

Reg. No.

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M.E. / M.TECH. DEGREE EXAMINATIONS, DEC 2019

Third Semester

MS18011 – INDUSTRIAL SAFETY*(Mechatronics)***(Regulation 2018)****Time: Three Hours****Maximum : 100 Marks**

Answer ALL questions

PART A - (10 X 2 = 20 Marks)

		CO	RBT
1.	Name any two safety devices used in the operation of pressure vessels and shot blasting.	1	R
2.	What are the effects of painting on health?	1	U
3.	Differentiate accident and incident.	2	U
4.	Define safety sampling.	2	R
5.	What are the effects of SO ₂ gas?	3	U
6.	What are the symptoms of gas poisoning?	3	U
7.	What is the importance of electricity act?	3	AP
8.	What do you understand from the explosive act?	3	U
9.	What is the objective of constituting safety committee?	4	U
10.	What are the functions of safety department?	4	U

PART B - (5 X16 = 80 Marks)

11. (a) (i) Briefly explain about the operating procedure of boiler with appropriate safety measures. (8) 1 U
- (ii) What is the usage of gas furnace? What are the various safety measures to be considered for operating the gas furnace? (8) 1 U
- (OR)**
- (b) (i) List out the safety measures to be initiated for the operations shot blasting, grinding, welding and metal forming. (8) 1 AP
- (ii) What are the safety aspects to be considered for sewage disposal & cleaning, highway & urban? (8) 1 AP

12. (a) (i) Explain the procedure about HAZOP training and development. (8) 2 U
- (ii) Prepare a checklist for investigation and reporting of accident. (8) 2 U
- (OR)**
- (b) (i) Explain about the various devices available for fire fighting and equipment available for personal protection. (8) 2 AP
- (ii) Explain any two strategies, which are followed for specific hazard control. (8) 2 AP
13. (a) (i) How does the chromium toxicity affect the environment? Explain. (8) 3 AP
- (ii) Explain the effect of ultra violet radiation on human system. (8) 3 AP
- (OR)**
- (b) (i) Write short notes on two notifiable occupational diseases. (8) 3 U
- (ii) List out any four poisonous gases and explain their effects. (8) 3 U
14. (a) (i) Briefly explain about the objectives of Factories Act. (8) 3 U
- (ii) What are the importances of Indian boiler act? (8) 3 U
- (OR)**
- (b) (i) Write short note on environmental protection act. (8) 3 U
- (ii) What are the welfare facilities available to prevent occupational diseases? (8) 3 R
15. (a) (i) Explain the steps involved in evaluation of modern safety concepts. (8) 4 AP
- (ii) List out the functions of safety department and safety committee. (8) 4 AP
- (OR)**
- (b) (i) Whether the safety concepts increase the productivity or decrease? Justify. (8) 4 AN
- (ii) How to motivate the employee participation in safety? (8) 4 AN