**Roll No……** **Total No. of Printed Pages: 1**
**Total no. of Questions: 09**

**B. Tech. (EE) (Semester: 6th/8th)**
**INDUSTRIAL SAFETY AND ENVIRONMENT**
**Subject Code: BMEE0F91**
**Paper ID: [OE1111511]**

**Time: 3 Hours** **Maximum Marks: 60**

**Instructions to candidates**

1) Section-A is COMPULSORY and consist of TEN questions carrying TWO marks each.
2) Section-B consist of FIVE questions of FIVE marks each & student has to attempt any FOUR questions.
3) Section-C consist of THREE questions of TEN marks each & student has to attempt any TWO questions.

**Section-A** **(02 marks each)**

Q1. (a) Define important principles of good illumination.
(b) How is physical fatigue different from mental fatigue?
(c) State the role of effective planning for safe industrial environment.
(d) How does accident investigation help to reduce industrial accidents?
(e) How does industrial safety affect productivity?
(f) Discuss the effect of vibrations on human body.
(g) Define Noise Isolation and its need.
(h) What do you mean by industrial hazards?
(i) What is the need of environment control?
(j) Why safety standards are needed?

**Section-B** **(05 marks each)**

Q2. Explain the relationship of industrial safety with the plant design? State the effect of this relationship on productivity of the industrial unit.
Q3. Explain various safety measures that need to be taken in a manufacturing organization.
Q4. Explain the importance of considering environment factors in an industry.
Q5. State the need of ventilation in an industrial space. Also differentiate between natural and mechanical ventilation explaining their relative advantages and disadvantages.
Q6. (a) State the role of employee participation in improving safety. (2.5)
(b) Explain the basics of environment design for improved efficiency and accuracy at work in an industry. (2.5)

**Section-C** **(10 marks each)**

Q7. What do you mean by industrial accident? Classify and explain various types of industrial accidents stating their causes of occurrence. Also explain various measures that can be taken to prevent the industrial accidents.
Q8. Why is it necessary to measure and evaluate noise? State the effect of noise on humans in an industry. Also explain how noise isolation helps in reducing the noise?
Q9. (a) Discuss the effects of temperature and humidity on human body & mind. (5)
(b) Explain the need and importance of the industrial safety policy formulation. (5)