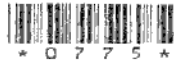


**B.Arch. Eighth Semester (Architecture Engineering) (CGS)**  
**10067 : Environmental Services - II : 08 AR 03**

P. Pages : 1

Time : Three Hours

**AU - 3082**

Max. Marks : 80

- Notes :
1. All question carry as indicated marks.
  2. Question No. 7 is compulsory.
  3. Illustrate your answer necessary with the help of neat sketches.
  4. Use of pen Blue/Black ink/refill only for writing the answer book.

- |           |                                                                         |                                                                                                                                          |    |
|-----------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1.        | a)                                                                      | Distinguish between Air conditioning and Air cooling.                                                                                    | 8  |
|           | b)                                                                      | Define the term ventilation? Why it is to be carried out. Explain the natural systems of ventilation.                                    | 12 |
| <b>OR</b> |                                                                         |                                                                                                                                          |    |
| 2.        | a)                                                                      | State the importance of service floor. Why it is to be provided.                                                                         | 6  |
|           | b)                                                                      | State the factors affecting ventilations.                                                                                                | 5  |
|           | c)                                                                      | Draw the sectional elevation of a multistory Building with refuse chute and explain it's working in detail.                              | 9  |
| 3.        | a)                                                                      | Draw a sectional elevation of a Entrance foyer of a mall with provision of Escalators. Explain it's component parts and working details. | 9  |
|           | b)                                                                      | Explain the system of Automation in smart building.                                                                                      | 5  |
|           | c)                                                                      | Explain the combination of supply and extraction systems of ventilations.                                                                | 6  |
| <b>OR</b> |                                                                         |                                                                                                                                          |    |
| 4.        | a)                                                                      | Describe with the help of neat sketches uses of solar energy in building industry.                                                       | 8  |
|           | b)                                                                      | Describe with neat sketches the energy construction and low energy systems used in building.                                             | 8  |
|           | c)                                                                      | State the importance of ducting systems in Air conditioning.                                                                             | 4  |
| 5.        | Describe with the help of neat sketches <b>any four</b> from following. |                                                                                                                                          | 20 |
|           | a)                                                                      | Fire escape stair case.                                                                                                                  |    |
|           | b)                                                                      | Plenum systems.                                                                                                                          |    |
|           | c)                                                                      | Lifts.                                                                                                                                   |    |
|           | d)                                                                      | Service floor.                                                                                                                           |    |
|           | e)                                                                      | Causes of fire in building.                                                                                                              |    |
|           | f)                                                                      | Air Handling unit.                                                                                                                       |    |
|           | g)                                                                      | Alarm systems.                                                                                                                           |    |
| <b>OR</b> |                                                                         |                                                                                                                                          |    |
| 6.        | a)                                                                      | Explain the causes of fire in building. How will you avoid them?                                                                         | 5  |
|           | b)                                                                      | What precautionary measures will you take against fire while designing theatres or cinemas?                                              | 6  |
|           | c)                                                                      | Explain with the help of neat sketches the Automatic sprinkler systems used for fire protection.                                         | 9  |
| 7.        | a)                                                                      | Explain with the help of neat sketches fire proof construction.                                                                          | 6  |
|           | b)                                                                      | What are the different special features required for physically challenged and elderly people in building types.                         | 8  |
|           | c)                                                                      | What are the different causes of fire in building and how will you avoid them.                                                           | 6  |

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