प्रज्ञानं ब्रह्म

Manipal
INSPIRED BY LIFE

INTERNATIONAL CENTRE FOR APPLIED SCIENCES
(Manipal University)
III SEMESTER B.S. DEGREE EXAMINATION –MAY 2016
SUBJECT: ENVIRONMENTAL TECHNOLOGY (AE 232)
(BRANCH: CIVIL)
24TH MAY, 2016

Time: 3 Hours   **Max. Marks: 100**

✓ **Answer ANY FIVE full Questions.**

1A. What are the six different climatic zones in India? Write one characteristics of each zone.

1B. With the help of sketches, explain five different ways in which buildings are naturally ventilated.   (12+8= 20 marks)

2A. Explain sun path diagram with a neat diagram

2B. Explain six heat exchange process in a building with a diagram

(8+12= 20 marks)

3. Write short notes on:
 3A.   Split air conditioners
 3B.   Objectives of a good duct design
 3C.   Sick building syndrome
 3D.   Reducing cooling load   (4x5= 20 marks)

4A. Explain the typical layout of a water treatment plant and the function of any six unit's operation.
4B. What is the per capita demand of water and list the factors that affect it?

(10+10= 20marks)

5A. What are the three sources of underground water? List the physical and chemical characteristics of water.
5B. What are traps and its features? Mention the need of a water seal. Describe P, S & Floor trap.   (10+10=20marks)

6A. Differentiate between water conservancy and water carriage system in sanitary engineering.

6B. What are sewer appurtenances? Write short notes on Manhole and Catch basins.   (12+8=20marks)

7A. Write short notes on i) Hospital elevator, ii) Residential elevators, iii) Dumb waiter, iv) Hoist elevators

7B. Explain the four classes of fires and the type of extinguishes used for each class of fire respectively   (12+8=20marks)

8A. Describe Fuses and Circuit Breakers

8B. With respect to distribution system define: i) Feeder, ii) Distributor iii) Service mains, iv) Nature of current, v) Type of construction, vi) Scheme of connection
                                                    (8+12=20marks)

༠༓༠༓༠༓༠༓