

NAME

ADIL AYAZ

I.D

7889

Section

A

Subject

Quantity Survey &
Estimation

Submitted To;

Sir Irtiaz Khan

Gora

National

University

Question no = 1

(part (i))

Page 01

ANSWER :-

Sol

External length of Building

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

$$\Rightarrow 31 \text{ ft}$$

External Breadth of Building

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

$$\Rightarrow 23'$$

Plinth Area of Building = 31×23

$$= 713 \text{ ft}^2$$

Rate of Construction = Rs 300/sq ft

Cost of Construction = 713×300

$$\text{Rs} = 213900$$

Water Supply and Sanitary 10%

$$= 213900 \times 10/100 \Rightarrow \text{Rs} = 21390$$

Cost of electric Supply is 10%

$$= 213900 \times 10/100$$

$$\Rightarrow \text{Rs} 21390$$

Cost of gas supply is 5% perce

$$\Rightarrow 213900 \times 5/100 \Rightarrow \text{Rs} = 10695$$

$$\text{Total Cost} = 213900 + 21390 + 21390 + 10695$$

$$\Rightarrow \boxed{\text{Rs} = 267375}$$

Contingencies = 3% of total cost

$$= 267375 \times 3/100$$

$$= 8021.25$$

$$\text{Grand total} = 267375 + 8021.25$$

$$\Rightarrow \boxed{275396.25}$$

Question no 1)

Page 03

ANSWER:

part (ii)

Step 1)

(Total wall length)

for room one

$$14 + 14 + 12 + 2$$

$$= 52 \text{ feet} = \boxed{15.8496 \text{ m}}$$

Step 2)

(Total Area of wall door)

$$\text{Total area of wall} = L \times h$$

$$= 52 \times 3 =$$

$$= 15.8496 \times 3 = \boxed{47.5488 \text{ m}^3}$$

$$\text{Total Area of door} = 2 \times 1$$

$$= \boxed{2 \text{ sqm}}$$

Step 3)

$$\text{Plaster Area} = \text{Area of wall} - \text{Area of Door}$$

$$= 47.5488 - 2$$

$$= \boxed{45.5488 \text{ sqm}}$$

$$\boxed{45.5488 \text{ sqm} = 10.76 \text{ sqft}}$$

So

Page 04

$$45.5488 \times 10.76 = \boxed{490.105 \text{ sqft}}$$

For Second room

Same step should be followed
in room I

For Bath and Kitchen.

Step 1: (total wall length)

$$\text{Bath} = 4+8+4+8 = 24 \text{ feet} = \boxed{7.31 \text{ m}}$$

$$\text{Kitchen} = 8+8+8+8 = 32 \text{ feet} = \boxed{9.75 \text{ m}}$$

Step 2: (Total area of wall door)

$$\text{Total Area for wall of Kitchen} = L \times h$$

$$= 9.75 \times 3$$

$$= \boxed{29.25 \text{ m}^2}$$

$$\text{Total Area of wall of Bath} = L \times h$$

$$= 7.31 \times 3$$

$$= \boxed{21.93 \text{ m}^2}$$

(Step 3):

Plaster Area for Kitchen

 \Rightarrow Area of wall - Area of door

$$\Rightarrow 29.25 - 2$$

$$= \boxed{27.25 \text{ m}^2} \text{ or } \boxed{296.115255 \text{ ft}^2}$$

Plaster Area for Bath

$$= 21.93 - 2$$

$$= \textcircled{19.93 \text{ m}^2} = \boxed{214.4468 \text{ ft}^2}$$

Total Internal plaster Area.

Plaster Area of one Beam.

+ Plaster Area of 2nd

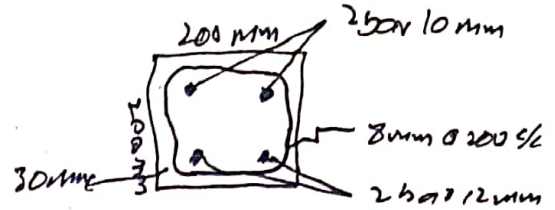
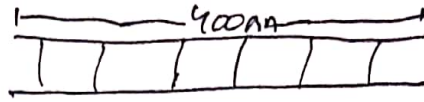
+ Plaster Area of Kitchen

+ Plaster Area of ^{Bath} wall

$$= 490.105 + 490.105 + 296.1152 + 214.4468$$

$$\boxed{1490.772 \text{ ft}^2} \text{ Ans}$$

ANSWER \Rightarrow



Sol:

