

M.E. MECHANICAL ENGINEERING FIRST YEAR FIRST SEMESTER – 2024

Subject: INTEGRATED MANAGEMENT SYSTEM

Time: 3 Hours

Full Marks: 100

Answer any five questions.

1. (a) What do you mean by quality management system? Explain with an example.
(b) Explain a 'gear making process' with Input-Process-Output Model in the context of ISO Standard. Also, mention its quality policy. [5+15]
2. (a) Define the term 'Risk'. Write short notes on FMEA.
(b) Suppose, a company XYZ wants to produce a simple Taper Job. The company will apply taper turning with the help of Lathe. Use PDCA cycle to explain production stages of the same for workers. [(3+5)+12]
3. (a) What is 'Quality Characteristics'? Mention different types of quality characteristics with at least one example.
(b) Explain the relationship of cost or value with the designed quality level.
(c) What are the functions of Quality Improvement Team? [(2+8)+5+5]
4. (a) What are the different steps to develop a total quality system?
(b) Explain causes of variation of products.
(c) What are the quality costs? How are these influencing overall costs? [5+5+(4+6)]
5. (a) Mention one inner objective of "SAFETY".
(b) What do you mean by accident? Explain causes of accident.
(c) What are the different types of cost of accident?
(d) Mention two human errors, which may cause accident. [5+(1+4)+5+5]
6. (a) What are the benefits of a good accident/incident report form?
(b) Explain responsibilities of Executive Officer in Safety Department.
(c) What is hazard? What are the roles of an engineer in safety discipline?
(d) Discuss role of Asset Manager. [5+5+(2+3)+5]

[Turn over

7. Write short notes on *any four*:

[4X5]

- (a) Conformity and conforming item
- (b) Quality circle
- (c) Organization of quality
- (d) Hierarchy of controls in safety
- (e) Benefits of Asset Management
- (f) Asset management organization