

C-0223

Sub. Code

91012

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

Fire and Industrial Safety

COMMUNICATIVE ENGLISH LANGUAGE

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is communication?
2. What is important for interview still?
3. Write a correction tag for the following sentence:
(a) You are a student
(b) If will not see the film on tomorrow.
4. What are the kinds of composition?
5. Where should we avoid indefinite article? Give example.
6. Give two examples for infinitive.
7. What is stress?
8. Why do we use visual aids for communication?
9. What SQ3R?
10. What are the significance of review writing?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a short note on barriers of communication.
Or
(b) How do describe people and place?
12. (a) Give a short note on question tag.
Or
(b) Explain the kinds of composition.
13. (a) Explain the uses of infinitives.
Or
(b) Write a note on noun and its uses.
14. (a) What are the vowels and consonants in English? Explain.
Or
(b) What are the signs of non-verbal communication?
15. (a) What is called loud reading? Explain.
Or
(b) Define skimming and scanning.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write an essay on kinds of verbal and non-verbal communication.
Or
(b) What are the barriers of communication and how do we eradicate the barriers to communicate effectively?

17. (a) Change the voice:
- (i) Mr. Ram teacher me English
 - (ii) Bombs destroy many a building
 - (iii) I appoint neither of you
 - (iv) Let the book be taken
 - (v) Don't choose a selfish fellow as your leader
 - (vi) Three men are painting our house
 - (vii) Good pupils attend to lectures carefully
 - (viii) Me shall have completed the job by this evening
 - (ix) She was beaten by the teacher
 - (x) Please call the doctor immediately.

Or

- (b) Put is suitable prepositions in the blanks
- (i) We shall wait _____ 9 O' clock
 - (ii) Her dress is for superior _____ my sister's
 - (iii) She burst _____ tears
 - (iv) He is rather tall _____ his age
 - (v) The train is now passing _____ a tunnel
 - (vi) There is no quarrel _____ you and me
 - (vii) He was kind enough to agree _____ my suggestion
 - (viii) Don't you prefer apples _____ oranges
 - (ix) _____ arriving _____ the station, we found we were too late

18. (a) Write an essay on SQ3R.

Or

(b) Write a report on 'College annual day'.

C-0224

Sub. Code

91013

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

Fire and Industrial Safety

FIRE SAFETY – PREVENTION AND CONTROL

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Explain fire triangle.
2. Define fire load with formula.
3. What are the types of detectors?
4. How will you classify the petroleum products based on flash point?
5. What is housekeeping?
6. List out some fire hazards in temporary occupancies.
7. What are the main causes of fire in transportations?
8. What is Explosion?
9. Expand the word: LNG, CNG and LPG.
10. What are the common causes of electrical fire?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain fire fighting methods with example.

Or

- (b) Explain about first aid treatment for burns and injury in case of fire.

12. (a) Specification for installation of fire hydrant systems in industries.

Or

- (b) Explain about active and passive fire prevention systems.

13. (a) Explain about fire safety in schools, colleges and educational institutions.

Or

- (b) Explain statutory provisions for fire prevention and control in BOCW act 1996.

14. (a) Briefly explain customer safety at petrol pump.

Or

- (b) Explain about escaping from the high rise building in case of fire emergency.

15. (a) Describe the fire safety measures Hot work area.

Or

- (b) Write common fire and safety tips inverters.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain about fire extinguisher as per BIS 2190.

Or

- (b) Explain fire safety in CNG vehicles.

17. (a) Explain about fire precaution in chemical laboratories.

Or

- (b) Explain fire fighting equipments in petrol pump.

18. (a) Explain fire safety in transformers, DG sets and sub-stations.

Or

- (b) Explain ERP.
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Sub. Code

91014

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

Fire and Industrial Safety

PERSONAL PROTECTIVE EQUIPMENTS

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is PPE and it's type?
2. What are the types of helmets?
3. What is UA and UC?
4. What is noise?
5. What is first aid?
6. List out the non respirator type PPE.
7. What are SCBA/SCUBA?
8. Where barriers creams are used?
9. Explain : Leg protection PPE's.
10. Give the functions of safety shoes.

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

11. (a) Explain emergency measures on eye protection with checklist.

Or

- (b) Classification of respiratory PPE.

12. (a) Explain about ear protection.

Or

- (b) Explain about eye protection.

13. (a) Explain about type of hand protections.

Or

- (b) Explain about skin and body protection PPE.

14. (a) List out the cartridges and their colour codes.

Or

- (b) Explain about SCBA.

15. (a) How to prevent Hand injury – Explain.

Or

- (b) Explain – Mechanical / Thermal / Chemical hazards.

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

16. (a) Explain about head protection.

Or

- (b) Explain Eye and Ear protection.

17. (a) Explain respiratory protection PPE.

Or

(b) Explain the points for successful implementation of an effective PPE programme.