Step 1)

length of steel 12mm

$$(\text{length of Beam over}) \times (\text{NO of bars})$$

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

Step - 2) $\Rightarrow 3880 \Rightarrow 3880/1000 = \boxed{3.88 \text{ m}}$

length of bar 10mm top 1 bar)

length of ~~water~~ steel 10m

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

$$\Rightarrow 3880 \text{ mm} \Rightarrow \frac{3880}{1000} = \boxed{3.88 \text{ m}}$$

Step 3)

weight of bar 12mm Bottom Bar)

$$\left(\frac{L^2}{162}\right) \times L$$

$$\Rightarrow \left(\frac{12^3}{162}\right) \times 3.88$$

$$\Rightarrow (3.448) \text{ Kg}$$

Step 4) weight of 10mm bar

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

$$(10^2/162) \times 3.88$$

$$\Rightarrow (2.395) \text{ kg}$$

Step 5) (NO of stirrups)

$$(\text{length of 1 beam} / \text{spacing}) + 1$$

$$= (1400 / 200) + 1$$

$$\Rightarrow 20 + 1 = \boxed{21 \text{ no's bar}}$$

Step 6) (cutting length of stirrup)

$$= (2 \times 182) + (2 \times 182) + (2 \times 10 + 8) - (5 \times 2 + 8)$$

$$\rightarrow 364 + 364 + 160 - 80$$

$$\rightarrow 808 \text{ mm} = \frac{808}{1000} = \boxed{0.808 \text{ m}}$$

Step 7) (Total length of stirrup)

Cutting length \times no of stirrups

$$0.808 \times 21 = \boxed{16.968 \text{ m}}$$

Step 8) (weight of stirrup)

$$(d^2 / 162) \times 16.968$$

$$= \boxed{1.0474 \text{ kg}}$$

ANSWER: →

Soln

Cutting length:

$$\text{Along (x)} = [\text{eff. length} + (\text{bends})] - \text{bend deduction}$$

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

$$\Rightarrow 2252 \text{ mm or } 2.5 \text{ m}$$

$$\text{Along (y)} = [\text{eff. length} + (\text{bends})] - \text{bend deduction (2)}$$

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

$$2252 \text{ mm} = 2.5 \text{ m}$$

(Step # 01) Effective length

$$\text{Eff. length (x)} = \text{length} - b/\text{sides covers}$$

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

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

Step 2#

No's of Bar

Page 10

$$\text{No of Bar (n)} = \frac{\text{eff. length}}{\text{spacing}} + 1$$

$$= \left(\frac{1900}{150} \right) + 1 = 13.6 = 14 \text{ No's}$$

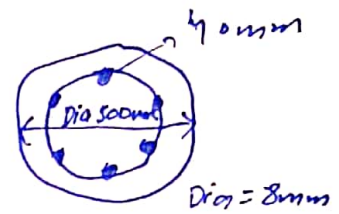
$$\text{No of bar (y)} = \frac{\text{eff. length}}{\text{spacing}} + 1$$

$$= \left(\frac{1900}{150} \right) + 1 = 13.6 = 14 \text{ No's}$$

Page 11

Question no 4)

part i)



Answer →

Cutting length for the circular
strips.

Circular column →

$$\text{Dia of column} = 500 \text{ mm}$$

$$\begin{aligned} \text{Dia of strip c/c} &= 500 - (2 \times 40) - (4 \times 4) \text{ is} \\ &= 500 - 80 - 8 \\ &\Rightarrow 412 \text{ mm} \end{aligned}$$

$$\text{parameter of stirrup} = \pi d$$

$$\Rightarrow 3.145 \times 412 = \boxed{1294.504 \text{ mm}}$$

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

$$\text{Cutting length for stirrup} = \text{parameter of stirrup} + \text{Hook length}$$

$$\Rightarrow 1294.504 + 160$$

$$\Rightarrow 1454.504 \text{ mm}$$

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

$$\Rightarrow \frac{1454.504}{1000} = \boxed{1.454504 \text{ m}} \underline{\underline{\text{Ans}}}$$

(part (iv))

ANSWER

Sol:

Value of plot = 350000/-

Rate of rent = 6%

Annual rent for plot = $\frac{350000 \times 6005}{100}$

" " " " = 21000/-

Value of building structure = 420000/-

Rate of rent = 8%

Annual rent for building structure =

$\frac{420000 \times 8}{100} = 33600$

Total Annual rent = 21000 + 33600

" " " " = 54600/-

⇒ 4550

ANSWER:

Dispute:

A dispute is an argument or disagreement between people or groups.

