

**B.Tech. CIVIL ENGINEERING (BTCLEVI)**

**Term-End Examination**

00453

June, 2018

**BICEE-012 : AIR QUALITY MONITORING AND  
CONTROL**

*Time : 3 hours*

*Maximum Marks : 70*

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

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1. (a) What is air pollution ? What are its sources ? Also explain primary and secondary pollutants. 7
- (b) Explain the various effects of air pollution on plants. 7
2. (a) What do you understand by sources and sinks of air pollution ? Explain with an example. 7
- (b) How do the ambient atmospheric conditions affect a contaminant plume ? Explain with the help of sketches. 7

3. (a) What is the necessity of air pollution standards ? Write a detailed note on the National Ambient Air Quality Standards. 7
- (b) Discuss the properties of  $\text{NO}_x$ . Explain in detail the procedure for sampling and analysing  $\text{NO}_x$  emissions. 7
4. (a) What are the objectives of stack ? What are the data required for designing a stack ? 7
- (b) Explain the operational principles of electrostatic precipitators. 7
5. (a) What do you understand by ozone hole ? What are its health hazards ? Also explain the control of ozone depletion. 7
- (b) What are the various legal provisions for control of air pollution ? 7
6. (a) What are the various techniques of control of gaseous air pollutants in an industry ? Explain any one in detail. 7
- (b) What is the necessity of public education and social awareness for control of air pollution ? Explain with the help of relevant examples. 7

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

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

- (a) Industrial Ventilation System
  - (b) Occupational Diseases
  - (c) Urban Heat Island
  - (d) Industrial Hygiene
  - (e) Zoning Practices in India
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