

<b>C-0679</b>
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<b>Sub. Code</b>
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<b>90311</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**First Year**

**Fire and Industrial Safety Engineering**

**ENGLISH – COMMUNICATIVE ENGLISH**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What are the essential ingredients of education according to Living stone?
2. Who are the power of our nation, according to Indira Gandhi?
3. Mention a few examples of men who are unconscious of the little habits.
4. How does Nehru want us to remember Gandhiji?
5. Why does Lynd want a referee to be present at debates?
6. What literature did Margaret Atwood start reading?
7. How do critics describe Allahabad?
8. Give two examples for sub-ordinate clause.
9. Mention the kinds of pronoun.
10. What is the use of definite article?

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

11. (a) What is the duty of society to the artist and the artist to society?

Or

- (b) Write a note on creative and intellectual education.

12. (a) What is the usefulness of forming habits?

Or

- (b) What is the strained relationship between the teacher and the student due to?

13. (a) Why had the stranger come back to the old neighbourhood after twenty years?

Or

- (b) How did the conjurer take revenge?

14. (a) Write a note on present perfect tense with examples.

Or

- (b) Write five sentences of your own. Mentioning verb and adverb.

15. (a) Illustrate indefinite articles.

Or

- (b) Change the following sentences into other degree of comparison :

- (i) No other book I have read is so good as this  
(ii) Very few kinds were so great as Ashoka  
(iii) Akbar was one of the wisest kings.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) What, according to Livingstone, are the essentials of education?

Or

- (b) What advice does Indira Gandhi give the youth?

17. (a) What are Gardiner's views on the desirability or otherwise of forming habits?

Or

- (b) What are Robert Lynd's views on the efficacy or otherwise of arguing?

18. (a) Write an essay on the books that Margaret Atwood enjoyed reading when she was a little girl. What reason does she give for her preferences?

Or

- (b) Fill in the blanks with suitable modals :

- (i) I \_\_\_\_\_ play cards, before my marriage.  
 (ii) \_\_\_\_\_ you do it for me?  
 (iii) I \_\_\_\_\_ like to meet her.  
 (iv) You \_\_\_\_\_ help your daughter.  
 (v) I \_\_\_\_\_ leave next week if I feel like it.  
 (vi) \_\_\_\_\_ you climb up the tree?  
 (vii) The girls said that they \_\_\_\_\_ clean the house easily.  
 (viii) He asked his boss, \_\_\_\_\_ I ask you for a favour?  
 (ix) I \_\_\_\_\_ send her a message.  
 (x) You \_\_\_\_\_ want to see a diabetic specialist.

**C-0680**

**Sub. Code**

**90312**

**DIPLOMA EXAMINATION, APRIL 2019**

**First Year**

**Fire and Industrial Safety Engineering**

**FIRE SAFETY — PREVENTION AND CONTROL**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** the questions.

1. Write the Principles of First aid.
2. Write the Mode of Heat Transfer.
3. What is UFL & LFL?
4. Write the types of Fire extinguishing methods.
5. Define Passive Fire protection system.
6. What are the Hazards presence in Electrical work?
7. What is SAP?
8. Expand the term "PASS".
9. Define the term "FLASH POINT".
10. What are the classifications of Fire?

**Part B**

(5 × 5 = 25)

Answer **all** the questions.

11. (a) Write short notes on types of Fire extinguisher.

Or

- (b) What is FHA? and Write the steps.

12. (a) How the Natural gas effectively used in vehicles?

Or

- (b) What are the Customer safety measures should be followed at Petrol bank.

13. (a) Write short notes on Fire safety in Residential places.

Or

- (b) What are the safety measures should be followed at Shopping mall?

14. (a) Write in detail about Fire safety in Luxury buses.

Or

- (b) Give some safety tips for Hazardous goods driver.

15. (a) What are the common causes of Electrical Fire & explain.

Or

- (b) Write short notes on Cable Tunnel safety.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about Hydrant & its Operation.

Or

(b) Explain in detail about fire “Safe Handling & Usage of LPG”.

17. (a) Explain in detail about Fire safety measures in Temporary occupancies.

Or

(b) Explain in detail “Fire Escape Plan”.

18. (a) Discuss in detail about Motor vehicle safety.

Or

(b) What is ELCB? and how it is Effectively used in Electrical work?

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<b>C-0681</b>
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<b>Sub. Code</b>
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<b>90313</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**First Year**

**Fire and Industrial Safety Engineering**

**LIFTING EQUIPMENTS AND TRANSPORT SAFETY**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is forklift training?
2. What is safe lifting?
3. Mention any four mechanical aids/equipments.
4. Define SWL.
5. What are the steps involved in inspection and maintenance of OET crane?
6. What are the two types of web slings?
7. Define defensive driving.
8. Define foresight.
9. Mention any four fuel saving tips for two/three wheelers.
10. What are SMPV and CMVR?

