

Roll No. 

Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(Automation & Robotics) (2011 batch) (Sem.-7,8)****INDUSTRIAL SAFETY AND ENVIRONMENT**

Subject Code : ME-402

Paper ID : [A2921]

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) What is meant by industrial safety?
- b) What is audiometer?
- c) Write about the hazards identification techniques.
- d) How the industrial hazards of catastrophic nature can be taken care of in any organization?
- e) What is the safe dress for the machinist?
- f) Differentiate between 'Natural ventilation ' and 'Mechanical ventilation' as related to industry safety.
- g) What are the adverse effects of noise on human body?
- h) What is meant by local relief?
- i) Differentiate between physical fatigue and mental fatigue.
- j) Enlist the factors that affect the thermal comfort of human body.

### SECTION-B

2. What is the principle of good illumination and discuss various colour codes used with their purpose in an industry?
3. How vibration can be measured and controlled in an industry?
4. Explain the impact of environmental design on accuracy and efficiency of a person.
5. Discuss various types of industrial accidents. What are their causes?
6. Write a note on the common heat stress indices used in an industry. How heat exposure can be controlled in an industry?

### SECTION -C

7. Discuss the need of environmental control in an industry. How do 'Noise' and 'Heat' affect the efficiency and accuracy of the work environment?
8. Discuss how accidents are reported, investigated and analysed in an industry. How does it help in prevention of future accidents in that industry?
9. a) Discuss various Environmental standards for representative industries.  
b) What do you mean by dilution ventilation?