18. (a) Explain the types and characteristics of leg protection.

Or

(b) Discuss management responsibilities in PPE selection and maintenance.

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Sub. Code

91015

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

Fire and Industrial Safety

LIFTING EQUIPMENTS AND TRANSPORT SAFETY

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Write the forklift hazards?
2. What is load centre?
3. What are the unsafe work habits in material handling?
4. What is hydrocarbon?
5. What is EOT crane?
6. What is SWL?
7. What are the 3 E's in which road accidents could be avoided?
8. What are the qualities of a defensive drive?
9. What is CNC?
10. What is an EIP and HAZMAT?

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

11. (a) Write short notes on employee / worker training in forklift.
- Or
- (b) Briefly explain about control checks in forklift.
12. (a) Explain about manual material handling.
- Or
- (b) Explain about compressed gas cylinder.
13. (a) Explain about the major components of EOT crane.
- Or
- (b) Explain about crane operator qualification and conduct of operations.
14. (a) What are the five action plans for split-second decisions?
- Or
- (b) What are the special techniques to be observed by two wheeler drivers?
15. (a) Write a short notes on Rule 129 and Rule 129 A.
- Or
- (b) Explain about fuel saving tips in vehicles.

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

16. (a) Explain about forklift safety.
- Or
- (b) Explain about compressed gas cylinder safety precautions.

17. (a) Explain the mechanical material handling.

Or

(b) Explain about inspection, selection of lifting tackles and procedures.

18. (a) Explain the six positions of two vehicle collisions.

Or

(b) Explain about CNC vehicle safety.

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Sub. Code

91016

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

Fire and Industrial Safety

SAFETY ON ELECTRICAL AND CHEMICAL HAZARD

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is static electricity?
2. What is Earthing?
3. What is fuse in electricity?
4. Explain classes of explosion?
5. What is first aid?
6. List some prohibited chemicals in India?
7. List out some electrical hazards?
8. Expands: ELCB and GFCI?
9. What is ON-SITE emergency plan?
10. Expands: MSDS and PSDC.

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

11. (a) Explain electrical safety for children.

Or

- (b) How to saving the electricity?

12. (a) Explain Electric shock and first aid procedure for electrical injury.

Or

- (b) Explain Earthing and bonding.

13. (a) Explain effects of chemicals and types of chemicals.

Or

- (b) Explain PPE for chemical.

14. (a) Explain management responsibility for electrical installation.

Or

- (b) Explain safety in handling and storage of hazardous chemicals.

15. (a) Explain principles of technical measures for chemical.

Or

- (b) Explain ELCB function and use.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the chemical safety reports.

Or

(b) Explain MSDS with sample format.

17. (a) Explain static electricity, hazards and control measures for it.

Or

(b) Describe the Indian Electricity Act 1910.

18. (a) What are the steps involved in the checklist for electrical installation.

Or

(b) Explain the import of hazardous chemicals.

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91022

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Year

Fire and Industrial Safety

COMMUNICATIVE ENGLISH LANGUAGE ADVANCE

(CBCS – 2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is time management?
2. What are the different kinds of Interview Skills?
3. What is meant by controlled composition?
4. Define Homonyms with examples.
5. What are the vowels?
6. What are the uses of visual aids?
7. Explain on wrong position of adverbs.
8. Expand SQ3R.
9. Mention various types of portfolios.
10. What is note-making?

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

11. (a) Write a short note on different ways of challenging the barriers.

Or

- (b) Explain briefly on interview techniques.

12. (a) Write five sentences of your own using gerund.

Or

- (b) Change compound sentence into complex sentence.

- (i) He tried his best, but he did not succeed.
- (ii) The clown entered the circus ring and the children started clapping.
- (iii) The battle has been won but the war is not over yet.
- (iv) The country has made huge progress, but we still have a long way to go.
- (v) He is a magician from Turkey and he has performed all over the World.

13. (a) Write a short note on preposition often confused.

Or

- (b) What are the uses of charts, diagrams and tables.

14. (a) Write a salient aspects of non-verbal communication.

Or

- (b) What are called consonants?

15. (a) Explain on Mechanics of handwriting.

Or

(b) Draft a telegram for inviting your friend for a marriage function.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Write an essay on Interview skills and its kinds.

Or

(b) Write a short story on “Sympathy”.

17. (a) Write an essay on articles.

Or

(b) Illustrate verbs and adverbs often confused.

18. (a) Write short note on the following:

(i) Controlled composition

(ii) Free composition.

Or

(b) Write an essay on mechanics of handwriting and characteristics of good handwriting.

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91023

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Year

Fire and Industrial Safety

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

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What are the responsibilities of supervisor?
2. Define severity rate.
3. What do you mean by safety incident?
4. Define SAR.
5. Define home Safety.
6. What is BSS?
7. Define Brainstorming.
8. Mention the permissible noise levels of industry area.
9. Define statutory obligation.
10. List out any four domestic safety training.

