

M.Sc. Sem.-1 Examination

403

Environmental Science

January-2024

Time : 2-30 Hours]

[Max. Marks : 70

Instructions: All Questions carry equal marks
Attempt all Questions

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| Q I | Explain in detail first and second law of thermodynamics. | 14 |
| OR | | |
| Q I | A. Define: fissile and describe different type of nuclear reaction. | 7 |
| | B. Write short note on (i) Molecules and Covalent compounds (ii) Chemical species and chemical reaction. | 7 |
| Q II | Explain distribution of all renewable energies across world. | 14 |
| OR | | |
| Q II | A. Write a note on Solar Energy Inputs | 7 |
| | B. Discuss on the risk of Nuclear Accidents | 7 |
| Q III | Explain wind and tidal energy in detail. | 14 |
| OR | | |
| Q III | A. Write a note on (i) Power from Biomass (ii) Biomass and Environment. | 7 |
| | B. Explain energy conservation and sustainability. | 7 |
| Q IV | Name and explain two types of biogas digester in detail. | 14 |
| Q IV | What will be the future scenario of the world? Explain it in detail. | 7 |
| | Write a brief note on (i) Water-based biomass (ii) Energy from waste. | 7 |
| Q V | Attempt any 7 out of 12 Short question. | 14 |
| 1 | Define: Atom and Elements | 2 |
| 2 | Give oxidation state of sulphur in sulphuric acid and elemental sulphur. | 2 |
| 3 | What will the electronic configuration of magnesium and potassium? | 2 |
| 4 | Explain the term: Dative Bonds with an example | 2 |
| 5 | State the valency of silicon and nitrogen | 2 |
| 6 | State the uses of natural gas liberated from biomass. | 2 |
| 7 | Enlist material used in biomass | 2 |
| 8 | Which semiconductor is used in photovoltaic cell? | 2 |
| 9 | Name two nuclear accidents. | 2 |
| 10 | State two differences between chemical reaction and nuclear reaction | 2 |
| 11 | Name specific energy crops. | 2 |
| 12 | Enlist two names of conventional energies | 2 |