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SARDAR PATEL UNIVERSITY

M.Sc. (EST) (Third Semester) Examination

Thursday, 27 October, 2016

Time: 2.00 pm to 5.00 pm

PS03CEST03: Industrial Safety & Technology

Max. Marks: 70

[08]

Q.1. Multiple Choice Questions (Choose Correct Answer)

- (1) Lye () is a strongly alkaline solution used for washing and cleaning.
(a) KOH (b) NaOH (c) AlOH (d) CaOH
- (2) As per OSHA, explosives are indicated by _____ color.
(a) Orange (b) Red (c) Yellow (d) None
- (3) The purpose of _____ is to identify the potential hazards.
(a) FMEA (b) CHA (c) HAZOP (d) "What if analysis"
- (4) Loading & unloading of materials are regulated as per _____ act.
(a) HMR (b) HRM (c) HRA (d) None
- (5) Fire Tender is a
(a) Portable fire protection system (b) Fixed fire fighting installation
(c) All of the above (d) None of the above
- (6) Occupier is the person
(a) Who has ultimate control over the factory affairs (b) Who possess the hazardous chemical
(c) Both of the above (d) None of the above
- (7) FMECA is a
(a) Quantitative Risk Assessment (b) Qualitative Risk Assessment
(c) Both of the above (d) None of the above
- (8) Machine Guard is a barrier between
(a) Hazard and Risk (b) Human and Risk (c) Human and Accident (d) Human and Hazard

Q.2. Write a Short Note on followings (Any Seven).

[14]

- (1) Define: Factory.
- (2) Define: Flammable, Explosive
- (3) Define: Toxic/Poison, Corrosive
- (4) Differentiate between hazard and risk.
- (5) Enlist HIT.
- (6) Enlist various phases of static electricity phenomenon.
- (7) Health hazards & Physical hazards
- (8) Name at least four types of Work Permits.
- (9) Sketch the fire triangle with the nomenclature.

Q.3. (a) How will you read MSDS? Explain.

[06]

- (b) Write a brief note on advantages and disadvantages of HAZOP & CHAZOP.

[06]

OR

- (b) Write a brief note on advantages and disadvantages of FMEA & PHEA.

[06]

Q.4. (a) What is ventilation system? Explain the parts of LEV.

[06]

- (b) How the IH is recognized? Describe the different parameters related to industrial hygiene.

[06]

OR

- (b) Describe the sources, effects, and preventions of chemical and electrical hazards.

[06]

Q.5. (a) Define and classify Explosion.

[06]

- (b) Define safety audit and enlist its salient features.

[06]

OR

- (b) Differentiate on-site and off-site emergency plans.

[06]

- Q.6. (a) Enlist steps of risk assessment. [06]
(b) Expand the term JSA. Enlist steps of JSA. Mention applicability of JSA. [06]
- OR**
- (b) What are provisions for safety under the factories act? [06]

— x — (2) — x —