

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Automation & Robotics) (Sem.-7)
INDUSTRIAL SAFETY AND ENVIRONMENT
Subject Code : ME-402
M.Code : 71809

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt ANY FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt ANY TWO questions.**

SECTION-A

1. **Write briefly :**
 - a. How safety of paramount is important in any industrial unit?
 - b. What are the 6 types of hazards in the workplace?
 - c. What do you understand by HAZOP?
 - d. Enumerate the steps followed by organizations for accident analysis.
 - e. Enumerate four safety related legislations in India.
 - f. How safety and productivity are related?
 - g. What is the need for environmental control in an industry?
 - h. Enumerate the principles of good illumination.
 - i. What is dilution ventilation?
 - j. Enumerate the considerations of environment design for improving accuracy at workplace.

SECTION-B

2. Explain the nature of industrial accident. How do organizations plan for mitigating industrial accidents?
3. Explain different Hazard identification techniques used by manufacturing organizations for assessing the accidents.
4. Explain common heat stress indices used in an industry. How heat exposure can be controlled in an industry?
5. Explain the recommended optimum standards of illumination in industrial units.
6. How do organizations implement maintenance standards relating to lighting and colour?

SECTION-C

7.
 - a. Explain the relationship of safety with plant design, equipment design and work environment.
 - b. What is safety planning? Discuss its scope and procedure. Also describe different types of safety plans used in industries.
8.
 - a. How heat exposure can be controlled in an industry? Explain different heat stress indices used in an industry.
 - b. How do organizations measure and evaluate noise at workplace? Explain various noise absorption techniques used at industrial units.
9.
 - a. Explain the steps taken by organizations for measurement and mitigation of physical fatigue at workplace.
 - b. Write short note on environment standards for representative industries.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.