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Roll No. : .....

**337846(37)**

**B. E. (Eighth Semester) Examination, 2020**

APR-MAY 2022

**(New Scheme)**

**(Mech. Engg. Branch)**

**ENVIRONMENT POLLUTION & CONTROL**

***Time Allowed : Three hours***

***Maximum Marks : 80***

***Minimum Pass Marks : 28***

***Note : Attempt all questions. Part (a) is compulsory of 2 marks. Attempt any two parts from (b), (c) and (d).***

**Unit-I**

1. (a) What is meant by 'Smog'? Discuss its cause and effects.

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- (b) Discuss the effect of air pollution on human health.  
List all of them. 7
- (c) Write down the effect of air pollution on building materials, paints, textiles and paper industry. 7
- (d) What is the mechanism of deterioration in polluted atmosphere? Explain factors influencing atmospheric deterioration. 7

### Unit-II

2. (a) What do you mean by photochemical air pollution? 2
- (b) Discuss the effect of various parameters of I.C. engines on air pollution. 7
- (c) Discuss the Ferrous Metallurgical operation and explain different types of pollutions emitted from ferrous metallurgical operations. 7
- (d) State the theory of formation of photochemical smog.  
Write different photochemical reaction. 7

### Unit-III

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3. (a) Define combustion and absorption. 2
- (b) Explain the principle, construction and use of the Ringelmann chart for smoke measurement. 7
- (c) Carbon Monoxide (CO) is present in standard atmospheric air at a concentration of 50 ppm. Compute  $I_p$ ,  $S_p$  and  $W_p$  values for the CO concentration in the atmosphere. 7
- (d) Explain the methods of control of air pollution by process changes. 7

### Unit-IV

4. (a) What are the reasons of using control equipment? 2
- (b) What is the principle of inertial separators? Mention the type of inertial separators, explain. 7
- (c) With a neat sketch, explain the principles construction and working of an electrostatic precipitators. List its advantages and disadvantages. 7
- (d) What do you mean by taken into consideration for choice of equipments? 7

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**Unit-V**

5. (a) Define Air Pollution Index. 2
- (b) Explain the function of 'State and Central Board' on pollution control. 7
- (c) What is Acid Rain? What are the causes of acid rain? How is the problem of acid rain overcome? 7
- (d) Write down the salient features of Environment Protection Act, 1986. 7