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

11. (a) Write short notes on workers on foot.  
Or  
(b) Write short notes on checking loads.
12. (a) Write a short note on defects in wire rope sling.  
Or  
(b) Explain about procuring new lifting tackles (slings) and maintaining them in the shop.
13. (a) Explain any five standard hand communication signals.  
Or  
(b) Explain the types of choker hitch.
14. (a) Explain the various driving errors.  
Or  
(b) Explain the tips for bicycle riders.
15. (a) Explain the safety tips on vehicular use of CNG.  
Or  
(b) Write a short note on Rule 133-EIP.

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

16. (a) Explain about employer/management.  
Or  
(b) Explain the safety precautions in storing compressed gas cylinders.



17. (a) Explain the safety precautions in storing hydrocarbons (class A, B, C).

Or

- (b) What are the do's and don'ts to be remembered while lifting?

18. (a) Explain the six conditions which an expert driver must consider while driving.

Or

- (b) Explain the various maintenance tips for vehicles.
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**C-0682**

**Sub. Code**

**90314**

**DIPLOMA EXAMINATION, APRIL 2019**

**First Year**

**Fire and Industrial Safety Engineering**

**OCCUPATIONAL, HEALTH AND SAFETY  
MANAGEMENT**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is meant by first aid?
2. Write any two accidents in the lifting operation.
3. What is meant by Body heat balance?
4. How to measure the Heat stress?
5. How we are affected from chemicals?
6. How to divide the chemical risk?
7. How to human body affects while working in standing position?
8. Why the working height is important?
9. What is the objective of safety and health?
10. What is the purpose of Inspections?

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

11. (a) What is meant by machine servicing?

Or

- (b) Explain the Hand amp safety.

12. (a) How to keep the body cool?

Or

- (b) Explain the hearing protectors.

13. (a) Explain the ventilation of car plants and workshops.

Or

- (b) Explain the PPE in chemical area.

14. (a) What are the requirements available in control selection?

Or

- (b) Explain the term “HAND TOOL SELECTION”.

15. (a) Explain welfare facilities.

Or

- (b) List out the following check list form

(i) Emergency Exits.

(ii) Waste Disposal.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain about first aid and what are the procedures followed to various injuries.

Or

- (b) Explain the “Protection Against Cold”.

17. (a) Explain the preventive measure from chemical handling.

Or

- (b) Explain the excessive hours of work.

18. (a) Explain the terms

- (i) Systematic examination  
(ii) Health check and investigation.

Or

- (b) Draw and explain the any two checklist form.

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**C-0683**

**Sub. Code**

**90315**

**DIPLOMA EXAMINATION, APRIL 2019**

**First Year**

**Fire and Industrial Safety Engineering**

**SAFETY ON ELECTRICAL AND CHEMICAL HAZARDS**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define – ELCB.
2. What do you mean by PPM?
3. What is static electricity?
4. What is voltage?
5. List out two prohibited chemicals in India.
6. Define - IDLH.
7. What is OEM?
8. Define — NBC.
9. What are the general responsibilities of the occupier?
10. What is EIP?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the electrical injuries.

Or

- (b) Explain the checklist for initial inspection of electrical installation.

12. (a) Explain the effect of the static charge.

Or

- (b) Explain earthing and bonding.

13. (a) Explain the classes of explosives.

Or

- (b) Explain effect and risk of chemical.

14. (a) Explain Indian electricity act 1910.

Or

- (b) Explain the general duties of manufacturer.

15. (a) List out the UN classifications of dangerous goods.

Or

- (b) List out MSDS sections?

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain factories act 1948.

Or

- (b) Explain briefly about the static electricity, Hazards in static electricity and generation of static electricity.

17. (a) Explain the electrical equipment for the hazardous location.

Or

- (b) Explain the causes of accident an electrical work.

18. (a) Describe MODULARS CHECKLIST.

Or

- (b) Briefly explain about features of electrical equipment.
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<b>C-0684</b>
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<b>Sub. Code</b>
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<b>90321</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Second Year**

**Fire and Industrial Safety Engineering**

**COMMUNICATION ENGLISH — ADVANCE**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. How do you describe a place?
2. What is meant by interview techniques?
3. What is Homophone? Give examples.
4. What are the different ways to develop our creativity?
5. Define indefinite articles.
6. What is noun? Give examples.
7. How many consonants are there in English?
8. What is flow-chart?
9. What are the salient features of a good handwriting?
10. Mention different types of greetings.



