

**2018**

**ENVIRONMENTAL AND  
SAFETY ENGINEERING**

Paper : ES 101

Full Marks : 100

Time : Three hours

***The figures in the margin indicate  
full marks for the questions.***

***Answer any five questions.***

1. Write about a basic water treatment plant, explaining every step with suitable diagram.  
20
2. (a) What are the different cycles in an ecosystem ? Draw the flow diagram of any two cycles and explain the details.  
10  
(b) Discuss the various methods of solid waste disposal systems.  
10

3. (a) Define Criteria Pollutants. What are the differences between primary and secondary pollutant? Explain *any three* criteria pollutants with its effect on human. 10

(b) Define Greenhouse effect. What are the different greenhouse gases? Explain its impact on global climate. 10

4. (a) Write about atmospheric composition and different methods of heat transfer. Explain the temperature variation phenomena in the atmosphere. 10

(b) Discuss *any three* devices that are used in industries to control particulate matter with figures. 10

5. Write short notes on : 5×4=20

(a) Acid Rain

(b) Noise pollution

(c) Resource

(d) BOD and COD.

6. (a) What are ozone depletion compounds? Discuss the process of ozone layer depletion and controlling measures. 10

(b) What is Ecosystem? What are the different types of ecosystem? What are the different factors that affect the ecosystem and how? 10