

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

June, 2016

00856

BICEE-012 : AIR QUALITY MONITORING AND CONTROL

Time : 3 hours

Maximum Marks : 70

Note : Answer any five questions. All questions carry equal marks.

1. (a) What are the natural ambient air pollutants ? Explain the properties of NO_x , PAN and CO. 7
- (b) Explain the effects of air pollution on human beings. 7

2. (a) What do you understand by Ozone hole ? What are its health hazards ? Also, explain the control of Ozone depletion. 7
- (b) Give the ambient air quality standards and guidelines followed in India. What are the objectives of air quality standards ? 7

3. (a) With neat sketches, explain the behaviour of a plume for various environmental conditions. 7
- (b) What are the various techniques of control of gaseous air pollutants in an industry ? Explain any one in detail. 7
4. (a) Explain the following : 4+3=7
- (i) Effect of air pollution on plants
- (ii) Minimum stack height
- (b) Explain the legal provisions for air pollution control. 7
5. (a) What is meant by occupational diseases ? Explain by giving an example. Also mention the control techniques for such diseases. 7
- (b) Explain the various environmental hazards involved in factories. 7
6. Explain in detail, the reduction of air pollution by changing raw materials and the process of production. 14
7. (a) What is photochemical smog ? Explain its formation and effects. 7
- (b) Explain the operational principles of electrostatic precipitators. 7

8. Write short notes on any *four* of the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Sampling Study and Planning
 - (b) Wind Rose Diagram
 - (c) Acid Rain Formation
 - (d) Zoning Practices of India
 - (e) Urban Heat Island
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