**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a short note on barrier of communication.

Or

- (b) Explain non-verbal communication.

12. (a) Change into passive voice :

- (i) She does not cook food.
- (ii) Peter gave me flowers on my birthday.
- (iii) You are waiting for your friend.
- (iv) Sheela will invite Rita.
- (v) Let her go out for a walk.

Or

- (b) State whether the following sentences are simple, complex or compound :

- (i) We met rather few people who spoke English.
- (ii) I have been on rather too many planes and trains recently.
- (iii) We drove right up to Hellen in two days.
- (iv) I don't care how expensive it is.
- (v) Two minutes ago the child was fast asleep, but now he is wide awake.

13. (a) Mention some mistakes on using articles.

Or

- (b) Write a short note on wrong position of adverbs.

14. (a) Explain on Falling and Rising intonation.

Or

- (b) Write the merits of visual aids.

15. (a) Write a short note on importance of reading.

Or

- (b) What are the various types of portfolios?

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) What is interview skills? Explain its kinds and techniques.

Or

- (b) Write a description on 'Tree Plantation'.

17. (a) Write an essay on parts of speech.

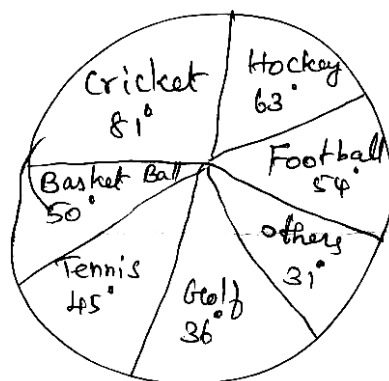
Or

- (b) Explain SQ3R (Survey, Questions, Read, Recite and Recall).

18. (a) Differentiate note-making and note-taking.

Or

- (b) The circle-graph given here shows the spendings of a country on various sports during a particular year. Study the graph carefully and answer the questions given below it.



- (i) What percent of total spending is spent on Tennis?
- (1)  $12\frac{1}{2}\%$                       (2)  $22\frac{1}{2}\%$   
(3) 25%                              (4) 45%
- (ii) How much percent more is spent on Hockey than on Golf?
- (1) 27%                              (2) 35%  
(3) 37.5%                          (4) 75%
- (iii) If the total amount spent on sports during the year be Rs. 1,80,00,000, the amount spent on Basketball exceeds on Tennis by
- (1) Rs. 2,50,000                  (2) Rs. 3,60,000  
(3) Rs. 3,75,000                  (4) Rs. 4,10,000
- (iv) How much percent less is spent on Football than that on Cricket?
- (1)  $22\frac{2}{9}\%$                           (2) 27%  
(3)  $33\frac{1}{3}\%$                           (4)  $37\frac{1}{7}\%$
- (v) If the total amount spent on sports during the year was Rs. 2 crores, the amount spent on Cricket and Hockey together was
- (1) Rs. 8,00,000                  (2) Rs. 80,00,000  
(3) Rs. 1,20,00,000              (4) Rs. 1,60,00,000

<b>C-0685</b>
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<b>Sub. Code</b>
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<b>90322</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Second Year**

**Fire and Industrial Safety Engineering**

**GENERAL SAFETY MANAGEMENT (PRINCIPLES AND  
POLICIES)**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define - housekeeping.
2. What are the responsibilities of supervisor?
3. Define – SAR.
4. Mention any three types of pesticides?
5. Write any four acts & laws related to industrial safety?
6. What are the statutory obligation?
7. What are the PPE's used for ear and eye protection?
8. Write down any two colours assigned to cartridge/  
canister?
9. Define – Brain storming.
10. Define – motivation.

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write about any five accident prevention tag?

Or

- (b) Explain the following:

(i) frequency rate

(ii) severity rate

(iii) incident rate.

12. (a) Explain the fuel saving tips for kitchen workers with safety instructions?

Or

- (b) Briefly explain LPG hazards.

13. (a) Write a short note on compensation method as per employee compensation act 1923.

Or

- (b) List out any ten laws relating to HSE.

14. (a) Write about fall protection equipment.

Or

- (b) Describe flexible panorama type goggles.

15. (a) Explain occupational safety and health training.

Or

- (b) Write short note on BBS training.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain about the ILO conventions and recommendations on OHS?

Or

- (b) Explain in detail and list out the HSE web resources?

17. (a) Explain in detail safety instructions for kids, elders and physically challenged person?

Or

- (b) Explain about the safety signages signals and displays, notices and labels required to be provided under HSE regulation.

18. (a) Explain eighteen ways that a good supervisor puts safety to work?

Or

- (b) Discuss about reporting of accident under various statutes?