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

11. (a) Explain the following :

(i) FR

(ii) SR

(iii) IR.

Or

(b) Explain the housekeeping and 5S.

12. (a) Explain the fuel saving tips for kitchen workers.

Or

(b) Write any five accident prevention.

13. (a) Write short notes on wireless devices.

Or

(b) Explain about first aid.

14. (a) Explain about MSME act.

Or

(b) Write short notes on noise pollution Rules 2000.

15. (a) Explain Eye and face protection.

Or

(b) Explain occupational safety and health training.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) List out the points that a supervisor should know.

Or

- (b) Explain about the safety instructions for kids elders and physically challenged Persons.

17. (a) Explain the classification as respiratory PPE.

Or

- (b) Explain the checklist for controlling occupational noise.

18. (a) Explain the safety signals, display, notices, under legislations.

Or

- (b) Explain in detail about safety training.

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Sub. Code

91024

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Year

Fire and Industrial Safety

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

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define HACCP.
2. What is meant by emerging disease?
3. Write any two control measure for heat stress.
4. State: Healthy diet.
5. Mention the important beneficial role of micro organism in food industry.
6. What are methods of food preservation?
7. Write a note on :
 - (a) Virus
 - (b) Fungi
8. What is the Food Safety Statements Act prescribed by FSSAI for regulate the manufacture?

9. List some toxic metals and chemical used in food industry.
10. What do you mean by Freezing?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain briefly on the Health aspect of diabetic and Asthma.

Or

- (b) Discuss the gangue fever its symptoms, prevention method.

12. (a) Write a detailed note on occupational stress management.

Or

- (b) Elucidate the water and sanitation related diseases.

13. (a) How can control of microbial growth in food?

Or

- (b) Write a short notes on the following :
 - (i) Basic principle of food preservation
 - (ii) Food additives.

14. (a) Describe briefly on the mode of transmission of Disease.

Or

- (b) Write about the HACCP Seven principles.

15. (a) Give a comprehensive notes on personal hygiene and necessities.

Or

- (b) Write about classification of pests.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Describe the HACCP.

Or

- (b) Details the ISO-22000 Food Safety Management System.

17. (a) What is Listeriosts?

Or

- (b) Discuss the role of Bacteria in various Food products.

18. (a) Write notes on the following:

- (i) Dry storage
- (ii) Refrigerate storage
- (iii) Freezer storage.

Or

- (b) Explain the Food borne diseases and their classification.

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91025

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Year

Fire and Industrial Safety

**OCCUPATIONAL HEALTH AND SAFETY
MANAGEMENT**

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is an accident?
2. What are the three ways in which body loses heat?
3. What is injury?
4. Why is adequate ventilation is important?
5. Briefly explain about work organization.
6. What is ergonomics?
7. What are the various checks to be followed while workplace inspection?
8. Define exposure limit.
9. Write the harmful air contaminants.
10. What are the three main causes of accidents?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a short notes on the safety requirements of motorized vehicles.

Or

- (b) Write a short notes on lifting equipments safety.

12. (a) Discuss in details about ventilation and lifting.

Or

- (b) Explain respiratory PPE.

13. (a) Write about atmospheric pollution.

Or

- (b) Write short notes on strenuous work.

14. (a) Explain in details about signals displays and panels.

Or

- (b) Write short note on irritant eczema and Allergic contact eczema.

15. (a) Write short notes on the types and their purpose of workplace inspections.

Or

- (b) Explain about WHO.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the methods of noise control.

Or

- (b) Explain the following measures to ;
(i) Improve shift conditions
(ii) Improve conditions of work and life.

17. (a) Explain the chemical risks to health by the gases, genetic effects, metals and Other hazardous chemicals.

Or

- (b) Briefly explain about lifting.

18. (a) Explain about shift work.

Or

- (b) Write short notes on work place climate and lifting.

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Sub. Code

91026

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Year

Fire and Industrial Safety

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

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is EHS committee?
2. What is LOTO?
3. What is PTW?
4. What is housekeeping?
5. What is machine guarding?
6. What is SOP?
7. What is ERP?
8. Write about horizontal: vertical ratio of ladder.
9. What is HASAWA?
10. What is first aid?

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

11. (a) Write a short note on factories act 1948.
Or
(b) Write a short note on batteries act.
12. (a) Write a short note on permit to work system.
Or
(b) Write a short note on housekeeping.
13. (a) Write a short note on machine guarding and its types.
Or
(b) Write a short note on fire prevention and control.
14. (a) Write a short note on manual material handling.
Or
(b) Write a short note on compressed gas cylinders.
15. (a) Write a short note on HASAWA.
Or
(b) Write a short note on workplace hygiene and monitoring.

