

Registration No:

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Total Number of Pages : 02

Course: B.Tech
Sub_Code: RIS7B001

7th Semester Regular / Back Examination: 2023-24

SUBJECT: INDUSTRIAL SAFETY ENGINEERING

BRANCH(S): AUTO,CHEM,CIVIL,CSE,ELECTRICAL &
C.E,IT,MANUTECH,MECH,METTA,MINING,MME,PE,PLASTIC,PT

Time : 3 Hour

Max Marks : 100

Q.Code : N030

Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Answer the following questions: (2 x 10)

- a) What do you mean by equipment maintenance management? State the prime objectives fulfilled by it.
- b) Which of the process is followed to stop a fire by stopping the supply of oxygen using blanket and sand?
- c) What do you mean by equipment maintenance management? State the prime objectives fulfilled by it.
- d) What are the major types of tools used in maintenance for industrial equipments?
- e) What is the basic difference between corrosion and wear?
- f) What is the concept for fault finding activities? How does it help in decision making?
- g) Which type of failure is generally occurred in rotating machinery due to some surface defects?
- h) State some advantages of preventive maintenance in electrical machines.
- i) What are the factors affecting Equipment life cycle?
- j) What type of maintenance is required for industrial air compressor and Why?

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- a) State and explain the criteria responsible for increase the productivity in a plant.
- b) Service life of a tool affects the productivity. Justify.
- c) What is fire triangle? Explain the different classes of fire with symbols and extinguishers used for them. Draw any four symbols for possible fire hazards.
- d) State the types of hazards and explain any three in detail with possible causes and remedial actions.
- e) What are the types of wears and corrosion? Explain one prevention method used in chemical plant.

- f) What is decision tree? Draw decision tree for IC engine and explain.
- g) State and explain different Steps for periodic and preventive maintenance of air compressor.
- h) Explain role of management and government in industrial safety.
- i) What is industrial safety? How it is associated with risk?
- j) How equipment life cycle is useful for deciding maintenance activities? Explain in detail.
- k) Explain in brief the maintenance economics.
- l) Discuss repair cycle concept and its importance in small scale industries.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

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| Q3 | State and explain the significances of different colour codes used in industrial safety. | (16) |
| Q4 | State and explain working and applications of different lubrication methods. Explain any three in details with neat sketch. | (16) |
| Q5 | Discuss different preventive maintenance techniques and explain the advantages and dis-advantages of overhauling electrical motor in DG set. | (16) |
| Q6 | Highlight the characteristics of factory act and explain employee's safety provisions to be made in factory. What is workman's compensation act and explain main features of the same? Also narrate the possible reasons for which compensation may not be given to employee. | (16) |