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<b>C-0686</b>
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<b>Sub. Code</b>
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<b>90323</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Second Year**

**Fire and Industrial Safety Engineering**

**HEALTH ASPECTS, FOOD HYGIENE AND SAFETY  
(HACCP)**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Why we need healthy diet?
2. What are single service items?
3. Define – personal hygiene.
4. Define – noise pollution.
5. Define – water pollution.
6. What is meant by radiation?
7. Types of cleaning equipment.
8. Give the name and year of the rule for control of irradiation of food.
9. Define – ISO 22000.
10. Define– ISO 9001.

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain in detail about water and sanitation related diseases.

Or

- (b) Explain about BIRD FLU and prevention.

12. (a) What are all the characteristics of microorganisms?  
Factor affecting growth of microbes.

Or

- (b) Beneficial role of microorganisms in food.

13. (a) What are the basic principles of food preservation?

Or

- (b) Give basic rules to be observed during food services.

14. (a) What are all the hazards of water and noise pollution?

Or

- (b) How to control solid waste pollution?

15. (a) Explain about plastic manufacturer, safe and usage rules.

Or

- (b) Explain sanitation risk management standards.



**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain about HACCP 7 stages and advantages.

Or

(b) Describe ISO 14000.

17. (a) Explain water pollution, effects and its control procedure.

Or

(b) Explain types of cleaning equipment's (manual and mechanical).

18. (a) Explain in detail :

(i) HACCP

(ii) FSSAI

Or

(b) Describe food safety management system.

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<b>C-0687</b>
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<b>Sub. Code</b>
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<b>90324</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Second Year**

**Fire and Industrial Safety Engineering**

**LAWS – (INTERNATIONAL STANDARDS AND REGULATIONS)**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is SMPV?
2. Write any two function and duties of EHS committee?
3. Types of environmental legislation?
4. Define PTW?
5. Define machine guarding?
6. Define noise?
7. List out any three types of lifting equipment?
8. Define pressure vessels?
9. Write any three function and duties of radiological safety officer?
10. Write about electrical installation?

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

11. (a) Explain the management responsibilities on implementing the OHS policy.

Or

- (b) Explain in detail about accident reporting and investigation.

12. (a) Write about 5's concept.

Or

- (b) Explain about lighting and ventilation.

13. (a) Write short note on SOP.

Or

- (b) Explain in detail about guarding of machineries.

14. (a) What are the procedures in manual handling?

Or

- (b) Write a short note on compressed gas cylinder.

15. (a) Explain in details about:

(i) HASAWA

(ii) ISO 9001

Or

- (b) Write a short note on plant hygiene.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write the salient features of personal protective equipment.

Or

- (b) Explain the types of PTW and its legal provision

17. (a) Explain in detail about First aid.

Or

- (b) Explain radiation hazards.

18. (a) Explain about categories of industry sectors with respect to environment

Or

- (b) Explain in detail:

(i) Water act 1974

(ii) Air act 1981

<b>C-0688</b>
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<b>Sub. Code</b>
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<b>90325</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Second Year**

**Fire and Industrial Safety Engineering**

**ENVIRONMENT SAFETY AND HAZARDOUS WASTE  
MANAGEMENT**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What are the Principles of Environmental Safety?
2. What is meant by Pollution Abatement?
3. Define the term MSIHC Rules.
4. List out the categories of Environment.
5. Define Ecolabels.
6. Give reason for international development in Ecolabelling.
7. Define Hazardous waste management.
8. What are the Duties of Occupier in Hazardous waste management?
9. What are the Responsibilities of Packaging and labelling?
10. What do you mean by PVC test?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) What are the causes and impacts of Environmental Challenges?

Or

- (b) Explain about the procedure of Environment Clearance.

12. (a) Explain Water Pollution Act-1974.

Or

- (b) Explain noise standards for Ambient Air Quality.

13. (a) What are the Corporate Responsibility for Environmental protection?

Or

- (b) Write about GOI scheme and ISO Standards of Ecolables.

14. (a) Explain in Detail about Treatment & Disposal of Bio-Medical waste.

Or

- (b) Explain the Welfare Schemes about Municipal solid waste.

15. (a) Explain the procedure of Grant Registration Rule.

Or

- (b) Give the guidelines for Manufacturers and users of DGsets.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about National Environmental policy.

Or

- (b) Explain Liability insurance Act and Rules 1991.

17. (a) Explain in detail about Ecolabels schemes and Standards.

Or

- (b) Explain about the Characteristics of Hazardous waste Management.

18. (a) Explain in detail about Environmental Effects of Vehicular Emissions.

Or

- (b) Explain the Guidelines of Water Conservation in industry of Atmosphere pollution.

