

Roll No

FT-804

B.E. VIII Semester

Examination, December 2016

Industrial Hygiene and Occupational Health

Time : Three Hours

Maximum Marks : 70

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each question are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc..

1. a) Describe ergonomical factor of stress.
b) Write short note on Biological factor of stress.
c) Define
 - i) TLV - TWA
 - ii) STEL and
 - iii) LD - 50
- d) Calculate the TWA for an employee who is exposed to an average level of 100 ppm of xylene for 10 minutes out of every hour and during the remaining period of each hour there is exposure of 50 ppm of xylene during his work shift of 8 hours?

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OR

Prepare MSDS of Ammonia.

2. a) Write down short note on Vapors and fibres?
b) Describe various types of noise (sound) in brief.
c) Calculate daily noise dose in percentage if an employee is exposed to following noise levels during a workshift?
 - i) 80 dB for 2 Hours
 - ii) 100 dB for 2 Hours
 - iii) 95 dB for 3 Hours
 - iv) 105 dB for One Hour
- d) What is importance of Noise Survey? Describe various steps of noise survey.

OR

What is Concept of Ergonomics? Describe CTS (Carpel Tunnel Syndrome) and CTD (Cumulative Trauma Disorder) in details.

3. a) Write short note on impinger tubes.
b) Briefly describe about toxic gas detector tubes.
c) Describe in brief about the instrument and procedure used for dust sampling?

- d) Describe general principles of air sampling? Also describe various instruments and equipments used for an sampling (Direct reading and others).

OR

Describe absorption based sampling and analytical process for determining HCL concentration in work atmosphere with the used spectrophotometer?

4. a) Write down basic control measures for control of work place hazards.
b) Write short note on isolation for potential hazard operation? <http://www.rgpvonline.com>
c) Briefly describe importance of education and training in the control of hazards.
d) Write down various engineering controls for the control of hazardous agents in the work place.

OR

What is importance of ventilation in the control of workplace air borne hazardous contaminants? Describe in details about general dilution ventilation and make up air system.

5. a) Describe in brief about router of entry of hazardous substances.
b) Write short note on respiratory system.
c) Write short note on pesticides and their hazards.

- d) What are various diseases occurring from metals? Describe in details about lead poisoning it's causes and control measures?

OR

Define Cancer? Describe those occupational exposures which are associated with exposure to Carcinogens?