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

16. (a) Explain in detail about accident investigating and reporting.
Or
(b) Explain in detail about handling and storage of hazardous chemicals.

17. (a) Explain in detail about SMPR & gas cylinder rules.

Or

(b) Explain in detail about hazardous waste disposal.

18. (a) Explain in detail about electrical safety.

Or

(b) Explain in detail about emergency planning and preparedness.

C-0233

Sub. Code

91031

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

Fire and Industrial Safety

DISASTER MANAGEMENT

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is disaster management?
2. What is a committee?
3. Expand: HAZCHEM, HAZMAT.
4. What is medical preparedness?
5. Write any four Indian Standards\Codes related to general structural safety.
6. What is explosion?
7. What is disaster and its types?
8. What is OFF-SITE ERP?
9. List out communication (or) notification systems in case of emergency.
10. What is lightning and Thunderstorm?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain about salient features in the disaster management Act, 2003.

Or

- (b) Explain about duties of communities, private sector enterprises and other agencies in disaster management.

12. (a) Write short notes on :

- (i) Mobile hospital/Medical Team
(ii) Proper chemical casualty treatment kits.

Or

- (b) Explain about chemical emergency Response plan.

13. (a) Explain criteria for Earthquake resistance design structure part-1, general provisions and buildings.

Or

- (b) List out some Indian standards/codes for general structural safety.

14. (a) Explain about psychological trauma in disaster.

Or

- (b) Why do conduct emergency drill?

15. (a) Explain about objective of emergency plan.

Or

- (b) Do's and Don'ts under risk from Tsunami.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the functions of local authorities as per disaster management act, 2003.

Or

- (b) Explain chemical disaster management salient features.

17. (a) Create ON-SITE emergency plan check list.

Or

- (b) Explain about ERP.

18. (a) Explain about earthquake.

Or

- (b) Explain about medical preparedness in chemical disaster.

C-0234

Sub. Code

91032

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

Fire and Industrial Safety

CONSTRUCTION SAFETY MANAGEMENT

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is excavation?
2. Write about end of work check in construction?
3. What is fragile Roof?
4. What are the types of excavations?
5. What is fire?
6. What is housekeeping?
7. Define NBC.
8. What is scaffolding?
9. What are the types of scaffolding?
10. What is PPE and it's type?

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

11. (a) Explain the daily safety work cycle.

Or

- (b) Briefly explain about roof work.

12. (a) Explain in detail about the working near fragile materials.

Or

- (b) Briefly explain about the PPE hygiene and First Aid.

13. (a) Write a note on safe use of ladder.

Or

- (b) Briefly explain about hot work safety.

14. (a) Explain about NBC 2005.

Or

- (b) Discuss about the 1984 Certified for earthquake resistant structure.

15. (a) Write short notes on scaffolding inspections.

Or

- (b) Give on account on mobile and tower scaffolds.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in details about safety and health provisions for construction worked under BOCW act 1996.

Or

- (b) Write a detail about work cycle.
17. (a) Explain detail about the safety for climbing and standing on ladder.

Or

- (b) Write short notes on :
- (i) Lighting.
 - (ii) High wind collapse.
18. (a) Explain the types of all scaffolds with diagram.

Or

- (b) List out the safety tips :
- (i) When you approach the elevator.
 - (ii) When you enter the leave the elevator.
 - (iii) When riding on elevator.
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C-0235

Sub. Code

91033

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

Fire and Industrial Safety

INDUSTRIAL SAFETY AND RISK MANAGEMENT

(2106 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **ALL** questions.

1. What is Safety?
2. Define Safety Management System.
3. Differentiate an Accident and Incident.
4. What is Hazard and Risk?
5. Write about Slip, Trip and Falls.
6. How to prevent Electrocution.
7. What is ERP?
8. Define Static Electricity.
9. Write about safety education and training.
10. Give the elements of Safety Programming

Part B

(5 × 5 = 25)

Answer **ALL** questions

11. (a) Write about Safety Performance Measures.
Or
(b) Explain about Safety Committee.

12. (a) Explain about Occupational Health and Industrial Hygiene.
Or
(b) Write about the prevention of accidents involving hazardous substances.
13. (a) Explain about Permit to Work System.
Or
(b) Explain about Confined Space Hazards.
14. (a) Briefly explain Bhopal Gas Tragedy.
Or
(b) Explain the Accident case study of electricity.
15. (a) Explain the Accident case study of Fire.
Or
(b) Explain the Accident case study of Explosion.

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

16. (a) Write short notes on:
(i) Forklift Hazard Control.
(ii) Tractor Hazard Control.
Or
(b) Write short notes on:
(i) Hazardous Energy Control.
(ii) Compressed Gas Cylinders.

17. (a) Explain the following Accident case Histories.

- (i) Tractor Overturn.
- (ii) Gas Cutting in a contaminated drum.

Or

(b) Explain the following Accident case histories.

