

<b>C-0624</b>
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<b>Sub. Code</b>
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<b>21511</b>
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**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non-Semester**

**Fire and Industrial Safety Management**

**PRINCIPLES OF SAFETY MANAGEMENT —  
GENERAL SAFETY**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define Incident Rate.
2. Define First Aid.
3. Define Natural Gas.
4. Define Lost Time Injury.
5. What is the permissible limit of Noise level at Work place?
6. What is MSME?
7. What are the things to be considered while selecting Safety shoe?
8. Write the reduced noise level by wearing Ear Muffs and Ear Plug.

9. Define Safety Education.
10. What are the two Objectives in Evaluation Process?

**Part B** (5 × 5 = 25)

Answer **all** questions.

11. (a) Write short notes on Ergonomics.  

Or

(b) Write Do's and Don'ts in First Aid.
12. (a) What are the precautions to be taken at work place?  

Or

(b) Explain — Fuel saving tips for House wives.
13. (a) Write short notes on Environment Protection Act 1986.  

Or

(b) Write short notes on Factories Act 1948.
14. (a) Write the recommended shade no for different types of welding.  

Or

(b) What are the things to be consider while selecting proper respiratory protective devices?
15. (a) Write the major Highlights of BBS.  

Or

(b) Write the Do's and Dont's in Brainstorming.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write in detail about the Safety responsibilities of a Supervisor.

Or

- (b) Explain Accident Prevention Tags.

17. (a) Explain the Do's and Don'ts in Domestic Electrical Appliances.

Or

- (b) Explain Controlling of Occupational Noise.

18. (a) Explain the Behavioural Based Safety Process.

Or

- (b) Explain in detail about PPE and its types.
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<b>C-0625</b>
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<b>Sub. Code</b>
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<b>21512</b>
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**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non-Semester**

**Fire and Industrial Safety Management**

**FIRE PREVENTION, CONTROL AND ELEMENTARY  
FIRST AID**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define Water monitors.
2. Define Flash point.
3. Define Natural Gas.
4. What are the types of petroleum product based on their flash point?
5. What are the major causes of computer fire?
6. What is NBC?
7. What is Defensive Driving?
8. Write the HAZCHEM codes for commonly used chemicals.
9. What is an inverter?
10. What is the purpose of ELCB?

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

11. (a) Write short notes on maintenance of fire Extinguisher.

Or

- (b) Write the first aid for cuts and wounds.

12. (a) Write short notes on Hydrant and Monitors.

Or

- (b) Explain the hazards in LPG.

13. (a) Write short notes on fire safety in residential places during emergency.

Or

- (b) Write short notes about exit requirements in Educational Institutions.

14. (a) Write short notes on hazards and precautions to be taken in vehicles operated by CNG/LPG.

Or

- (b) Write the do's and don'ts in case of vehicle fire.

15. (a) Write the mandatory technical requirements of ELCB.

Or

- (b) Write short notes spontaneous combustion and its process.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the treatment for burn injuries.

Or

(b) Explain customer safety at petrol pump in detail.

17. (a) Explain Fire safety measures in chemical laboratories.

Or

(b) Explain Fire safety measures in Hazardous Goods.

18. (a) Explain the first aid for Electrical shock.

Or

(b) Explain the basic requirements of firefighting equipment in transformer installation.

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<b>Sub. Code</b>
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<b>21513</b>
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**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non Semester**

**Fire and Industrial Safety Management**

**ELECTRICAL AND CHEMICAL SAFETY**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define Conductor.
2. Write the rating of ELCB.
3. Define Hazardous atmosphere.
4. Define SDS.
5. What are the common ways of chemical enter in our body?
6. What is a solvent?
7. What is Capacitor?
8. What are the PPE's used in chemical safety?
9. Define CPR.
10. Write short notes on petroleum rules 1976.

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

11. (a) Explain Electrostatic hazards and control.  
Or  
(b) How will you save energy through use of efficient light sources?
12. (a) Write first aid for burn injury.  
Or  
(b) Explain the types and effects of chemicals.
13. (a) Explain the Air contaminants.  
Or  
(b) Write short notes on prohibited chemicals in India.
14. (a) Write the general duties of manufacturer under section 7-B.  
Or  
(b) Write short notes on Acute and Chronic effect.
15. (a) write short notes on notification of major chemical accidents.  
Or  
(b) Write short notes importing of hazardous chemicals.

**Part C****(3 × 10 = 30)**Answer **all** questions.

16. (a) Explain Static Electricity in detail.  
Or  
(b) Explain first aid for Electric shock.



17. (a) Explain Lockout Tagout in detail.

Or

(b) Explain the salient features of Indian Electricity act 1910.

18. (a) Explain the sections in Safety Data sheet.

Or

(b) Explain the safety aspects in chemical laboratories.

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**C-0627**

**Sub. Code**

**21514**

**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non-Semester**

**Fire and Industrial Safety Management**

**INDUSTRIAL SAFETY AND RISK MANAGEMENT**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define safety committee.
2. Define ERP.
3. Define Accident.
4. Write short notes on Industrial Hygiene.
5. Define Permit to Work.
6. Define Frequency rate.
7. What is a Confined space?
8. Define Static Electricity.
9. Write short notes on safe use of chemical handling.
10. What is Anticipation?

