

GUJARAT TECHNOLOGICAL UNIVERSITY
ME - SEMESTER– III • EXAMINATION – SUMMER 2015

Subject Code: 731804**Date: 02/05/2015****Subject Name: Industrial Hygiene & Safety****Time: 2:30 pm to 5:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary
3. Figures to the right indicate full marks.

- Q.1 (a)** Describe the application and usefulness of following engineering control in industry **08**
 (1) Substitution (2) Administrative control (3) Enclosure (4)Wetting process
- (b)** Describe the Need of Personal Protective Equipments (PPE) for workers working in industry. **06**
- Q.2 (a)** Define Ergonomics ?Describe ergonomic aspects (Design) of Computer Workstation **08**
- (b)** Write Short notes on : **06**
 (1) Lux Meter
 (2) Dosi Meter (Personal Sound Meter)
 (3) WBGT (Wet Bulb Globe Thermometer)
- OR**
- (b)** Write Short notes on : **06**
 (1) Silicosis
 (2) Reynaudø Phenomena/Disease
 (3) Carbon Monoxide Poisoning
- Q.3 (a)** Define Industrial safety? Explain the role of EHS/ SHE Officer in industry **08**
- (b)** Write Short Notes on (Any Three) : **06**
 (1) Health Effects of high and continuous Noise
 (2) Heath Effects of radiations
 (3) Good house Keeping
 (4) Minimata disease
- OR**
- Q.3 (a)** Describe the Health Hazards in Pharma Industry .What are preventive steps required to control the hazards **08**
- (b)** Write Short Notes on (Any Three): **06**
 (1) Hazards in Textile Industry
 (2) Biological Monitoring
 (3) Significance Of TLV
 (4) Local Exhaust Ventilation System (LEV)
- Q.4 (a)** Describe the effects and control of Heat Stress .Name the four industries where there is Heat Stress exposure **08**

- (b) Short Notes (Any Three) 06
 (1) Difference between Occupational Health and Hygiene
 (2) Detector Tubes
 (3) MSDS
 (4) Asbestosis
- OR**
- Q.4 (a)** Explain following terms in brief (any eight) 08
 (1) ACGIH (2) GDS (3) STEL (4) TWA
 (5) Ceiling Limit, C (6)SOP (7) HVAC (8) LVS (9)HVS (10) PPE
- (b) Preparation of Safety Report conforming to MSIHCR provision 06
- Q.5 (a)** Explain any two of the following : 08
 (1) Hazard identification checklist
 (2) Safety Tagging System
 (3) Safety Sampling
 (4) Job Safety Analysis(JSA)
- (b) Expand the following (Any Six) 06
 (1) HAZOP (2) HAZAN (3) QRA (4) OHSAS (5) JSA (6) PFD (7)RA (8)FTA
- OR**
- Q.5 (a)** Write Short Notes on(Any Four): 08
 (1) Total Loss Control
 (2) Fault Tree Analysis
 (3) Personal Monitoring
 (4) Bio Medical Wastes
 (5)Use of Environmental Engineering in Occupational Health
- (b) Explain any three of the following themes in detail 06
 (1)Hazard analysis
 (2) Physical Hazards at work-place
 (3) Provisions related to health under Factories Act
 (4) A Rating Technique for Risk Assessment
 (5) Fire and Extinguishers