- (i) Lapse in Safety Organization.
- (ii) Lack of procedural system and supervision.

18. (a) Explain the following Accident case studies

- (i) Process and Chemical handling.
- (ii) Machines and Equipment

Or

(b) Explain the following Accident case histories

- (i) Faculty handling of Equipment
- (ii) Malfunction and failure of an ID fan.

C-0236

Sub. Code

91034

B.Sc. DEGREE EXAMINATION, APRIL 2019
Third Year
Fire and Industrial Safety
INDUSTRIAL HYGIENE AND SAFETY AUDITING
(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is risk assessment?
2. What is safety audit?
3. What is inspection and its types?
4. What is accident investigation?
5. What are the objectives of safety management?
6. Write about accident sequence.
7. What are audit elements?
8. How is audit conducted?
9. What is safety survey?
10. Define third party audit.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain about the types of audit.

Or

(b) What does on health complaints audit include?

12. (a) Explain about continuous improvement management cycle with figure.

Or

(b) Write short note on scope occupational health and industrial hygiene.

13. (a) Write short note on qualifications to audit management system.

Or

(b) Explain about integrated management system audit.

14. (a) Explain about the reporting system on the collective actions.

Or

(b) Explain about the specialised inspections.

15. (a) Explain about hazardous noise-facility program.

Or

(b) Explain about ionizing radiations.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain about process flow for the management of an audit program.

Or

- (b) Explain in detail about the inspection procedures.

17. (a) Develop check list for identifying unsafe acts for worker in unsafe conditions in construction.

Or

- (b) Distinguish between ISO 14001 1996 and ISO 9001 : 1994.

18. (a) Explain about the types of records and records management.

Or

- (b) What are the points to be considered on excavation safety inspection?

C-0237

Sub. Code

91035

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

Fire and Industrial Safety

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 PPE and its types?
2. What is ERP?
3. Define Confined space.
4. What is compressed gas cylinder?
5. What is housekeeping?
6. Mention few hand and power tools.
7. What are the types of crane?
8. Define First aid.
9. What is fire?
10. What is accident?

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

11. (a) Write the details about PPE.

Or

(b) Write about safety induction training.

12. (a) Explain about respiratory protection.

Or

(b) Explain about safety in crane.

13. (a) Explain about compressed gas cylinders.

Or

(b) Explain about excavation hazards and safety.

14. (a) Explain about fire prevention and control in oil and gas industries.

Or

(b) Explain about housekeeping and 5S.

15. (a) Explain about falling hazards and safety.

Or

(b) Explain about Electrical safety.

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

16. (a) Explain about ERP in oil and gas industries.

Or

(b) Explain about confined space safety.

17. (a) Explain about hot work area.

Or

(b) Explain about abrasive blasting and painting safety.

18. (a) Explain about conveyor safety.

Or

(b) Explain about accident Reporting and accident investigation.

C-0238

Sub. Code

91036

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

Fire and Industrial Safety

**ENVIRONMENTAL SAFETY AND HAZARDOUS
WASTE MANAGEMENT**

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Write about rain water harvesting.
2. Write about environmental policy.
3. What is PVC test?
4. Write about environment (protection) Act 1986.
5. Write about environmental categorization.
6. What is electronic waste?
7. What is noise pollution?
8. What is ISO 14000 and OSHA 18001?
9. Define Eco labels.
10. Write about national environmental policy.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Briefly explain about environmental awareness, education and information.

Or

- (b) Explain the review of the national environmental policy and implementation.

12. (a) Discuss in detail about AIR (Prevention and control of pollution) Act 1981.

Or

- (b) Explain in detail about Noise standards and methods of noise control.

13. (a) Write about the corporate responsibility for environmental protection.

Or

- (b) Briefly explain about the reason for international developments in ECOLABELLING.

14. (a) Explain in detail about electronic waste.

Or

- (b) Discuss in detail about municipal solid waste.

15. (a) Write about waste water treatment process.

Or

- (b) Briefly explain about rain water harvesting.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about environmental categorization.

Or

- (b) Write short notes on ISO 14000.

17. (a) Explain in detail about Bio-medical waste.

Or

- (b) Briefly explain about ECO labeling.

18. (a) Explain objectives and principles of National Environmental policy-2006.

Or

- (b) Discuss in detail about technologies for Reuse and Recycle of treated waste water.
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C-0239

Sub. Code

91011

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

Fire and Industrial Safety Management

COMMUNICATIVE ENGLISH

(Upto 2015 Batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. What is important for writing a business letter?
2. How do you keep a record of visitors?
3. What is interpersonal Communication?
4. Voice modulation is most important for a good presentation. Why?
5. Give a few tips on preparing resume.

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) What are the advantages and the disadvantages of written Communication?

Or

- (b) Write a letter to the Sales Manager for enquiring recent products stock.

7. (a) What is subject, verb, agreement and their examples?