**Part B** (5 × 5 = 25)

Answer **all** questions.

11. (a) Write short notes on Emergency preparedness and Planning.

Or

- (b) Write short notes on Importance of training methods in safety.

12. (a) Write short notes on PPE.

Or

- (b) Explain the responsibilities of a management representative.

13. (a) Explain the stages of brainstorming.

Or

- (b) Explain work Permit.

14. (a) Write short notes on Manual material handling.

Or

- (b) Explain static electricity.

15. (a) Write shot notes on lack of work Organization.

Or

- (b) Explain safe operating procedure for machinery and equipment.

**Part C** (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain about investigation report based on Layered method.

Or

- (b) Explain in detail about safety management.

17. (a) Explain the hazards in Confined space and its control measures.

Or

- (b) Explain compressed gas cylinder in detail.

18. (a) Write the safety precautions for EOT crane Goliath crane and Chain pulley block.

Or

- (b) Explain Hazards in Static Electricity and its safety precautions.
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**C-0628**

**Sub. Code**

**21515**

**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non Semester**

**Fire and Industrial Safety Management**

**CONSTRUCTION SAFETY MANAGEMENT**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What are the hazards involved in construction industry?
2. What is PPE?
3. Define Excavation.
4. Define Cardio Pulmonary Resuscitation.
5. Define Housekeeping.
6. What are the types of Ladders?
7. Define National Building code.
8. Define Forklift.
9. What are the types of Scaffolding?
10. What is the uses of Guard rail?

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

11. (a) Explain in detail about Roof work.

Or

- (b) Write short notes on safety promotional activity.

12. (a) Explain the health effects of chemical in construction work.

Or

- (b) Write short notes on PPE against chemical exposure in construction.

13. (a) Write about Welding hazards and its safety measures.

Or

- (b) Write short notes on Elevator safety tips.

14. (a) Explain ERP for construction work.

Or

- (b) Explain National Building Code.

15. (a) Write short notes on Scaffolding Inspection.

Or

- (b) Write short notes on Slipping and Tripping hazards.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write short notes on :

- (i) Ladder.
- (ii) Roof work.
- (iii) Excavation.

Or

(b) Explain the types of fire in detail.

17. (a) Explain PPE and its types.

Or

(b) Explain Housekeeping.

18. (a) Write short notes on :

- (i) High wind collapse.
- (ii) Work over water.

Or

(b) Explain in detail about Portable and Step ladder.

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**C-0629**

**Sub. Code**

**21516**

**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non Semester**

**Fire and Industrial Safety Management**

**SAFETY AT OIL, GAS AND NUCLEAR PROJECTS**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is safety Induction training?
2. Define PPE.
3. Define LOTO.
4. List out the Confined space gases.
5. What is Scaffolding?
6. What are the Hazards that present in Excavation?
7. Write First Aid for Electric shock.
8. List out the Electrical hazards.
9. Define Housekeeping.
10. What are the types of Extinguishers?



**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write short notes on Offsite ERP and team members.

Or

- (b) Write short notes on Non Respiratory PPE and its maintenance.

12. (a) Write short notes on ZMS.

Or

- (b) Write short notes on Confined space entry.

13. (a) Explain the hazards in Scaffolding and its safety measures.

Or

- (b) Write short notes on Chemical safety.

14. (a) Discuss about Electrical safety.

Or

- (b) Explain PFAS with a neat sketch.

15. (a) Write short notes on Fire prevention and use of fire Extinguishers.

Or

- (b) Explain 5S in Housekeeping.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

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

Or

(b) Explain the importance of safety induction training.

17. (a) Explain Lock Out Tag Out.

Or

(b) Explain hazards present in Confined space and its control measures.

18. (a) Explain CPR.

Or

(b) Explain Safety in handling of Portable and Power tools.

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<b>C-0630</b>
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<b>Sub. Code</b>
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<b>21511</b>
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**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non-Semester**

**Fire and Industrial Safety Management**

**SAFETY CONCEPTS**

**(Upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer **all** questions.

1. What is IRT? Why it is necessary?
2. Define Safety Budgeting.
3. Define Accident.
4. Define JSA.
5. Define Severity rate.

**Part B**

(5 × 12 = 60)

Answer **all** questions.

6. (a) Write short notes on :
  - (i) Budgeting for safety.
  - (ii) Safety promotion.
  - (iii) Safety committee.

Or

- (b) Explain safety inspection.

7. (a) Explain reportable and non-reportable accidents.

Or

(b) Explain Safety audit in detail.

8. (a) Write short notes on :

(i) Frequency rate.

(ii) Frequency severity indices.

(iii) Incident rate.

(iv) Accident rate.

Or

(b) Explain safety signs.

9. (a) Write a check list for safety audit.

Or

(b) Explain JSA in detail.

10. (a) Discuss the role of Government agencies and private consulting agencies in safety training.

Or

(b) Discuss the various methods of safety training.

