ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(A Unit of Alva's Education Foundation)

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(Affiliated to VTU Belagavi, Approved by AICTE, New Delhi, Recognized by Govt. of Karnataka)

INTERNAL ASSESSMENT ANSWER BOOK

Branch : CIVIL ENGINEERING

Test	Date	Signature of the Invigilator	Maximum Marks 40 / Marks Obtained	Signature of the Student with Date	Signature of the Teacher with Date
I	27/11/20		11		
II	22/12/20		20	22/12/20	24/12
III	15/1/21		23	15/1/21	17/1/21
		Total Marks	54		
		Average Marks	18		
		Average of Assignment / Quiz / Seminar etc..	10		
		Grand Total	28		

Marks in words : Twenty eight

Name : SHRIHARSHA.S.T

USN : 4AU17CV066

Sem. & Section : 7TH sem 'B' Sec

Subject Name / Code : Design concept of Building Service / 17CV743

Faculty Name : Asst. Prof. Tanvi Rai A.

Internal Assessment Marks 28 / Max Marks 40

Signature of Faculty

Signature of the HOD

VISION OF THE INSTITUTE

"Transformative education by pursuing excellence in Engineering and Management through enhancing skills to meet the evolving needs of the community

MISSION OF THE INSTITUTE

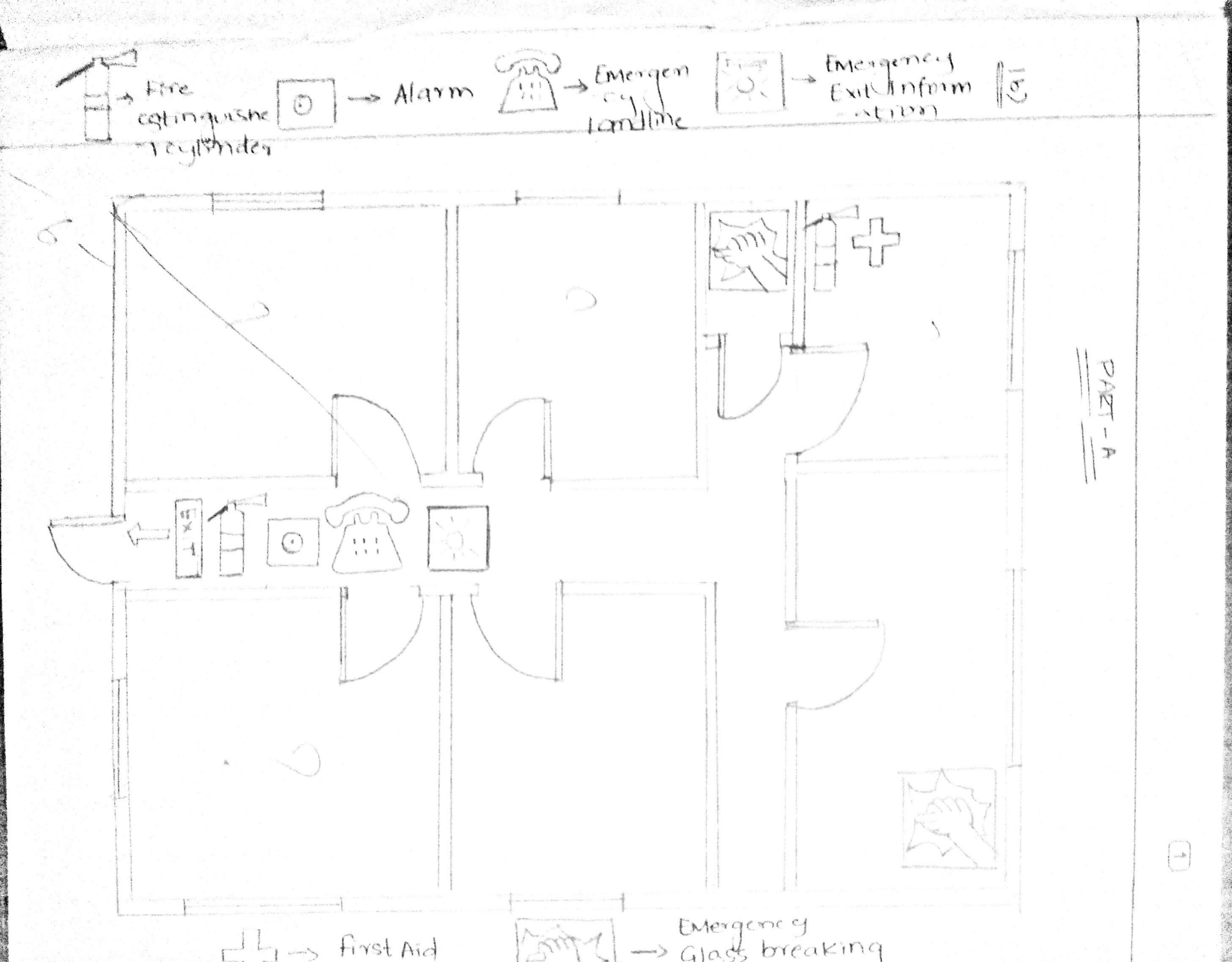
- To bestow quality technical education to imbibe knowledge, creativity and ethos to students community.
- To inculcate the best engineering practices through transformative education.
- To develop a knowledgeable individual for a dynamic industrial scenario.
- To inculcate research, entrepreneurial skills and human values in order to cater the needs of the society.