Or

- (b) Write an essay on giving a good impression.

8. (a) Explain briefly on types of Communication.

Or

- (b) Discuss group and functional Communication.

9. (a) Write in detail on tips and techniques for great presentation.

Or

- (b) Write an essay on mechanics of writing and preparing a presentation.

10. (a) Prepare a resume for applying for a job.

Or

- (b) Write notes on the following :

- (i) interview styles
- (ii) preparing for the interview
- (iii) attending the interview.

C-0240

Sub. Code

91012

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

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. What is fire and its elements?
2. Explain fire fighting methods.
3. What is fire load?
4. Expand: LPG, SMPV, DCP, and AFFF.
5. What is explosion?

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Discuss briefly about fire properties of solids, liquids and gases.

Or

- (b) Write short notes on:

- (i) Flash fire, (ii) Jet fires,
- (iii) Pool fires, (iv) Vapour clouds,
- (v) BLEVE.

7. (a) Explain active and passive fire protection systems.

Or

(b) Explain types of fire extinguishers with diagrams.

8. (a) What is the need of fire fighting system? Give its merits and demerits?

Or

(b) Explain about fire alarm and sirens systems and its maintenance.

9. (a) Explain about fire safety Requirements for high rise buildings.

Or

(b) How to get fire certificates in industries.

10. (a) Explain the features of Indian explosive act and Rules.

Or

(b) Explain suppression systems based on carbon dioxide and halons.

C-0241

Sub. Code

91013

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

Fire and Industrial Safety Management

ERGONOMICS

(Upto 2015 batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. Define heat stress and cold.
2. Define Ergonomics.
3. Define Dehydration.
4. Why rest time is so important?
5. What are the factors influencing while selection of hand tools?

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain the applications of Ergonomics in detail.

Or

- (b) Explain in detail about Sitting and Standing positions.

7. (a) Write short notes on
- (i) Dehydration.
 - (ii) Types of Glare
 - (iii) Workplace temperature.

Or

- (b) Explain how workplace noise can affect the health and safety of workers.

8. (a) Explain Fatigue and its effect.

Or

- (b) Write short notes on
- (i) Drinking water
 - (ii) Ventilation
 - (iii) Labour Colony Management
 - (iv) Meals.

9. (a) Explain in detail about Organization structure.

Or

- (b) Explain why holidays are necessary to improve productivity.

10. (a) Explain in detail about crane hazards and its safety measures.

Or

- (b) Explain Safety precautions for
- (i) Chain pulley block
 - (ii) Slings
 - (iii) Tools and Tackles.

C-0242

Sub. Code

91014

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

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. Briefly define Fuse.
2. Expands
 - (a) CPR
 - (b) ELCB
 - (c) ANSI
 - (d) ISO
3. What is Earthing?
4. Illustrate Electrocutation.
5. Explain about lighting arrester.

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain about selection of different.

Or

- (b) Write about Classification of hazardous zones.

7. (a) Explain about work permit system in electricity.

Or

(b) Illustrate about LOTO and its types.

8. (a) Explain safety in hand held electrical appliances tools and equipments.

Or

(b) Briefly explain about Fuse and its Types.

9. (a) Explain types of hazards in electricity.

Or

(b) Explain about Electrical causes of fire and explosion.

10. (a) Explain Indian electricity act & rules in electricity.

Or

(b) Briefly explain about CPR.

C-0243

Sub. Code

91015

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Year

Fire and Industrial Safety Management

ENVIRONMENTAL STUDIES

(Upto 2015 Batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. What is pollution and types?
2. Define Water pollution.
3. Define air pollution.
4. Explain about hazardous waste management.
5. Define LUX meter.

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain about air pollution in automobile exhausts.

Or

- (b) Explain classification of water pollutants.

7. (a) Define Incineration and verification in waste management.

Or

- (b) Explain about water pollution in chemical industry and textile effluents.

8. (a) Explain about Sampling and analysis.

Or

- (b) Explain about Separators and Scrubbers in environmental measurement.

9. (a) Explain about recycling and refuse in hazardous waste management.

Or

- (b) What are basic and radioactive wastes?

10. (a) Explain pollution control in process industries like cement, paper industry.

Or

- (b) Explain pollution control in process industries in thermal power plants.

C-0244

Sub. Code

91021

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Year

Fire and Industrial Safety Management

SAFETY ACCOUNTING

(Upto 2015 Batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. What is probability?
2. What is correlation and regression?
3. Define Time series.
4. Illustrate Chi-square.
5. What is moving averages?

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Calculate the correlation from the following data and interrupt the value mark in statistics and accountancy.

X: 60 80 100 120 140

Y: 50 70 90 110 130

Or

- (b) Explain about random variables.

7. (a) Calculate regression derivation both x on y and y on x .

X : 15 20 25 30 35

Y : 40 45 50 55 60

Or

- (b) Solve by Moments method.