<b>C-0689</b>
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<b>Sub. Code</b>
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<b>90331</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Third Year**

**Fire and Industrial Safety Engineering**

**DISASTER MANAGEMENT**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is meant by Disaster Management?
2. What are the Duties of Voluntary Agencies?
3. What are the Salient Features of Chemical disaster?
4. Define Risk inventory and Resource inventory
5. What is Wind Storm Protection?
6. List some Natural Disaster Guidelines
7. What is meant by ERP
8. What do you mean by on site Emergency plan?
9. List some Tsunamis affected in India.
10. Define Flood



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

11. (a) Explain about Disaster Management Act 2005.

Or

- (b) Write down the Duties of voluntary Agencies.

12. (a) Explain about Medical Preparedness and Awareness.

Or

- (b) What are the Classifications of casualties and illness?

13. (a) Give the Guidelines of United National Environment Program(UNEP).

Or

- (b) Explain about the general provisions of Building.

14. (a) What need to be done in on site Emergency plan?

Or

- (b) Give the guide lines for Emergency Drill.

15. (a) Explain in details about objectives of Emergency plan.

Or

- (b) Explain about Earth Quake.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about the Disaster Management plan in Districts.

Or

- (b) Explain in briefly about private and public Sector National policy

17. (a) Explain in details about National Disaster Management.

Or

- (b) Explain about Structural safety from Natural hazards with Indian standards and codes.

18. (a) Explain in details about psycholological Trauma in Disaster.

Or

- (b) Give in brief about Emergency Planning, Preparedness and Response in natural disaster.

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**C-0690**

**Sub. Code**

**90332**

**DIPLOMA EXAMINATION, APRIL 2019**

**Third Year**

**Fire and Industrial Safety Engineering**

**CONSTRUCTION SAFETY MANAGEMENT**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define Excavation.
2. Write about Welfare Facilities.
3. List out the Hot works in Construction site.
4. What is PPE?
5. What are the Types of Ladder?
6. How Slings are inspected?
7. Write about Building Guidelines of IS-13920:1993
8. Define Scaffolding.
9. Define Guard Rail.
10. Who can erect the scaffold?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain about safety Check List at site.

Or

- (b) What are the features to be considered before excavation?

12. (a) Discuss about the Working near Fragile Materials.

Or

- (b) Explain about Controlling Exposure of Fire.

13. (a) Explain the Safe use of fixed Ladder.

Or

- (b) Explain about House Keeping?.

14. (a) Explain the Design of Earth Quake Resistant Structure.

Or

- (b) What are the Guidelines for Repair and Seismic Strengthening of Building?

15. (a) Discuss about scaffolding inspection.

Or

- (b) Explain about Slipping and tripping Hazards.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain about BOCW Act 1996 and Central Rules 1998.

Or

- (b) Explain Briefly about Safety Work cycles at Construction Sites.

17. (a) Discuss in detail about Safety for Climbing and Standing on ladder.

Or

- (b) Write Short notes on :

- (i) Lighting
- (ii) Roof work
- (iii) High Wind Collapse.

18. (a) Explain Scaffolding safety and Causes of Accidents in Scaffolding?

Or

- (b) Discuss about the Recording Fire and Emergencies.

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<b>C-0691</b>
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<b>Sub. Code</b>
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<b>90333</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Third Year**

**Fire and Industrial Safety Engineering**

**INDUSTRIAL HYGIENE AND SAFETY AUDITING**

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define Compliance Audit.
2. What are the benefits of Audit process?
3. What do you mean by open meeting?
4. Define Sampling.
5. Give the importance of management system audit.
6. What is the use of conducting document Review in auditing?
7. Define Tracking.
8. What is mean by Audit process critiques?
9. Define ionizing Radiation.
10. What is meant by Respiratory protection system?

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

11. (a) Explain the Scope of safety Audit.

Or

(b) Explain about Team Preparation.

12. (a) Explain about Occupational Health compliance audit.

Or

(b) Explain about Review of injury and illness Records.

13. (a) Explain Integrated management system audit.

Or

(b) Explain on-site audit activities preparation.

14. (a) Explain about Audit program status report.

Or

(b) Explain about Follow up and tracking of audit.

15. (a) Explain Emergency use and supplied Air Respirators.

Or

(b) Explain Laboratory use of chemicals.

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

16. (a) Explain the requirements associated with auditing.

Or

(b) Explain in detail about Anticipating and Identifying by products of production.

17. (a) Explain in detail about Approving and Distributing of audit report.

Or

- (b) Explain about Reporting System Audit.

18. (a) Explain about Response to hazardous chemical in emergencies.