**C-0631**

**Sub. Code**

**21512**

**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non Semester**

**Fire and Industrial Safety Management**

**FIRE PREVENTION AND CONTROL**

**(Upto 2015 Batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

**(5 × 3 = 15)**

Answer **all** questions.

1. Define auto ignition.
2. Define sprinkler.
3. Write the first aid for burns.
4. What are the types of Extinguishers?
5. Write short notes on inert gas.

**Part B**

**(5 × 12 = 60)**

Answer **all** questions.

6. (a) Explain the theory of combustion and explosion.

Or

- (b) Explain the different types of Fire in detail.

7. (a) Explain the maintenance of Fire truck.

Or

(b) Write short notes on.

(i) Fire Watches.

(ii) Hoses.

(iii) Monitors.

8. (a) Write short notes on.

(i) Sprinkler.

(ii) Hydrant.

Or

(b) Explain CO2 system in detail.

9. (a) Explain in detail about

(i) Hierarchy of control measures

(ii) Terminologies in safety.

Or

(b) Explain the fire safety requirements for high rise building.

10. (a) Explain the structural fire protection as per NBC code.

Or

(b) Explain the hazards and control measures in LPG.

**C-0632**

**Sub. Code**

**21513**

**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non-Semester**

**Fire and Industrial Safety Management**

**CONSTRUCTIONAL SAFETY**

**(Upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

**(5 × 3 = 15)**

Answer **all** questions.

1. Define Permit to work.
2. What are the causes of fatal accidents?
3. Explain the functions of PFAS.
4. Define National Building code.
5. What is high rise building?

**Part B**

**(5 × 12 = 60)**

Answer **all** questions.

6. (a) Explain the types and causes of accidents related to various construction activities.

Or

- (b) Explain Permit to work in detail.

7. (a) Explain the types of scaffolding and its uses.

Or

(b) Explain the Confined space hazards and control measures.

8. (a) Write short notes on :

(i) Safety monitoring system.

(ii) Working on fragile roofs.

Or

(b) Explain the fall protection plan for construction site.

9. (a) Explain the Inspection and testing of hoisting cranes.

Or

(b) Write short notes on :

(i) Portable electrical tools

(ii) Manual handling.

10. (a) Explain the fire hazards and preventing methods.

Or

(b) Write an accident case study in height work accident.



**C-0633**

**Sub. Code**

**21514**

**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non-Semester**

**Fire and Industrial Safety Management**

**ELECTRICAL SAFETY**

**(Upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

**(5 × 3 = 15)**

Answer **all** questions.

1. Define CPR.
2. Define LOTO.
3. Define Static electricity.
4. Define Hazardous zone.
5. Define Grounding.

**Part B**

**(5 × 12 = 60)**

Answer **all** questions.

6. (a) Write short notes on :
  - (i) Electromagnetism.
  - (ii) Stored Energy.
  - (iii) Energy radiation.
  - (iv) Electromagnetic interference.

**Or**

- (b) Explain First aid for Electrical injuries.

7. (a) Explain Earth pit maintenance.

Or

(b) Explain corona effect.

8. (a) Explain Grounding in detail.

Or

(b) Explain the PPE's used in Electrical safety.

9. (a) Explain LOTO in detail.

Or

(b) Explain Work permit system.

10. (a) Explain safety in the use of portable electrical tools.

Or

(b) Explain the salient features of Indian electricity act and rules.

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<b>C-0634</b>
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<b>Sub. Code</b>
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<b>21515</b>
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**CERTIFICATE COURSE EXAMINATION, APRIL 2019**

**Non-Semester**

**Fire and Industrial Safety Management**

**SAFETY EQUIPMENTS AND PERSONAL PROTECTIVE  
EQUIPMENTS**

**(Upto 2015 Batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

**(5 × 3 = 15)**

Answer **all** questions.

1. Define Safety equipments.
2. What is mean by Rigging equipments?
3. Explain Fire Axe.
4. What is eye wash? How to use it?
5. Explain briefly: Snap hook and Carabineer hook.

**Part B**

**(5 × 12 = 60)**

Answer **all** questions.

6. (a) Describe :
  - (i) Purchase guideline for PPE.
  - (ii) Storage conditions for PPE.

**Or**

- (b) Explain in detail how to use PPE's while welding, cutting and grinding.

7. (a) Illustrate the uses of winch tripod, ventilator, survey meter and Dosi meter.

Or

- (b) Define and explain in detail :  
(i) Circuit protection devices: ELCB, GFCI.  
(ii) Multi gas monitor.

8. (a) Illustrate the uses of Fire Axe, Fire Bucket, Fire Alarm and Fire Balls.

Or

- (b) Explain in detailed manners of Hydrants, Monitor, Nozzles and Sprinklers.

9. Describe :

- (a) Non-Respiratory PPE's:  
(i) Eye protection  
(ii) Ear protection  
(iii) Hand protection and  
(iv) Leg protection.

Or

- (b) Respiratory PPE's: Air supply type – BA, SCBA, SCUBA and SAR.

10. (a) Explain :  
(i) Active fall protection  
(ii) Passive fall protection.

Or

- (b) Explain safety lanyard :  
(i) Single lanyard  
(ii) Double lanyard.