

[213]

SEAT No. \_\_\_\_\_

No. of printed pages : 2

**SARDAR PATEL UNIVERSITY**  
**M.Sc. Polymer Science & Technology Semester-IV Examination – 2019**  
**Tuesday, 26<sup>th</sup> March 2019**  
**2:00 p.m. to 5:00 p.m.**  
**PS04EPST21: ENVIRONMENTAL SCIENCE**

**Total Marks: 70**

**Note:** (1) Attempt all questions.  
(2) Figures to the right indicate marks.

**Q. 1** Answer the following multiple choice questions. **08**

- (1) Aerosols diameter less than  $0.2\mu$  is called \_\_\_\_\_.  
(a) Atikans (b) Atiken (c) Atison (d) none of above.
- (2) Particles with a diameter more than \_\_\_\_\_  $\mu$  is remove by gravity settling chamber.  
(a) 30 (b) 80 (c) 50 (d) 10.
- (3) Peroxyacetylnitrare is \_\_\_\_\_ pollutant.  
(a) primary (b) secondary (c) both a & b (d) none of above.
- (4) In Stack Gas measurement concentration of sulphur dioxide is measure by its \_\_\_\_\_.  
(a) weight (b) velocity (c) colour (d) none of above.
- (5) Runoff from agricultural lands provide plant nutrients in natural setting, this biological process called \_\_\_\_\_.  
(a) eutrophication (b) neutralization (c) detonation (d) none of above.
- (6) \_\_\_\_\_ is long lived radioactive component.  
(a) Ra-226 (b) Sr-90 (c) kr-85 (d) Ba-140.
- (7) At \_\_\_\_\_  $^{\circ}\text{C}$  temperature thermophilic bacteria take place for decomposition.  
(a) 25(b) 35 (c) 45 (d) 60.
- (8) \_\_\_\_\_ is a pathological waste.  
(a) Fruit (b) Wood (c) Chemicals (d) Dead animals.

**Q. 2** Attempt **any seven** of the following. **14**

- (1) Give environmental composition.
- (2) Enlist sources of air pollution.
- (3) Explain sulphur cycle.
- (4) Write a note on CFC substitutes.
- (5) Give a note on Stratosphere.
- (6) Write a note on chloride analysis for water.
- (7) Explain Biochemical effect of pesticides.
- (8) What do you mean by urban wastes?
- (9) Write a note on sanitary landfill.

(1)

(P.T.O)

- Q. 3** (a) Draw a neat labelled diagram of nitrogen cycle and explain. 06  
(b) Explain in detail about ecology and ecosystem. 06  
**OR**  
(b) Write a note on carbon cycle and oxygen cycle. 06
- Q. 4** (a) Explain in detail about major sources of air pollution. 06  
(b) What is photochemical smog? Explain in detail with the help of route for reactive hydrocarbon and peroxyacyl nitrate. 06  
**OR**  
(b) Explain in detail about Green house effect. 06
- Q. 5** (a) Write a note on following: 06  
(i) Biochemical oxygen demand (BOD).  
(ii) Chemical oxygen demand (COD).  
(b) Explain radioactive wastes. 06  
**OR**  
(b) Write a note on toxic chemicals for environment. 06
- Q. 6** (a) Write a note on following: 06  
(i) Open dumping disposal method.  
(ii) Incineration.  
(b) Explain in detail about Composting. 06  
**OR**  
(b) Explain Recovery and Recycling of following: 06  
(i) Plastics.  
(ii) Metals.

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(2)