CP–8093

Sub. Code
11

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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. Write a short note on enquiry letters.

2. What are confidential papers?

3. Define interpersonal skills.

4. What is active listening?

5. What are the tips for completing job applications?

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Write in detail on the importance of business letters.

Or

(b) Draft a letter to the Bank Manager seeking sanction of a personal loan.

7. (a) Discuss the importance of keeping a record of registers.

Or

(b) How can a candidate create a good impression?

8. (a) Why are effective communication skills very necessary in the modern world?

Or

(b) Attempt an essay on group and functional communication strategies.

9. (a) What are the essential requirements of a good presentation?

Or

(b) Analyse the importance of Grammar, Punctuation and Mechanics in a good presentation.

10. (a) What are the contents of a resume and what are the things to be avoided in writing a resume?

Or

(b) Define interview styles and explain the types of selection interviews.

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CP–8094	Sub. Code
	12

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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. List the types of fire and explain the behaviour of each.

2. Distinguish and differentiate active and passive fire protection system.

3. Define Halon system and list the needs of its replacement.

4. Differentiate Exists and Egress.

5. List out the hazards in LPG and SO_3.

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Explain any two types of explosion.

Or

(b) Explain the following terms :

(i) Toxicity of products of combustion

(ii) Fire properties of solids.

7. (a) Define the following terms and explain how its helps for fire fighting.

   (i) Fire watches

   (ii) Hoses

   (iii) Monitors.

Or

(b) How do the fire alarms and fire sirens are maintained? Explain about the maintenance of fire trucks.

8. (a) List out the selection criteria of sprinklers and fire hydrants.

Or

(b) How do the CO_2 system and foam system are helpful in fire protection.

9. (a) Explain briefly about the fire safety requirements for high rise buildings.

Or

(b) Structural fire protection and structural integrity are mandatory for fire safety in buildings. Justify the statement.

10. (a) Explain the principles and parameters of explosion.

Or

(b) How the petroleum act in India is helpful for the systems for the protection of building during explosion?

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CP–8095	Sub. Code
	13

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

Fire and Industrial Safety

ERGONOMICS

(Upto 2015 batch)

Time : 3 Hours Maximum : 75 Marks

Part A (5 × 3 = 15)

Answer **all** questions.

1. List the application of Ergonomics.

2. What are the types of glares?

3. Define ventilation.

4. Draw a flow chart for organization structure.

5. What are the factors influencing selection of handling materials?

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Explain the importance of signals and controls during manual lifting.

Or

(b) Write short notes on :

(i) Human factor

(ii) Biomechanics

(iii) Ergonomics.

7. (a) What is Noise? Explain about the noise effects, accepted level and reduction.

Or

(b) List and discuss safety precautions necessary during outdoor working.

8. (a) What is fatigue? Write its effects and way to reduced it.

Or

(b) Briefly explain the labour colony management.

9. (a) Explain the organisation structure with flow chart.

Or

(b) Explain the various types of reporting and its importance.

10. (a) Explain in detail about material handling.

Or

(b) Write the safety precautions for cranes, chain pulling block and fork lift.

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CP–8096

Sub. Code
14

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

Fire and Industrial Safety

ELECTRICAL SAFETY

(Upto 2015 Batch)

Time : 3 Hours Maximum : 75 Marks

Part A (5 × 3 = 15)

Answer **all** questions.

1. Define CPR.
2. Classify the types of voltage.
3. Write short note on short circuit protection.
4. What is meant by work permit system?
5. Name any four types of hazardous zone.

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Write notes on :

   (i) Electromagnetism

   (ii) Energy radiation and electromagnetic interference

   (iii) First aid.

Or

(b) Explain the international standards on electrical safety.

7. (a) Describe the types of voltage with merits and demerits.

Or

(b) Write about the corono effect, static electricity and earth pit maintenance.

8. (a) Explain the grounding methods with neat sketch.

Or

(b) What are the various methods used for circuit protection system? Explain the working principle of any two methods.

9. (a) Explain the role of environment in selection of electrical equipment.

Or

(b) Briefly explain the cabling and cable joints.

10. (a) Write a detail note on equipment certifying agencies and justify, why it is necessary.

Or

(b) Discuss the classification of hazardous zones.

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CP–8197

Sub. Code
15

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

Fire and Industrial Safety

ENVIRONMENTAL STUDIES

(Upto 2015 Batch)

Time : 3 Hours Maximum : 75 Marks

Part A (5 × 3 = 15)

Answer **all** questions.

1. Define ozone depletion.

2. What are the classification of water pollutants?

3. Write about particle size analyzer.

4. Define toxic and radioactive wastes.

5. What are the pollution control done in cement industries?

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Discuss briefly about the classification and properties of air pollutants.

Or

(b) Write short notes on :

(i) Deforestation

(ii) Ozone hole

(iii) Ultra violet radiation and infrared radiation.

7. (a) Explain about advanced waste water treatment.

Or

(b) Write about effluent quality standards and laws for chemical and textile industries.

8. (a) Enumerate the procedure for collection, disposal and treatment of hazardous waste.

Or

(b) Explain incineration and secure landfills methods for urban waste management.