Or

- (b) Explain Hazardous noise level and ionizing radiation.
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<b>C-0692</b>
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<b>Sub. Code</b>
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<b>90334</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Third Year**

**Fire and Industrial Safety Engineering**

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

**(2016 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define safety.
2. What are the rules for safety?
3. Write a short notes on safety signs or safety displays.
4. Define confined space.
5. What are the types of crane?
6. Define hot work.
7. Mention few power tools.
8. Define ELCB.
9. What are the uses of fire extinguishers?
10. Define 5'S.

**Part B** $(5 \times 5 = 25)$ Answer **all** questions.

11. (a) Write short notes on safety induction training.

Or

- (b) Briefly explain about personal pre check.

12. (a) Briefly explain about confined space safety.

Or

- (b) Explain about barricades and barriers.

13. (a) Explain about hot work and safety procedures.

Or

- (b) Briefly explain about safety at abrasive painting.

14. (a) Give an account of safety and conveyors.

Or

- (b) Write short notes on safety at portable hand and power tools.

15. (a) Explain about near miss incident reporting.

Or

- (b) What are the safety measures to be implemented in office?

**Part C** $(3 \times 10 = 30)$ Answer **all** questions.

16. (a) Explain in detail

(i) Safety rules

(ii) Safety responsibilities.

Or

- (b) Explain safety sign with detailed diagram.

17. (a) Explain conveyor safety in detail.

Or

(b) Explain in detailed about storage, handling of compressed gas cylinders.

18. (a) Explain in detail about House keeping.

Or

(b) Explain in detail about scaffold safety.

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<b>C-0693</b>
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<b>Sub. Code</b>
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<b>90311</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**First Year**

**Fire and Industrial Safety Engineering**

**COMMUNICATIVE ENGLISH**

**(upto 2015 Batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer **all** questions.

1. Prepare a circular for conducting a meeting in your college.
2. How do you create good impression?
3. What is interpersonal communication?
4. Write a short note on preparing the presentation.
5. Write a few tips for attending interview.

**Part B**

(5 × 12 = 60)

Answer **all** questions:

6. (a) Explain the basic formats for business letter with an example.

Or

- (b) Write a letter to the sales manager, on verification of stocks.

7. (a) How do you act as a smart person in your working place?

Or

- (b) Write an essay on agreement of verb and subject.

8. (a) Write an essay on formats of communication with reference to OJT.

Or

- (b) What are the different categories of communication? Explain.

9. (a) Write an essay on presentation skills.

Or

- (b) How do you rectify nervousness and make yourself more confident?

10. (a) Prepare a resume of your own.

Or

- (b) Write a short note on preparing and attending for the interview.
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<b>C-0694</b>
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<b>Sub. Code</b>
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<b>90312</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**First Year**

**Fire and Industrial Safety Engineering**

**BASICS OF SAFETY MANAGEMENT**

**(Upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer all questions.

1. Define safety inspection and safety audit.
2. What is the role of safety committee?
3. Define incident rate.
4. Define induction training.
5. Define unsafe act and unsafe condition with each one example.

**Part B**

(5 × 12 = 60)

Answer all questions

6. (a) Explain in detail about incident recall technique (IRT)

Or

- (b) Explain in detail about.
  - (i) Safety budgeting.
  - (ii) Safety committee.

7. (a) Explain in detail about accident investigation and reporting.

Or

- (b) Explain in detail cost of an accident.

8. (a) Explain in detail about.

- (i) Frequency rate.      (ii) Severity rate.  
(iii) Incident rate.      (iv) Accident rate.

Or

- (b) Differentiate between reportable and nonreportable accidents.

9. (a) Write in detail about safety induction training tool box talk and on the job safety training.

Or

- (b) Describe about role of government agencies and private consulting agencies in safety training.

10. (a) Define unsafe act and unsafe condition. Write any unsafe act and 10 unsafe condition.

Or

- (b) Explain in detail about safety audit.

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**C-0695**

**Sub. Code**

**90313**

**DIPLOMA EXAMINATION, APRIL 2019**

**First Year**

**Fire and Industrial Safety Engineering**

**SAFETY EQUIPMENTS AND PROCEDURES**

**(Upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer **all** questions.

1. Explain about multi gas monitor.
2. Why PPE is required during working? Write any four PPE.
3. What are the types of fire extinguishers?
4. What is hearing protection? Give example.
5. What is meant by shock absorption? Where it is used?

**Part B**

(5 × 12 = 60)

Answer **all** the questions.

6. (a) What are the criteria's to be considered while selecting PPE? Explain.

Or

- (b) Explain about maintenance requirements of PPE.



7. (a) Explain about PRV and machine guards.

Or

(b) Explain about survey meter, dosimeter and winch tripod.

