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SARDAR PATEL UNIVERSITY

M.Sc. (Polymer Science & Technology) Semester-IV Examination-2015

Friday, 24<sup>th</sup> April, 2015

02.30 p.m. to 5.30 p.m.

PS04CPST11: Industrial Hygiene & Safety

Total Marks: 70

**Note:** (1) Attempt all questions.

(2) Figures to the right indicate full marks.

**Q.1** Write appropriate choice for the following. (8)

- (1) MSDS means \_\_\_\_\_.  
(a) material security data sheet (b) material safety diagnosis sheet (c) material sheet of data safety (d) material safety data sheet
- (2) What is to be mentioned in the top right section of Hazchem plate?  
(a) Company symbol (b) ADR number (c) EAC number (d) UN number.
- (3) Normally \_\_\_\_\_ separation distances are kept between two tanks.  
(a) 15 & 30 m (b) 10 & 20 m (c) 15 & 20 m (d) none of above
- (4) PPE should be \_\_\_\_\_.  
(a) durable (b) minimum weight (c) attractive (d) All of above
- (5) Gloves are \_\_\_\_\_ PPE.  
(a) non respiratory (b) respiratory (c) non of above (d) Both a & b
- (6) Fire is an \_\_\_\_\_ reaction.  
(a) endothermic (b) exothermic (c) both of above (d) alkylation
- (7) The growth of industry is depend on \_\_\_\_\_.  
(a) Control of hazard (b) safety knowledge  
(c) control of process (d) technological advance
- (8) Fire involving ordinary combustible material like wood, paper. The extinguishing medium is :  
(a) Foam (b) water (c) carbon dioxide (d) dry chemical powder

**Q.2** Attempt any **seven** of the following (14)

- (1) Define fire. How can we stop it?
- (2) Explain Hazchem plate & CAS number.
- (3) What is Dyke? Explain its importance in chemical industry.
- (4) Describe protective media.
- (5) Enlist the factors affecting the selection of PPE.

- (6) Explain mechanical filter respirators.
- (7) Write a note on 5 S concepts for good housekeeping.
- (8) Explain - CO<sub>2</sub> as fire extinguisher.
- (9) Give guideline for safe handling of flammable material.

- Q.3** (a) Give classification on hazard. Explain physical hazard. (6)
- (b) Explain fire triangle. Write a note on flammable and combustible liquids. (6)

**OR**

- (b) Write a various step on incident investigation program. (6)
- Q.4** (a) Write different types of chemical hazards & its control in industries. (6)
- (b) Give an account on fire. (6)

**OR**

- (b) Write in detail interpretation of MSDS. (6)
- Q.5** (a) Write a note on hazards & control in unit operations & processes. (6)
- (b) Explain in detail work permit. (6)

**OR**

- (b) Write a note on following. (6)
- (1) Rupture disk
- (2) Maintenance
- Q.6** (a) Give an account on air supplying respirators. (6)
- (b) Name the various non respiratory PPEs. Explain any three of them. (6)

**OR**

- (b) Write a note on Air purifying Respirators. (6)

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