VISION OF THE DEPARTMENT

To become leader in the feild of civil engineer by imparting quality educatn & promote researc -ch to meet the corrent & future challanges in civil engineering

MISSION OF THE DEPARTMENT

- To impart knowledge by creating conductive teach -ing learning environment
- To produce civilengineer of high caliber, technical skills & ethical serve society
- To promote innovatn in the mindsof future eng -ineer to face the challanges


→ Fire extinguisher cylinder
→ Alarm
→ Emergency Landline
→ Emergency Exit Inform
→ First Aid
→ Emergency Glass breaking
PART - A

PART - B

5c)

10) Conventional Method of earthing

- In this method of earthing the ground is usually digged where the GI pipe (or) copper plate is placed at the centre which is where the coal & salt present
- We need to pour water at every interval for its maintenance

Conventional Methods of earthing are of 5 types

1) Plate earthing
2) Pipe earthing
3) Strip earthing
4) earthing to the water main
5) Rod earthing

1) Plate earthing Method

- In this method of earthing ground is digged not less than 3 meters
- & The GI pipe or copper plate is placed at the centre of the coal & salt is been poured
- The thickness of coal & salt layer must be 15cm
- Then the GI pipe & copper plate is fitted with GI nuts & copper nuts

Pipe earthing Method:-

- In this Method of earthing ground is digged not less than 2m.
- Then the pipe should be of 38mm in dia
- Then after the digged portion of the ground is filled with Coal & Salt
- & the pipe is ~~plate~~ placed at the centre & then water is poured into it

6

20/30

24/2

IIrd IA test

PART - A

2a) Types of lifts are as follows

1) Trade lift
2) Hospital lift
3) Institution lift
4) Store lift
5) Car lift
6) High rise lift
7) Fire lift

1) Trade lift :-

- Trade lifts are used in offices, malls, Hotels
- upto 6-23 peoples can enter into the lift
- Speed of lift should be 1000-2000ft/min

2) Hospital lift :-

- It is used in the hosiptals for treatment purposes
- Width of the doors must be 900-1100mm
- Size should be that a furniture can hold in it
- provided with two doors for loading & unloading
- Speed must be 200-350ft/min

~~Part-B~~

fire lift :

- It is used during fire emergency
- where building caught fire at that time the peoples can use a lift as emergency exit
- Speed must be 200-350 ft/min

Part - B

4a) Social features required for physically handicapped & elderly.

- There are several ways of providing social features for physically handicapped & elderly & they are as follows

- If a person with disabilites wants to move from one floor to other. We can provide a escalater which is parallel to the stairs.
- By providing such features a person with disabilities can move easily
- We need to provide a hand rail support in the lift so that a person with disabilities & elderly can take a support of it
- lift operator has to be their when person with disabilities & elderly ~~moving~~ in it.

- In hospitals instead of providing stairs we can give slope pathways so that eldeely (or) person with disabilities can easily move.