8. (a) Explain about flame detector and smoke detector.

Or

(b) Explain about fire monitors and sprinklers.

9. (a) Explain about eye protection and ear protection.

Or

(b) Explain about body protection and hand protection.

10. (a) What is personal fall arrest system? Why half body harness is banned? What is full body harness?

Or

(b) Write in detail about connectors, hooks, lifeline and anchorage point.

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**C-0696**

**Sub. Code**

**90314**

**DIPLOMA EXAMINATION, APRIL 2019**

**First Year**

**Fire and Industrial Safety Engineering**

**ENVIRONMENTAL STUDIES**

**(upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

**(5 × 3 = 15)**

Answer **all** the questions.

1. What are the effects of air pollution on human beings?
2. What are the health hazards of water pollution?
3. What are the methods of disposal of hazardous wastes?
4. Define pH meter.
5. Define recycling and reusing.

**Part B**

**(5 × 12 = 60)**

Answer **all** the questions.

6. (a) Describe in detail about air pollution.

Or

- (b) Describe in detail about radiation hazards.

7. (a) Describe in detail about effluent treatment in chemical industries.

Or

- (b) Describe in detail about effluent treatment in tannery industries.

8. (a) Describe in detail about sampling and analysis of atmospheric air.

Or

- (b) Describe in detail about gas analyzer, particle size analyzer, lux meter and pH meter.

9. (a) Discuss in detail about hazardous waste treatment in India.

Or

- (b) Describe in detail about treatment of radioactive waste treatment and disposal.

10. (a) Describe in detail about pollution control in cement industries.

Or

- (b) Describe in detail about pollution control in petroleum industries.

<b>C-0697</b>
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<b>Sub. Code</b>
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<b>90321</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Second Year**

**Fire and Industrial Safety Engineering**

**INDUSTRIAL SAFETY MANAGEMENT**

**(upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer **all** the questions.

1. Write any four safety requirements for waste storage locations.
2. Define ETP.
3. Define PPE. Write any four PPE.
4. Define hot work.
5. Define radiography.

**Part B**

(5 × 12 = 60)

Answer **all** the questions.

6. (a) What are the safety requirements to be considered while handling ammonia and acetylene?

Or

- (b) What are the safety requirements to be considered in fireworks industry?

7. (a) What are the safety requirements to be considered during drilling?

Or

- (b) Explain in detail about ZMS.

8. (a) What are the safety requirements to be considered during grinding?

Or

- (b) What are the safety requirements to be considered while handling compressed gas cylinders?

9. (a) What are the safety requirements to be considered during shot blasting?

Or

- (b) What are the safety requirements to be considered during hydro testing?

10. (a) Describe in detail about OHSAS 18001.

Or

- (b) Describe in detail about certification procedure and benefits of certification.

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<b>C-0698</b>
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<b>Sub. Code</b>
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<b>90322</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Second Year**

**Fire and Industrial Safety Engineering**

**ELECTRICAL SAFETY**

**(Upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer **all** questions.

1. What is electrostatic magnetism?
2. What is static electricity.
3. Define Earthing.
4. What is the use of discharging rod?
5. Define ELCB.

**Part B**

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain Indian Electricity Act and rules.

Or

- (b) Explain about the international standards on electrical safety.

7. (a) Explain about lighting and the types of lighting arrested.

Or

- (b) Explain the classes of insulation.

8. (a) Discuss ELCB in detail.

Or

- (b) Explain about protection against over voltage and under voltage.

9. (a) Explain about protection and interlock.

Or

- (b) Explain about Earthing devices.

10. (a) Explain about different hazardous zones.

Or

- (b) Discuss the barriers and isolators.

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<b>C-0699</b>
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<b>Sub. Code</b>
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<b>90323</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Second Year**

**Fire and Industrial Safety Engineering**

**ERGONOMICS**

**(Upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer **all** questions.

1. What is meant by Misleading Expression?
2. Define job stress.
3. Define work place temperature.
4. What are the types of glares?
5. Write the effects of fatigue.

**Part B**

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain the following :
  - (i) Sitting position,
  - (ii) Standing position,
  - (iii) Visual conditions.

Or

- (b) Explain in detail about shop Environment and Safe Behavior.



7. (a) Explain in detail about Heat stress and Cold stress.

Or

(b) Explain outdoor working.

8. (a) Explain the general facilities to provide for the workers.

Or

(b) Write short note on Labor colony Management.

9. (a) Explain briefly the work organization structure.

Or

(b) Write short notes on working period and Rest time.

10. (a) Give the safety precautions for cranes, chain pulling Block and Forklift.

Or

(b) Explain about the unsafe work habits.

