

**CP-8794**

**Sub. Code**

**21**

**M.Sc. DEGREE EXAMINATION, APRIL 2018**

**Second Semester**

**Health Safety Environment**

**BEHAVIOUR BASED SAFETY**

**(2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What are the types of learners?
2. Define motivation.
3. Define communication.
4. What are the groups in organizations?
5. Define BBS.
6. Define safety culture.
7. Define OSH training.
8. Define INSITU safety training.
9. What are the critical success factors for BBS?
10. Define occupational safety.

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain about the factors influencing personality.

Or

- (b) Describe in details about the importance of motivation.

12. (a) Explain about the group decision making techniques.

Or

- (b) Describe in details about the organization structure.

13. (a) Explain about the ABC behavior model consequences.

Or

- (b) Explain about the addressing ergonomic hazards through BBS observation.

14. (a) Explain about the health promotion training.

Or

- (b) Explain about the don'ts at a brainstorming session.

15. (a) How to sustain employee's involvement in occupational safety.

Or

- (b) Explain about the ten myths of BBS.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about the misbehavior and its types.

Or

- (b) Describe in details about the emergence of informal leaders and working norms.

17. (a) Explain in details about the BBS.

Or

- (b) What Are The Ten Leadership Qualities For Total Safety Culture?

18. (a) Explain in detail about the brainstorming and its stages.

Or

- (b) Explain about the behavior based safety for increasing PPE use.

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**M.Sc. DEGREE EXAMINATION, APRIL 2018**

**Second Semester**

**Health Safety Environment**

**LEGAL ASPECTS OF HEALTH AND SAFETY**

**(2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is meant by hazardous process?
2. Who is a safety officer?
3. Define accident.
4. Define near miss.
5. Define dangerous occurrence.
6. Name any four hazardous chemicals.
7. Name any four bio waste.
8. Define E waste.
9. Define noise.
10. Name any four PPE'S

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Briefly discuss about precaution against dangerous fumes.

Or

- (b) Briefly discuss about precautions against fire.

12. (a) Briefly discuss about basic welfare facilities.

Or

- (b) Briefly discuss about accident investigation.

13. (a) Briefly discuss about public liability insurance act 1991.

Or

- (b) Briefly discuss about environment act 1986.

14. (a) Briefly discuss about bio waste management and handling rules.

Or

- (b) Briefly explain about E waste management rules.

15. (a) Briefly explain about Indian boilers act 1923.

Or

- (b) Briefly discuss about noise rule 2000.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about roles and responsibilities of safety officer.

Or

- (b) Explain in detail about notification of accidents and dangerous occurrences.

17. (a) Explain in detail about MSIHC rules 1989.

Or

(b) Explain in detail about national environment tribunal act 1995.

18. (a) Explain in detail about SMPV rules, 1981.

Or

(b) Explain in detail about dangerous machines act, 1983.

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**M.Sc. DEGREE EXAMINATION, APRIL 2018**

**Second Semester**

**Health Safety Environment**

**ELECTRICAL SAFETY ENGINEERING**

**(2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is CPR?
2. Explain OVER LOAD
3. Define FUSE
4. Brief ARC IGNITION
5. How it SHOCKS?
6. Write about EARTHING
7. Where is ELCBs usage?
8. Define AMPERAGE
9. What is under wastage?
10. Write about work permit system.

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain the key features of “Indian Electricity Act”.

Or

- (b) Detail the statutory requirements in “Indian Electricity Rule and Act”.

12. (a) Explain the” Secondary Hazard” on Electricity.

Or

- (b) Define the “Classes of Insulation” in detail.

13. (a) How the Safety measures are followed while?

- (i) EARTHING  
(ii) EARTH PIT MAINTENANCE.

Or

- (b) Describe the prevention maintenance in electrical safety in with example.

14. (a) Explain the challenges on maintaining Electrical Safety with example.

Or

- (b) What are the barriers in preventive maintenance? Explain.

15. (a) How ELCBs are functioning in detail with neat diagram?

Or

- (b) Elaborate the roles of PPE’s in Electrical Safety with examples.



**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the key features of National Electrical Safety code in detail.

Or

- (b) What is ANSI? Prescribe the role of ANSI in Electrical Safety Promotion.

17. (a) Detail the primary and Secondary Hazards of Electricity in detail.

Or

- (b) Narrate the hazards of corona effect and ARC blast in detail.

18. (a) How to promote the Electrical Safety? Explain.