- lift should be provided with alarms if a person with disabilities get stucked into the lift so that he can call for emergency

- We should provide pre recorded voice in to the lift so that the person with disability can able to recognise

- If a person has eye defect (or) who can't see for them we need to provide special literature so that if any instructions is given the -y can easily be get through the instruct -on provided

4b) advantages & disadvantages of air conditioning

advantages

- It provide fresh air in the space
- It can filter the air & dust particles
- we can use it for different seasons
- It is also used for humidification & dihumi -dification
- Better rating air conditioning system consum less power than low rating air conditioner

disadvantages

- ~~We can provide~~ for larger building like theater & hotels we need to provide more No of air conditioning system which not economical
- It can cool (or) heat the space of single room only

22/2/20

typical details of water harvesting pit are as follows

> Usually the water present in harvesting pit is fresh water

> To get fresh water ~~it has~~ from roof to the harvesting pit it involves several stages

1) Storage tank
2) filtration tank
3) harvesting pit

> 1) Storage tank :- The rain water from roof top passes through pipe ~~to~~ ~~the~~ which is connected to the storage tank where the water ~~is~~ is collected

> 2) filtration tank :- ~~from storage tank the~~ ~~water~~ The collected water from storage tank is then passed to the filtration tank where solid wastes like plastics, leaves are ~~re~~ retained or removed

> 3) harvesting pit :- filtered water is then discharged to the harvesting pit for the domestic uses

Advantages of Rainwater harvesting

- Get Sufficient Supply of water
- Increasing quality of ground water
- To reduce the soil erosion
- To reduce the ground water pollution
- We can use this water during dry conditio

2b) Types of ventilation

1) Natural Ventilation
2) Mechanical ventilation

1) Natural Ventilation includes
   a) Wind drive ventilation
   b) pressure ventilation
   c) Stack Ventilation

2) Mechanical Ventilation includes
   a) Natural inflow & outflow
   b) Natural inflow & Mechanical outflow
   c) Mechanical inflow & Natural outflow
   d) Mechanical inflow & outflow

(b) Insulating materials

11/15

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INTERNAL ASSESSMENT MARKS ENTRY

Q.No's		I.A. - I			I.A. - II			I.A. - III		
		Max. Marks	Marks Obtained	Co's	Max. Marks	Marks Obtained	Co's	Max. Marks	Marks Obtained	Co's
1	a	10	8	1	8	6	3	10	—	5
	b	5	—	2	7	6	4	5	—	6
	c									
		OR								
2	a	8	—	1	8	—	3	10	10	CO5
	b	7	3	2	7	—	4	5	—	6
	c									
3	a	10	—	2	8	8	4	8	—	5
	b	5	—	1	7	—	3	7	—	6
	c									
		OR								
4	a	8	—	2	8	—	4	8	8	CO5
	b	7	—	1	7	—	3	7	5	CO6
	c									
TOTAL		30	11	---	30	20	---	80	23	---

COURSE OUTCOMES	
CO1	explain the importance of water from its entire supply plumbing & sewer appliance
CO2	explain the importance of human comforts regarding respect variation
CO3	Explain the electrical system & to discuss safety guidelines w.r.t fire safety
CO4	Describe the issues w.r.t Plumbing layout & fire layouts, system & its functions
CO5	explain code of provision vertical & vertical transportation & electrical system
CO6	explain the requirement & appliance building maintain

PROGRAM OUTCOMES (POs)	
PO1	**Engineering knowledge:** Apply the knowledge of mathematics, science, Engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
PO3	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal and environmental considerations.
PO4	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice
PO7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.
PROGRAM SPECIFIC OUTCOMES (PSOS)	
PSO1	The graduate will have the ability to plan, analyze design execution without over exploitation of natural resource
PSO2	The graduates will have the ability to take up employment entrepreneur for Sustainable civil Society
PSO3	The gradeates will be able to rescue opportunities for Persons professional growth in lifelong learning by active in civil engineering
PSO4	The graduates will be able to demonstrate professional integrity & issues related to Civil engineering projects.
PROGRAM EDUCATIONAL OBJECTIVES (PEOS)	
PEO1	To provide the students a strong foundation fundamental that will real time problems in civil engineering or industries
PEO2	To develop abilities & talent lead into creativity & productive & industrial & employability skills
PEO3	To explore & apply modern engg tools for planning design execution & maintenance & technically & Socity acceptance
PEO4	

MRP : Rs. 30/-