X : 30 35 40 45 50

Y : 35 40 45 50 55

8. (a) Calculate the regression analysis equation of items from the means X and Y .

X : 8 4 10 6 9

Y : 11 2 6 5 3

Or

- (b) Explain Analysis of variance.

9. (a) Calculate 3 year average of production given below draw the trend.

Year : 1995 1996 1997 1998 1999 2000

Production : 60 65 50 45 35 70

Year : 01 02 03 04 05

Production : 80 95 100 55 65

Or

- (b) Discuss one way and two ways classification.

10. (a) Explain Latin square theorem.

Or

- (b) Define about T-distribution and chi-Square.

C-0245

Sub. Code

91022

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Year

Fire and Industrial Safety Management

PERSONALITY DEVELOPMENT

(Upto – 2015 batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. What is correlation?
2. What is Regression?
3. What is T-Distribution?
4. Explain time series?
5. What are the components of time series?

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain about good manners and etiquettes.

Or

- (b) Define leadership and quality of successful leader.

7. (a) Define concepts of goal setting.

Or

(b) Explain about Dream Vs Goal.

8. (a) Define Do's and Don'ts of self esteem, Term self esteem.

Or

(b) Difference between positive and negative self esteem.

9. (a) What is attitude and significance of attitude?

Or

(b) Explain about ways to develop positive attitude.

10. (a) What is failure? How to avoid failure?

Or

(b) What is personality development?

C-0246

Sub. Code

91023

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Year

Fire and Industrial Safety Management

PRINCIPLES OF SAFETY MANAGEMENT

(Upto – 2015 batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. What is safety policy?
2. What is NCR?
3. What is accident & its types?
4. Write safe 'T' Score formula.
5. Write any four Domestic safety training topics.

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain about the various safety management systems and its functions.

Or

- (b) Explain about evaluation of performance of supervisors on safety.

7. (a) Explain safety audit.

Or

(b) Explain about implementation of audit indications and liaison with departments to ensure co-ordination.

8. (a) Explain domino sequence.

Or

(b) Explain Accident Reporting system.

9. (a) Write short notes on

(i) Permanent total disabilities.

(ii) Permanent partial disabilities.

(iii) Temporary total disabilities.

Or

(b) Calculate frequency severity incidence for given data,

Total number of employee-510

No. of reportable accident-07

No. of work days per week-06

No of weeks per year-51

Lost day due to accident -26

Shift hours' -08.

10. (a) How to create safety awareness in our industries.

Or

(b) Explain role of government agencies and private consulting agencies in safety training.

C-0247

Sub. Code

91024

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Year

Fire and Industrial Safety Management

ENVIRONMENT HEALTH AND SAFETY LAWS

(Upto 2015 batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. Define adolescent and adult.
2. What is Noise pollution?
3. What is MSDS?
4. Expand: BOCW, SMPV.
5. Define UA and UC.

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain Chapter No.2 in Factories Act 1948.

Or

- (b) Briefly explain Tamil Nadu factories Rules 1950.

7. (a) Explain the Noise Pollution Regulation & Control rules 2000.

Or

- (b) How to prevention and control of air pollution and water pollution.

8. (a) Explain duties and responsibilities of occupier as per hazardous chemical Rules 1989.

Or

- (b) Explain about ERP.

9. (a) Explain compressed gas cylinder Rules.

Or

- (b) Explain Indian Boiler Act 1923.

10. (a) Explain about HASAWA Act 1974.

Or

- (b) Explain about ISO 14000.
-

C-0248

Sub. Code

91025

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Semester

Fire and Industrial Safety Management

FOOD HYGIENE AND SAFETY (HACCP)

(Upto 2015 Batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. Write few kitchen Safety Tips.
2. What is micro-organism?
3. Define Canned foods.
4. Define ventilation and lighting.
5. What is housekeeping?

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain handling fresh fruits and Vegetables.

Or

- (b) List out some kitchen safety and food safety tips.

7. (a) Explain Biological, Physical and Chemical hazards.

Or

(b) Briefly explain food borne illness.

8. (a) How to store meat, fish and Dairy products?

Or

(b) Explain safe cooking procedures.

9. (a) Explain food storage facilities.

Or

(b) Briefly explain WHO guidelines about food safety.

10. (a) Explain Active and Passive pest Control.

Or

(b) Explain Storage and disposal of Water.

C-0249

Sub. Code

91031

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

Fire and Industrial Safety Management

DISASTER MANAGEMENT AND APELL
(Awareness and Preparedness during Emergencies
at Local Level)

(upto 2015 Batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. What is forest fire?
2. What is Emergency Response Plan?
3. Define assembly point.
4. Expand APELL.
5. Which gas leaked in Bhopal Disaster?

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain Role of Armed forces / other agencies in disasters.

