

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-IV (NEW) EXAMINATION – SUMMER 2022****Subject Code:3141310****Date:29-06-2022****Subject Name:Occupational Health & Safety****Time:10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

|            |  | Marks     |
|------------|--|-----------|
| <b>Q.1</b> | (a) State the scientific safety management functions.  | <b>03</b> |
|            | (b) Discuss the safety measures for electric works.  | <b>04</b> |
|            | (c) Explain the various routes of entry of toxicants in to the human body.                                     | <b>07</b> |
| <b>Q.2</b> | (a) Explain the 5 E's for accident prevention.   | <b>03</b> |
|            | (b) Define permissible exposure limit, threshold limit value, lethal dose and lethal concentration.            | <b>04</b> |
|            | (c) Write a short note on factors impeding safety and Accident prevention.                                     | <b>07</b> |
|            | <b>OR</b>  |           |
|            | (c) What is mean by occupational diseases? Group them under physical agent, chemical agent & biological agent. | <b>07</b> |
| <b>Q.3</b> | (a) Draw & explain the pyramid of fire.  | <b>03</b> |
|            | (b) Explain the constituents of Ergonomics.  | <b>04</b> |
|            | (c) With the help of table explain classification of fire and extinguishers.                                   | <b>07</b> |
|            | <b>OR</b>  |           |
| <b>Q.3</b> | (a) Enlist steps of accident prevention.   | <b>03</b> |
|            | (b) Explain safety terminology.  | <b>04</b> |
|            | (c) What do you mean by the term ergonomics? Explain its Application.  | <b>07</b> |
| <b>Q.4</b> | (a) Give classification of PPE.  | <b>03</b> |
|            | (b) Write a short note: Need of personal protective equipment (PPE).   | <b>04</b> |
|            | (c) Define safety organization and enlist the objectives of safety Organization.                               | <b>07</b> |
|            | <b>OR</b>  |           |
| <b>Q.4</b> | (a) Explain different types of Ventilation.  | <b>03</b> |
|            | (b) Give classification of occupational health hazards.  | <b>04</b> |
|            | (c) Explain the Concept of Safety & Philosophy of Safety.  | <b>07</b> |
| <b>Q.5</b> | (a) What is Good House Keeping?  | <b>03</b> |
|            | (b) Write a short note on On-Site Emergency Plan   | <b>04</b> |
|            | (c) Write a short note on Fault Tree Analysis along with the example.  | <b>07</b> |
|            | <b>OR</b>  |           |
| <b>Q.5</b> | (a) What do you mean by the term Total safety?   | <b>03</b> |
|            | (b) Explain in brief Explosion control devices.  | <b>04</b> |
|            | (c) Write a short note on Event Tree Analysis along with the example.  | <b>07</b> |