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<b>C-0700</b>
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<b>Sub. Code</b>
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<b>90324</b>
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**DIPLOMA EXAMINATION, APRIL 2019**

**Second Year**

**Fire and Industrial Safety Engineering**

**ENVIRONMENT, HEALTH AND SAFETY LAWS**

**(Upto 2015 Batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer **all** questions.

1. What is safety report?
2. Define SMPV.
3. Define ANSI.
4. Write about BOCW Act.
5. Define HASAWA.

**Part B**

(5 × 12 = 60)

Answer **all** questions.

6. (a) Describe in details about penalties and procedures.

Or

- (b) Explain : (i) Welfare, (ii) Working hours, (iii) Special provisions.

7. (a) Describe about Batteries (Management and Handling Rules) 2001.

Or

(b) Explain about Noise pollution (Regulation and Control Rules) 2000.

8. (a) Explain about list of hazardous and toxic chemicals.

Or

(b) Discuss about safety reports.

9. (a) Describe about Indian Boiler Act 1923.

Or

(b) Describe about BOCW Act 1996.

10. (a) Explain about Health and Safety Work Act (HASAWA 1974, UK).

Or

(b) Briefly discuss about William-Steiger Act of 1970.

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**C-0701**

**Sub. Code**

**90331**

**DIPLOMA EXAMINATION, APRIL 2019**

**Third Year**

**Fire and Industrial Safety Engineering**

**PRINCIPLES OF SAFETY MANAGEMENT**

**(Upto 2015 batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer **all** questions.

1. Define permanent total disabilities.
2. Define safety training.
3. What do you mean by safety inspection?
4. Define audit.
5. What do you mean by safety campaign?

**Part B**

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain Job Safety Analysis (JSA).

Or

- (b) Explain the domestic safety and training.

7. (a) Explain the following :
- (i) Accident rate
  - (ii) Frequency rate
  - (iii) Severing rate
  - (iv) Safe 'T' score.
- Or
- (b) Explain the general concepts of management.
8. (a) Explain the accident investigation and analysis.
- Or
- (b) Explain the following :
- (i) Non conformity report (NCR)
  - (ii) Purpose of checklist
  - (iii) Unsafe act
  - (iv) Unsafe condition.
9. (a) Explain the following :
- (i) Safety survey
  - (ii) Safety sampling
  - (iii) Safety Inspection
  - (iv) Safety Policy.
- Or
- (b) Explain the importance of training and training needs.
10. (a) Explain the role of safety committee.
- Or
- (b) Explain the principles of accident prevention.

**C-0702**

**Sub. Code**

**90332**

**DIPLOMA EXAMINATION, APRIL 2019**

**Third Year**

**Fire and Industrial Safety Engineering**

**SAFETY INSPECTION AND AUDIT**

**(Upto 2015 Batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

**(5 × 3 = 15)**

Answer **all** questions.

1. Define specialized inspection.
2. What are the types of safety audit?
3. Explain the principles of OH and S policy.
4. Write the objective of ISO 1400.
5. What is the purpose of accident report?

**Part B**

**(5 × 12 = 60)**

Answer **all** questions.

6. (a) Explain the inspection procedures.

Or

- (b) Explain the implementation of audit indication.

7. (a) Explain the components of safety audit.

Or

(b) Explain the OHSAS 18001.

8. (a) Explain the OH and S management system element, specification and scope.

Or

(b) Explain the ISO 14001.

9. (a) Explain the accident reports, process and procedures.

Or

(b) Explain the performance measurement and monitoring.

10. (a) Explain the principles of environmental audit.

Or

(b) Explain the development of action plan.

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**C-0703**

**Sub. Code**

**90333**

**DIPLOMA EXAMINATION, APRIL 2019**

**Third Year**

**Fire and Industrial Safety Engineering**

**CONSTRUCTIONAL SAFETY**

**(Upto 2015 Batch)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(5 × 3 = 15)

Answer **all** questions.

1. What do you mean by scaffolding?
2. Define confined space.
3. Explain PTW.
4. Name some earth moving equipments.
5. List out the health hazards in construction.

**Part B**

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain the quality assurance in construction.

Or

- (b) Explain the safety in erection and dismantling of structural frame work.



7. (a) Briefly explain the Personal Fall Arrestor System (PFAS).

Or

- (b) Explain the fall prevention and fall protection system.

8. (a) Prepare a checklist for chain pulley and winches.

Or

- (b) Briefly explain the manual handling.

9. (a) Explain the following.

- (i) Trusses
- (ii) Girders
- (iii) Beams.

Or

- (b) Briefly explain first aid.

10. (a) Briefly explain the demolition work and its control measures.

Or

- (b) Explain the safety procedures followed in cranes of construction site.

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