

Code No: R20DME52

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

R20

(Autonomous Institution – UGC, Govt. of India)

M.Tech II Year I Semester Regular/Supplementary Examinations, March 2023

Industrial Safety

(MD)

Roll No									
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Time: 3 hours

Max. Marks: 70

Note: This question paper Consists of 5 Sections. Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 A Discuss various types of industrial accidents. What are their causes? [7M]
B How do organizations plan service life of equipment to obtain balance between operational efficiency and safety? [7M]

OR

- 2 A Discuss about
I. Safety Organization [3M]
II. Safety Auditing [3M]
B Explain the steps to be followed for Industrial Noise Control Method. [8M]

SECTION-II

- 3 A Explain the various provisions in the Petroleum act 1934. [7M]
B Describe the personal protective equipment used in process industries. [7M]

OR

- 4 A Discuss the safety aspects to be followed in process plants. [7M]
B Elaborate the pollution problem in Cement and Steel plants. [7M]

SECTION-III

- 5 A Explain the safety procedures to be adopted while operating a crane. [7M]
B Explain the steps to be taken after occurrence of fire. [7M]

OR

- 6 A Explain any four mechanical actions that can trap hands and cause for same. [7M]
B Discuss the approaches to prevent electrical accidents. [7M]

SECTION-IV

- 7 A Categorize workplace hazards. Explain each with suitable examples. [7M]
B Classify and Explain the Industrial enclosure for gases and vapours [7M]

OR

- 8 A Discuss the mechanical and environmental hazards present in industries. [7M]
B Discuss the different type of safety devices that can protect against heat, electricity and chemicals. [7M]

SECTION-V

- 9 A Describe the guidelines to be followed in Indian Factory act related various aspects of the working nature [7M]
B Explain some important rules in the Indian Boiler act. [7M]

Code No: R20D1517

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R20

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M.Tech II Year I Semester Regular/Supplementary Examinations, March 2023

Design for Manufacture Assembly and Environment

(MD)

Roll No									
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Time: 3 hours

Max. Marks: 70

Note: This question paper Consists of 5 Sections. Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 A List out the Mechanical factors in design for manufacturing and Mechanism selection design for manufacturing [7M]
B Discuss with neat sketch about Process capability [7M]
OR
2 A Describe with neat sketch about the manufacturing datum, functional datum & change in datum in DFM. [7M]
B Explain the various means by which the designer can work through the discovery of solution of the problem. [7M]

SECTION-II

- 3 A Explain in detail about the influence of material in form design. [7M]
B List out the design rules for form design of welded member with neat sketch. [7M]
OR
4 A List out the design rules for form design of casting member with neat sketch [7M]
B Demonstrate with neat sketch about form design of forging defects. [7M]

SECTION-III

- 5 A Describe in detail about the reduction of machined area by simplification by separation with neat sketch. [7M]
B Discuss in detail process and principles used in designing the Design for Clamp ability and the Design for accessibility. [7M]
OR
6 A Explain briefly the mechanical properties that affect [7M]

- Machinability
- B Discuss about the doweling procedure and counter sunk screws. [7M]
- SECTION-IV**
- 7 A Describe computer application in DFMA with neat sketch. [7M]
B Explain briefly Computer modeling of casting processes [7M]
- OR
- 8 A Illustrate the following with neat sketch [7M]
i) Casting pattern
ii) mould
iii) parting line.
- B Discuss the use of GT for Design of Manufacturing Systems [7M]
- SECTION-V**
- 9 A Illustrate the following (1) global issue (2) Regional and local issue. [7M]
B Discuss in detail about Design to minimize material usage. [7M]
- OR
- 10 A What is mean by DFE? Explain the design guidelines for DFE. [7M]
B Distinguish between the following with suitable sketch i) Recycling ii) Remanufacturing. [7M]
