Faculty of Engineering & Technology

B.Arch. (Architecture Engineering) Eighth Semester (C.G.S.) Examination

ENVIRONMENTAL SERVICES–II

(10067)

Paper—08 AR 03

Time : Three Hours] [Maximum Marks : 80

INSTRUCTIONS TO CANDIDATES

(1) All questions carry equal marks.

(2) Answer **FOUR** questions.

(3) Question No. **5** is compulsory.

(4) Due credit will be given to neatness and adequate dimensions.

(5) Illustrate your answers wherever necessary with the help of neat sketches.

(6) Use pen of Blue/Black ink/refill only for writing the answer book.

1. (a) What is the necessity of "Ventilation" ? Explain supply and extraction systems of ventilation ? State the various factors affecting the ventilation. 9

(b) Explain with neat sketches the various natural systems of ventilations. 6

(c) State the object of "Air Conditioning". 5

OR

2. (a) What is meant by the term "Escalator" ? Under which circumstances they are used ? Explain with neat sketches the various types of Escalators. 8

(b) Explain how "Air Conditioning" is the most modern methods of mechanical ventilation system now a days. Explain air conditioning system for summer. 7

(c) What is meant by "Service Floor" ? Under which circumstances it is provided ? State its importance. 5

3. (a) Explain with neat sketches how will you carried out the disposal of solid waste in high risk building. Explain its different systems. 7

(b) Explain with neat sketch the plennum system of ventilation and state its advantages and disadvantages. 7

(c) Describe with neat sketch the duct of Air Conditioning. 6

OR

4. (a) Distinguish between Low Energy System and Hybrid System. 7

(b) Describe integration and P.V. and wind system in building. State their advantages. 6

(c) Explain Electricity generation in building. 7

5. Describe with neat sketches any **FOUR** of the following :

(i) Fire hydrant.

(ii) Lightening conductor.

(iii) Types of Lifts.

(iv) Building Automation System.

(v) Portable Fire Extinguishers.

(vi) Solar thermal application for heating and cooling.

(vii) Fire tank. 20

6. (a) Describe with neat sketches the various planning consideration to taken in high rise building for fire safety. 8

(b) Describe with neat sketches the dry and wet riser. 6

(c) Draw neat sketch of high rise building with provision of fire refuse area and explain its importance. 6

OR

7. (a) Describe the various causes of fire in the building. 6

(b) Describe with neat sketch the function and working of smoke detectors and sprinkler system used in multistoried building. 8

(c) Explain with neat sketch the fire escape staircase. 6