Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 20752

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2023.

Fifth Semester

Mechanical Engineering

CME 388 — INDUSTRIAL SAFETY

(Regulations 2021)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Mention some special provisions given by Factories Act, 1948.

2. List the types of accidents.

3. Define maintenance.

4. What is service life of equipment?

5. List different methods of lubrication.

6. List any four factors affecting corrosion.

7. What is the importance of fault tracing?

8. Mention the probable cause for excessive nose in the gear box.

9. What is over hauling?

10. Explain the need for degreasing in the maintenance of machinery.

PART B — (5 × 13 = 65 marks)

11. (a) Summarize the mechanical hazards and the basic requirements of mechanical guards.

Or

(b) Explain briefly about Fire prevention and firefighting, equipment and methods.

12. (a) Write short notes on Primary and Secondary functions and responsibilities of maintenance department.

Or

(b) Explain briefly about different types of maintenance strategies.

13. (a) Explain different types of wear with neat sketches.

Or

(b) List different methods of preventing corrosion and elaborate any two methods.

14. (a) Describe the fundamental principles, methodologies and practical applications of FTA.

Or

(b) Explore the key components and decision nodes involved in creating a comprehensive decision tree for troubleshooting boiler issues.

15. (a) Explore the step-by-step procedures involved in the overhaul of electric motors and delve into the troubleshooting methodologies to address prevalent issues.

Or

(b) Explain the essential steps and procedures involved in the periodic and preventive maintenance of machine tools.

PART C — (1 × 15 = 15 marks)

16. (a) Develop a comprehensive exploration of strategies to mitigate wear in machinery and components, with a focus on practical applications and real-world case studies.

Or

(b) Develop a comprehensive decision tree to troubleshoot and address problems in an air compressor system, considering a real-life case study.