

SARDAR PATEL UNIVERSITY
THIRD YEAR B.Sc (FIFTH SEMESTER) EXAMINATION

2013

Monday, 18th November

10.30 am to 1.30 pm

US05CENV03 Environmental Pollution

Maximum Marks: 70

- Note:** 1. Answers of all the questions (including multiple choice questions) should be written in the provided answer book only
 2. Draw neat and labelled diagrams wherever necessary.

Q.1. Select the correct answer and write it in the answer sheet. (10)

1. Sulphur Dioxide can be measured by _____ method
 (a) Turbidimetric (b) Arsenite (c) Ernst Haeckel (d) West and Gaeke
2. ____ air pollutant combines with Haemoglobin and reduces the oxygen carrying capacity of blood
 (a) CO₂ (b) SO₂ (c) CO (d) CH₄
3. The excellent classification of the conventional approaches is given by _____
 (a) George Jackson (b) Reiter (c) Haeckel (d) Paintre
4. Lead, Mercury and Chromium are the _____ contaminants of soil.
 (a) Organic (b) Inorganic (c) Phenolic (d) Radioactive
5. The range of visible spectrum is _____.
 (a) 300-500 nm (b) 400-700 nm (c) 700-900 nm (d) 100-700 nm
6. In radioactive fallout _____ occurs at very low altitude.
 (a) Early fallout (b) delayed fallout (c) late fallout (d) near fallout
7. The most important characteristics of sound wave are _____ and _____.
 (a) Intensity & Wave (b) Frequency & Amplitude
 (c) Sound pressure & Pitch (d) Loudness & Pitch
8. Eurytherm refers to the animals which can tolerate _____ changes of temperature.
 (a) Narrow (b) Wide (c) Medium (d) Low
9. _____ has began to regulate emission from autos in 1963
 (a) Los angeles (b) California (c) Columbia (d) none of these
10. _____ ratio is most important factor that influences the exhaust emission.
 (a) Gasoline - Diesel (b) Air- Moisture (c) Air - Fuel (d) none of them

Q.2. Answer the following questions in brief (Any 10) (20)

1. Define Air Pollution and enlist various sources of it.
2. Write the classification of Air pollutants according to their origin.
3. Define: i) Swamp gas ii) Catalytic combustion
4. Enlist the six general kinds of Soil pollutants.
5. Describe two types of radiations.
6. Explain the effects of radiation on Embryo/ Fetus.
7. Define Frequency and Wavelength. Write down the range of frequency people can hear.
8. What is noise pollution? Enlist the sources of Noise pollution.
9. Discuss the relation between temperature and concentration of Dissolved Oxygen in water.
10. Write a short note on Air-Fuel ratio.
11. Enlist the major air pollutants generated by automobiles.
12. Discuss the flame quenching reduction.

Q.3. Define air pollution. Enlist the sources and describe the sampling methodologies for gaseous and particulate air pollutants. (10)

OR

Q.3. Enlist and explain various types of scrubber with diagram. (10)

Q.4. (a) Discuss the reactions of pesticides in soil environment. (05)

(b) Explain the natural and anthropogenic sources of Radiation pollution. (05)

OR

Q.4. (a) Write a note on prevention and elimination of inorganic chemical contamination. (06)

(b) Discuss the harmful effects of radiation pollution on human. (04)

Q.5. (a) Explain the working principle of Sound Level Meter with schematic diagram. (05)

(b) Give a brief account on effects of thermal pollution on aquatic ecosystem. (05)

OR

Q.5 (a) Illustrate a labeled diagram of Human ear and explain the hearing mechanism. (06)

(b) Describe the various control measures of thermal pollution. (04)

Q.6. (a) Write a note on crankcase and evaporative emission. (05)

(b) Describe exhaust gas recirculation (05)

OR

Q.6. Discuss the four stroke IC gasoline engine with suitable diagram. (10)

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