

Roll No

FT - 704

B.E. VII Semester

Examination, December 2014

Safety Engineering and its Industrial Application

Time : Three Hours

Maximum Marks : 70

Note: Attempt all five questions. All questions carry equal marks.
There is internal choice in each question.

1. a) Explain the different types of accident causation models with the help of suitable example. 7
b) What do you understand by unsafe act and unsafe condition? Explain with the help common example at work places. 7

OR

2. a) Explain types of accident data and incident data. Explain practical implications of these data in forecasting the accident patterns. 7
b) What do you understand by Bird's accident triangle? Explain the relationship between frequency and severity. 7
3. a) Explain the concept of ergonomics on following points:
i) The human-machine Interface
ii) Allocation of function
iii) Anthropometry 7
b) Enlist the limitation of thermal protection covered by personal protective clothing. 7

OR

4. a) Explain the four different level of Protection covered by the personal protective clothing. 7

- b) Explain Work Related Upper Limb Disorder (WRULD) with common example at workplace. 7
5. a) Distinguish between sound power level and sound pressure level for the assessment of Industrial Noise. Demonstrate the available models for both levels. 7
b) What are the four parameter required to correct assessment of thermal environment in a factory? 7

OR

6. a) What do you understand by Equivalent noise level? Explain the terms in concern with exposure time. 7
b) Explain Wet Bulb Globe Temperature index for the thermal assessment of work places. 7
7. a) What are the systematic approaches involve in compilation of safety audit for an LPG Bottling Plant? 7
b) Describe the most common methodology used for the safety audit in process industries. Explain the essential documents required for the commencement of safety audit in a process industry. 7

OR

8. a) Explain the most common storage tank classes used for the storage of flammable liquids. Enlist the safety devices installed in each class. http://www.rgpvonline.com 7
b) Explain the physical and chemical properties of corrosive substances. What are the different Hazards associated with acid and bases? 7
9. Explain the various sections of solvent extraction plant with the help of block diagram. What are the fire hazards and explosion hazards involved in each section? 14

OR

10. Give the detail description on single super phosphate plant. What are the various hazards associated with SSP in fertilizer industry? 14
