

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2024****Subject Code:3154006****Date:05-12-2024****Subject Name: Health and Safety Management****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

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| Q.1 | (a) Explain the direct and indirect costs of an accident. | 03 |
| | (b) Briefly explain the following terms: health, safety, accident, near miss. | 04 |
| | (c) Explain health and safety management system (HSMS) and the key elements of a good HSMS for a workplace. | 07 |
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| Q.2 | (a) Define occupational hazards. Classify them. | 03 |
| | (b) What is “OSHA”, discuss briefly. | 04 |
| | (c) Discuss some of the existing OHS legislations in India and its shortcomings. | 07 |
| OR | | |
| | (c) Explain the hierarchy of controls | 07 |
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| Q.3 | (a) Describe ISO45001. | 03 |
| | (b) What is an emergency? What are the basic steps to tackle such situations? | 04 |
| | (c) Explain PPE in detail, what are its characteristics? | 07 |
| OR | | |
| Q.3 | (a) Explain hazard and risk assessment. | 03 |
| | (b) List out the contents of a standard first aid kit? | 04 |
| | (c) Explain electrical hazards and the ways in which they can be controlled. | 07 |
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| Q.4 | (a) Explain fire triangle. | 03 |
| | (b) Why is health screening important and mention the principles as proposed by Wilson and Jungner for health screening. | 04 |
| | (c) Explain in detail fire hazard, the types of fuel and sources of ignition and the methods of extinction. | 07 |
| OR | | |
| Q.4 | (a) What is occupational hygiene and what are the five basic principles involved? | 03 |
| | (b) Briefly discuss about chemical and biological hazards and necessary control measures to reduce exposure. | 04 |
| | (c) Discuss the various hazards encountered at construction, demolition sites. Discuss ways in which you can tackle them. | 07 |
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| Q.5 | (a) Discuss HAZOP. | 03 |
| | (b) Describe the steps involved in an investigation of an accident. | 04 |
| | (c) What are the employer’s responsibilities under OSHA? | 07 |
| OR | | |
| Q.5 | (a) What is LOPA? | 03 |
| | (b) What is hazard identification? Explain HAZID. | 04 |
| | (c) What are the employee’s basic rights under the occupational health and safety act? | 07 |
