Strip $\varphi_c = 500 - (2 \times 100) -$
 (4×4)

$$= 500 - 80 - 80$$

$$= 412 \text{ mm}$$

parameter of stirrups = πd

$$\Rightarrow 3.1415 \times 412 = 1294.504 \text{ mm}$$

Hook length = $10D = 10 \times 8 = 80 \times 2 = 160^{\text{mm}}$

cutting length for stirrups = parameter of stirrups
+ Hook length

$$= 1294.504 + 160$$

$$= 1454.504 \text{ mm}$$

$$1 \text{ m} = 1000 \text{ mm}$$

$$\frac{1454.504}{1000} = 1.454504 \text{ m}$$

Required answer

1.454504 meter

Q4 part 2

value of plot = 350000/-

Rate of ^{rent} = 6%

Annual rent for plot =

$$350000 \times 6/100$$

$$21000/-$$

value of of Building Structure

$$= 420000/-$$

Rate of rent = 8%

Annual rent for structure =

$$420000 \times 8/100$$

$$= 33600/-$$

$$\text{Total Annual rent} = 27000 + 33600 \\ = 54600/-$$

$$\text{Monthly rent} = 54600/12 = 4550$$

$$\text{one Day rent} = \frac{4550}{30} = 151.66$$

Q No 5

Types of ADR

Arbitration

Mediation

Med-Arb

Mini Trial

Summary Jury Trial (SJT)

Negotiation

Arbitration

Arbitration utilizes the help of neutral third party and is similar to an informed trial. After hearing issues a decision that the disputing

that the disputing parties
may have agreed to
binding or non-binding.

Mediation

A first glance mediation
and arbitration are incredibly
similar one of the mediator
or impartial third party -
cannot force the parties to
agree and is not allowed
to decide the outcome
of the dispute.

Med-Arb:-

This form of ADR in one
in which the arbitrator
starts as a mediator

but should the mediation fail, the arbitrator will impose a binding decision med-arbit.

Mini TRIAL:-

A mini trial is not so much a trial as it is a settlement process. Each party present their summarized last

Summary Jury Trial (SJT)

An SJT is similar to mini trial. However, the case is presented to a mock jury. The mock jury produce an advisory verdict.

There are many advantages and some disadvantages to using **Alternative Dispute Resolutions**.

Advantages include the fact that it usually takes far less time to reach a final resolution than if the matter were to go to trial. Usually (but not always), it costs significantly less money, as well. Furthermore in the case of arbitration the parties have far more flexibility in choosing what rule will be applied to their dispute (they can choose to apply relevant industry standards, domestic law, the

law of a foreign country
a unique set of rules
used by a arbitration
service, or even religious
law, in some cases).

The parties can also have
their **dispute arbitrated or
mediated** by a person
who is an expert in
the relevant field, as an
ordinary trial involving
complicated and technical
issues that are not
understood by many people
outside a relevant industry,
a great deal of time has
to be spent educating
the judge and jury, just
so they can make informed
decision. The large time

investment often translates into a great deal of money being spent. Both sides might have to call expert witness, who may charge very large fees for their time if an arbitrator has a background in the relevant field. However, far less time needs to be spent on this, and the parties can get to the actual issues of the case much sooner.

There are some disadvantages as well. Generally, arbitrators can only resolve disputes that involve money. They cannot issue orders requiring one

party to do something
or refrain from doing
something (also known as
injunctions). They cannot
charge title to property,
either. Also some of
the safeguards designed
to protect parties in
court may not be present
in ADR. These might
include the liberal discovery
rules used in U.S. courts,
which make it relatively
easy to get evidence
from the other party
in lawsuit.
Also there is a very
limited opportunity for
judicial review of an
arbitrator's decision.

while a large arbitration service could, if it, so choose some kind of process for internal appeals, the decision is usually final and binding, and can only be reviewed by a court in limited cases. This generally happens when original arbitration ~~is~~ agreement is found to be invalid, because both parties must voluntarily agree to arbitration, if the consent of one party is obtained by a force or fraud, it will be not enforced. Also, if the decision of the arbitrator is patently unfair, it will not be enforced.

This is a difficult standard to meet. The fact that the arbitrator made a decision that the court would not have made is not, by itself, a basis to overturn the decision.

A court might also overturn an arbitrator's decision if it decided issues that were not within the scope of the arbitration agreement.

It is important to consider these advantages and disadvantages before agreeing to arbitration, or any kind of alternative dispute resolution.

Chances are, you have already agreed to

arbitration in many situations, without even knowing it. Many lease agreements and employment contracts have mandatory arbitration provisions, and they will usually be enforced, as long as certain standards are met (generally, they must not deprive a person of a constitutional right, and they should be reciprocal).

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Subject

Estimation

Submitted
to

intiaz Sir

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