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Question Paper Code	12658
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**M.E. - DEGREE EXAMINATIONS, APRIL / MAY 2024**

First Semester

**M.E. - Industrial Safety Engineering**

**20PISEL101– PLANT LAYOUT AND MATERIALS HANDLING**

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

	<i>Marks</i>	<i>K- Level</i>	<i>CO</i>
1. Identify the need to take decision for location of a plant.	2	K1	CO1
2. How do you select safe storage for chemicals?	2	K1	CO1
3. List out the uses of security towers.	2	K2	CO2
4. Write any four requirements for the safe layout for metal powder manufacturing industry.	2	K2	CO2
5. What are the principles of good ventilation?	2	K1	CO3
6. Why housekeeping is essential for industries?	2	K1	CO3
7. Define Steel strapping and sacking.	2	K1	CO4
8. What are the factors to be considered while inspecting hooks?	2	K2	CO4
9. Name any four types of hoisting apparatus.	2	K2	CO5
10. What is the use of escalator?	2	K2	CO5

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

11. a) Explain the decision of plant location is important to the organization.	13	K2	CO1
<b>OR</b>			
b) Exemplify the factors to be considered in storage and handling of explosives.	13	K2	CO1
12. a) Describe the facilities required for safe effluent disposal and treatment tanks.	13	K3	CO2
<b>OR</b>			
b) Explicate the safe layout of storing fertilizers and pesticides.	13	K3	CO2
13. a) Illustrate the advantages of local exhaust ventilation system.	13	K3	CO3

**OR**

- b) Examine the effects of glare and how to reduce it. 13 K3 CO3
14. a) Elucidate the storage and handling of cryogenic liquids in detail. 13 K4 CO4
- OR**
- b) Discuss about the inspection of wire ropes. 13 K4 CO4
15. a) Analyze the categories and applications of conveyors. 13 K4 CO5
- OR**
- b) Explain the working of power elevators with a neat sketch. 13 K4 CO5
- PART - C (1× 15 = 15 Marks)**
16. a) Develop the considerations to be followed for a safe design of a bulk Liquefied Petroleum Gas (LPG) storage facility. 15 K3 CO6
- OR**
- b) Identify the various precautions to be taken to prevent common injuries during manual material handling. 15 K3 CO6