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Roll No. : .....

**337846(37)**

**B. E. (Eighth Semester) Examination, April-May 2021**

**(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) which carry 7 marks.***

**Unit-I**

1. (a) How air pollutant can be classified? 2
- (b) Explain with a neat sketch the mechanism of action of air pollution on human beings. 7

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- (c) Difference between : 7
- (i) Primary and secondary air pollutants
  - (ii) Stationary and Mobile sources
- (d) Write down the effect of air pollution on building materials, paints, textiles and paper industry. 7

### Unit-II

2. (a) How are the emissions from gasoline powered vehicles classified? 2
- (b) State suitable methods of minimizing crank cases emissions and evaporative emissions. 7
- (c) State the theory of formation of photochemical smog. Write different photochemical reaction. 7
- (d) What do you mean by thermal power plant? Explain various types of pollutions emitted by thermal power plant with help of block diagram. 7

### Unit-III

3. (a) Define Smoke. 2

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- (b) Define mass concentration, volume concentration and mass-volume concentration and establish relationship between these concentrations. 7
- (c) Explain the control of gaseous contaminants by absorption and adsorption. 7
- (d) Carbon monoxide (CO) is present in standard atmospheric air at a concentration of 50 PPM compute  $y_p$ ,  $\rho_p$  and  $w_p$  values for the CO concentration in the atmosphere. 7

### Unit-IV

4. (a) Name the various equipment used for control of air pollution. 2
- (b) Explain 'cyclone' as collection equipment with the help of diagram. 7
- (c) Explains choice of equipment in details. 7
- (d) Explain with neat sketch working principle and construction of inertial separator. 7

**Unit-V**

5. (a) Explain criteria for a standardised index. 2
- (b) Explain 'green house effect'. What are the threats of it and how it can be prevented? 7
- (c) Give classification of pollution sources under Air Act, 1981 and 1986. 7
- (d) What do you mean by constitution of the board? Explain the function of the central pollution control and state pollution control board. 7