Or

- (b) Describe the role and responsibilities of Electrical Safety officer in detail.
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**M.Sc. DEGREE EXAMINATION, APRIL 2018.**

**Second Semester**

**Health Safety Environment**

**CHEMICAL SAFETY ENGINEERING**

**(2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define Reader Safety.
2. What is Thermal Relief.
3. Briefly write about the Failures in pressure system.
4. What are pre-commissioning documents?
5. How many key elements in management of maintenance?
6. Describe Safety Measures in chlorine storages.
7. Explain hot work?
8. What is meant by Exposure of Personal?
9. Describe confined space.
10. What is vaporizer?

**Part B****(5 × 5 = 25)**Answer **all** questions.

11. (a) How to ensure the Fire Prevention and Protection in Petroleum Storages?

Or

- (b) Explain the “under ground storages’ in detail.

12. (a) What are the Hazards on LPG and LNG storage facility?

Or

- (b) Explain ‘disaster planning’.

13. (a) Describe acoustic — emission Inspection Process in detail.

Or

- (b) Write about Pressure Testing and Leak Testing.

14. (a) Detail the function and usage of “heat exchangers”.

Or

- (b) Explain “layout segregation” in detail.

15. (a) What is ware house and its safety measures?

Or

- (b) Distinguish the merits and demerits of “pressure storages”.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the functions of chemical reactor with types.

Or

- (b) Comprehensively write the Pre — Commissioning and post commissioning documents with examples.

17. (a) Write about “hand over permit system” in detail.

Or

- (b) How the flared items are disposed?

18. (a) Describe the process of Demolition and Repairs of Plant.

Or

- (b) How the TRIP Systems functions in detail with examples?
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**M.Sc. DEGREE EXAMINATION, APRIL 2018**

**Second Semester**

**Health Safety Environment**

**SAFETY IN OIL AND GAS INDUSTRY**

**(2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is the difference between Safety Officer and Safety Engineer?
2. Write about Safety Organization.
3. Define : Root Cause Analysis.
4. Give the advantages of JSA.
5. What do you mean by Ocean Ranger Accidents?
6. Write the contents of offshore accident report.
7. How Oil field fatality analysis conducted?
8. Write down the recommendations for reducing the fatal accidents in Oil and Gas industry.
9. Write about Danish Energy Agency.
10. What do you mean by Performance Measurement Project?

**Part B****(5 × 5 = 25)**Answer **all** questions.

11. (a) Explain briefly about Accident Cautious Theories.

Or

- (b) Give some examples of Mechanical injuries.

12. (a) Write short notes on failure mode and effect analysis.

Or

- (b) Discuss in detail about Markov Method.

13. (a) Briefly discuss about piper Alpha Accident.

Or

- (b) Give the important of offshore accident reporting.

14. (a) Discuss in detail about Oil Field fatality analysis.

Or

- (b) What are the human factors that affect the Safety in industrial Sector?

15. (a) Explain the functions of Danish energy agency.

Or

- (b) Write about International Association of Oil and Gas.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Elaborately explain about Oil and Gas industry accident data and accident data analysis.

Or

- (b) Discuss in detail about offshore worker situation awareness concept studies and their results.

17. (a) Write a short note on Safety Management Principles.

Or

- (b) Discuss in detail about offshore industry accident reporting approach.

18. (a) Explain : FMEA.

Or

- (b) What are the common causes of Work Injuries and Mechanical Injuries? Explain.
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**M.Sc. DEGREE EXAMINATION, APRIL 2018**

**Second Semester**

**Health Safety Environment**

**HAZARD AND RISK MANAGEMENT**

**(2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is Engineering Control? Give some examples.
2. Define : Risk Assessment.
3. Write about JSA format.
4. What are the key elements should be considered when preparing JSA?
5. Decode the meaning of : SOP.
6. Give the application of fault tree analysis?
7. How the Accident Investigation is useful?
8. Draw the Heinrich Triangle.
9. What is difference between temporary total disabilities and Permanent total disability?
10. Give the advantages of safety performance monitoring.



**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain in detail about ALARA and ALARP.

Or

- (b) Write a short note on types of industrial hazards.

12. (a) What is JSA? What are the basic job steps in JSA? Explain.

Or

- (b) Detail the discussion on the benefits of JSA.

13. (a) What is HAZAN? Explain.

Or

- (b) Discuss in detail about fault tree analysis.

14. (a) Narrate the reportable and no-reportable accidents with examples.

Or

- (b) Define immediate cause and root cause with examples.

15. (a) Attribute (i) Frequency Severity Incidence  
(ii) Accident Rate.

Or

- (b) Explain (i) Safety Activity Rate (ii) Safety – T – Score.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about Root cause analysis.

Or

- (b) Write short notes on Hazard and Operability Studies.

17. (a) Discuss in detail about Hazard Identification and Risk Assessment.

Or

- (b) Elaborate on Accident Investigation and Reporting.

18. (a) What is PPE? Explain the two types of PPE.

Or

- (b) Explain in detail about SHELL Model.
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