Or

- (b) Briefly explain principles / components of disaster management.

7. (a) Explain Disaster recovery plan.

Or

(b) Explain Disaster Management cycle.

8. (a) Explain Hierarchical Test Analysis (HTA).

Or

(b) List out Human failures during Evaluation, Escape and Rescue.

9. (a) Explain goals and benefits of Implementing APELL.

Or

(b) Explain APELL partners Roles and Responsibilities.

10. (a) Explain Gas tanker accident Quilon, 2010.

Or

(b) Explain Orissa super cyclone Act, 1999.

C-0250

Sub. Code

91032

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

Fire and Industrial Safety Management

HAZARD AND RISK MANAGEMENT

(upto 2015 batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. Define risk matrix
2. What are the benefits of JSA?
3. Define ETA.
4. What are the types of accident?
5. What is meant by permanent total disabilities?

Part B

(5 × 12 = 60)

Answer **all** questions

6. (a) Explain in detail with suitable examples for the following:
 - (i) Engineering control
 - (ii) Administrative control

Or

- (b) Explain in detail about the types of hazards with suitable examples.

7. (a) Explain the JSA with suitable examples.

Or

- (b) Explain in detail about FMEA.

8. (a) Explain in detail about HAZOP.

Or

- (b) Explain in detail about standard operating procedure.

9. (a) Explain the following in detail:

- (i) Domino's sequence
- (ii) Root cause analysis CRCA.

Or

- (b) What are the types of accidents and explain the purpose of AIR Heinrich triangle?

10. (a) Explain the following in detail:

- (i) Temporary total disabilities
- (ii) Frequency severity Incidence.

Or

- (b) Explain the following in detail:

- (i) Frequency rate
- (ii) Safety "T" score
- (iii) Safety activity rate.

C-0251

Sub. Code

91033

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

Fire and Industrial Safety Management

SAFETY INSPECTION AND AUDIT

(Upto – 2015 batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. What are the obligations of inspection team?
2. Define Non Conformity Report (NCR).
3. What are the content of OH & S policy?
4. What are the objectives of environmental policy?
5. Define Pro-active monitoring with examples.

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain in detail about inspection team and their obligations.

Or

- (b) What is meant by inspection procedures and explain in detail?

7. (a) What are the types of audit and explain in detail?

Or

(b) Explain in detail about audit checklist and report.

8. (a) Explain the structures and features of OHSAS 18001.

Or

(b) Explain in detail about the elements of OHS management system.

9. (a) Explain in detail about the specifications and objectives of environmental policy.

Or

(b) Describe the ISO 14000 auditing.

10. (a) Explain in detail about the accident reports, process and procedures.

Or

(b) Explain about the performance measurement and monitoring.

C-0252

Sub. Code

91034

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

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. Define post blast inspection.
3. What is meant by fall protection with examples
4. What are the types of crane?
5. Define first aid.

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) What are the human factors associated with accidents and explain in detail?

Or

- (b) Explain the following in detail. (i) Pre contract activities (ii) Pre construction meeting.

7. (a) What are the hazards associated with excavation activities and explain in detail?

Or

- (b) Explain in detail about the construction of high buildings.

8. (a) Explain the following in detail

- (i) Controlled access Zone
- (ii) Safety monitoring system.

Or

- (b) What are the OHSAS requirement for working at height?

9. (a) Explain the following in detail.

- (i) Concrete pumps
- (ii) Concrete vibrators.

Or

- (b) Explain in detail about the crane.

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

Or

- (b) Explain the following in detail :

- (i) Safe Clearance zone.
 - (ii) Methods statement.
-

C-0253

Sub. Code

91035

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Year

Fire and Industrial Safety Management

**INDUSTRIAL SAFETY MANAGEMENT AND OSHA
STANDARDS**

(Upto 2015 Batch)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 3 = 15)

Answer **all** questions.

1. What are the facilities for safe effluent disposal?
2. Define zero mechanical state(ZMS).
3. Define hot work with examples.
4. Define electro plating.
5. What are the benefits of OHSAS 18001.

Part B

(5 × 12 = 60)

Answer **all** questions.

6. (a) Explain the selection of plant location in detail.

Or

- (b) Explain the safe layout for process industries in detail.

7. (a) Explain the types of machine guarding in detail.

Or

(b) Explain in detail about the following.

(i) Chain pulleys

(ii) Fly wheels.

8. (a) What are the hazards associated with gas welding and oxygen cutting process and explain in detail?

Or

(b) Explain in detail about the safe storage and handling of gas cylinders.

9. (a) Explain in detail about the hazards and precautions for sand and shot blasting.

Or

(b) Explain in detail about (i) Radiation hazards
(ii) Personal monitoring devices.

10. (a) Explain in detail about the structure and features of OHSAS 18001.

Or

(b) What are the principles and procedures for OHSAS 18001?