Alternative Dispute Resolution:

Alternative dispute resolution is a vast field in Pakistan. It is not a new concept in fact, ADR, in Pakistan is in one form or another as old as country itself. Parties have presented dispute to Panchayats or Jirgas. Committee of honorable elders of the community to resolve them for years. However this type of particular dispute has been most often associated with marital and other family matters.

Although "ADR" is now dated from the late 1970s as a social and legal reform movement in the United States (from the 1970 Pound Conference on the Causes of Public Dissatisfaction with the Administration of Justice)

which called for more efficient and different form of dispute resolution for different kind of matter. ADR is really thousands of years old and has several different motivating concerns efficiency flexibility and tailoring of outcomes party and sometimes with privacy avoidance of precedents for others.

Definition: Alternative dispute resolution:

Alternative dispute resolution is often to as ADR..

It distribute the ways that parties can settle civil disputes with the help of an independent third party and without the need for a formal court hearing.

Alternative dispute resolution refers to a variety of process that help parties to resolve dispute without a trial.

* Types of alternative dispute resolution:

Main Types ADR :	Other Types of ADR
Arbitration	Neutral evaluation
Mediation	Ombudsmen
Negotiation	Avoidance
Conciliation	

Arbitration :

Arbitration is the adjudication of a dispute by one or more specially appointed expert or lawyers.

Arbitration involves an independent third party who actually makes suggestion and actually imposes a decision on the parties.

People who work as arbitration often belong to the Chartered institute of arbitration.

Arbitration governed by arbitration act 1996

Arbitration is binding.

(a) The object of arbitration is to obtain the fair resolution of disputes by an impartial tribunal without unnecessary delay or expense

(b) The parties should be free to agree how their disputes are resolved subject only to such safeguards as are necessary in the public

c. in matters governed by the Act should not intervene except as provided by this Part.

Choosing An Arbitrator ::

Parties are free to decide between themselves whom they will appoint as an arbitrator.

Arbitration - By Contract ::

Arbitration by Contract is when parties have signed a contract and there is a clause in the contract where they agree to refer any dispute over the terms of contract to an arbitrator.

Arbitration - As a Trade Practice :: page 17

Arbitration
is Common in many trade Practices.

Arbitration Act 1996 s. 9,

where a party tries to ignore an arbitration clause agreed in a contract the Court in which he or she is trying to make his claim will order a stay of proceedings so that the matter may be referred to arbitration as agreed in the contract.

Mediation ::

Parties in a dispute may refer their dispute to an independent third party who will act as a go between.
mediation is not binding.

Conciliation ::

Similar to mediation but the Conciliator may suggest a way to settle to the dispute.
Conciliation is not binding.

Negotiation ::

Page 18

Negotiation requires parties to bargain without outside assistance exchanging compromises to reach a solution. In this approach parties can begin bargaining discussions of the beginning of a dispute without the presence of legal representation.

Neutral Evaluation ::

Neutral evaluation is where a third party usually somebody legally qualified gives an opinion on the likely outcomes if the case went to trial.

Ombudsman ::

There are a number of ombudsmen appointed by Parliament.

Avoidance ::

This is an international plan to avoid development of resentment by sorting out critical issues independently without challenging the other party.

Advantages of ADR

Page 19

- * Reduced time in dispute it takes less time to reach a final decision.
- * Reduced costs in relating to the dispute resolution. it requires less money i.e. It is cheap
- * flexibility Parties have more flexibility in choosing what rules will be applied to the dispute they have the freedom to do so
- * Produce good results - statement of up to 95 percent.
- * Produce good results and improved satisfaction with the outcome in which the dispute is resolved wrong department.
- * Increased compliance with agreed solution

Disadvantages of ADR ::

- * It can be used as a stalling tactic.
- * Parties are not compelled to continue

negotiations.

page 20

- * Does not produce legal precedents
 - * Exclusion of pertinent parties weakens final agreement
 - * Parties may have limited bargaining power
parties do not have much of a say
 - * little or no check on power imbalances
b/w parties.
-

THE

END

THANK

YOU