9. (a) Discuss the methods of sampling and analysis with neat sketch.

Or

(b) Briefly explain the gravitational settling chamber, cyclone separators and scrubbers.

10. (a) Discuss the pollution control methods in paper and cement industries.

Or

(b) Explain the hazard and control measures in petroleum industry and thermal power plants.

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CP–8198

Sub. Code
21

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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. Define time series.
2. What is probability? And its types.
3. What are the components of time series?
4. What is discrete variable and continue variable?
5. Define multiplication theorem.

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Calculate the Karl Pearson co-efficient of correlation from the following data and interrupt the value mark in statistics and accountancy.

X	40	60	80	100	120
Y	20	30	50	70	90

Or

(b) Explain Addition theorem and prove it.

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

X	5	10	15	20	25
Y	30	35	40	45	50

Or

(b) Calculate the regression analysis taking Equation of item from the means of X & Y.

X	6	2	10	4	8
Y	9	11	5	8	7

8. (a) Explain Analysis of variance.

Or

(b) Discuss one way and two way classification.

9. (a) Explain Latin square design.

Or

(b) Solve by Moments method.

X	10	15	20	25	30
Y	15	20	25	10	5

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

Year	1995	96	97	98	99					
Production	75	82	30	37	42					
Year	2000	01	02	03	04	05	06	07	08	09
Production	66	40	56	63	70	24	82	70	95	102

Or

(b) Estimate the trend value using the data given by taking four year moving average.

Year	1996	97	98	99	2000				
Production	52	85	79	34	75				
Year	2001	02	03	04	05	06	07	08	09
Production	47	15	10	32	15	49	34	50	07

CP–8199

Sub. Code
22

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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 are the significance of personality development?

2. What is failure?

3. List out the advantages of attitudes.

4. What are the constraints in setting goal?

5. Define body language.

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Explain the causes and factors associated with success and failure.

Or

(b) Analyze the causes of failure.

7. (a) What is positive attitude? What are the factors that help develop positive attitude?

Or

(b) Explain the concept of motivation.

8. (a) Analyze the symptoms of self esteem.

Or

(b) Analyze the effects negative attitude and suggest measures to resolve them.

9. (a) Explain the concept of goal setting.

Or

(b) Explain how prioritization helps improve personality.

10. (a) Explain about work ethics.

Or

(b) Explain the concept of time management.

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CP–8200	Sub. Code 23

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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. Write a short note on safety policy.

2. What is meant by review of inspection?

3. Define unsafe act and unsafe condition.

4. What is a Safe "T" score?

5. Distinguish between role of government agencies and private agencies.

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Describe about the various safety management systems.

Or

(b) What is Job Safety analysis? Explain the steps involved in job safety analysis.

7. (a) What is NCR? Explain in detail. Develop NCR formats and use it for OSHAS – 18001 Audit.

Or

(b) Discuss in detail the Methodology of Safety audit.

8. (a) What do you understand from Domino Sequence developed by Frank E Bind?

Or

(b) Explain one methodology to identify Route Cause of an Accident (RCA).

9. (a) Explain temporary total disability and permanent partial disability.

Or

(b) A company has 17 full time employees and 3 part time employees that each work 20 hours per week. If the company experience 2 recordable injuries and 5 lost workdays. Calculate IR and SR.

10. (a) Explain the role of Government and Private consulting agencies in safety training.

Or

(b) Explain domestic safety training.

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CP–8201

Sub. Code
24

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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. Write about the special provisions for employment of young persons.

2. Explain accounts and audit.

3. Write short notes on safety reports and safety data sheets.

4. What are the Acts and Rules of electricity?

5. What is HASAWA 1974?

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Explain about welfare and working hours.

Or

(b) What are the factors to be considered in the chapter (three) health in Indian Factory act?

7. (a) Describe about control and abatement of environmental pollution.

Or

(b) Write about powers and functions of central and state boards.

8. (a) List out the various hazardous and toxic chemicals.

Or

(b) Write about preparation of offsite and onsite plans.

9. (a) Describe about the acts and rules for the workman compensation.

Or

(b) Explain about BOCW act.

10. (a) Explain objectives and benefits of ISO 14000.

Or

(b) Explain Explosive act 1983 and Pesticides acts.

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CP–8202

Sub. Code
25

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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. Define food borne illness.

2. What are the types of pest control?

3. What are the types of hazards in food safety?

4. How to store meat and fish item?

5. What do you mean by FMIA and PPIA?

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Explain about the principles of HACCP.

Or

(b) Explain food contamination and spoilage. List out the prevention tips for food contamination: Do's and Don'ts.

7. (a) Explain about Bacillus cereus poisoning.

Or

(b) Explain in detail about physical, chemical and biological hazards.

8. (a) Define effective storage and preservation. How do you store raw materials and finished products?

Or

(b) What are the sanitary procedure should follow while preparing, cooking and holding food? How will you display and serve safe food?

9. (a) Explain about the adulteration in food and how will you detect adulteration in food articles.

Or

(b) Explain in detail about temperature monitoring.

10. (a) Define water supply and give support procedures for storage and disposal of water.

Or

(b) Explain in detail about cleaning procedures and the basic principles for hygiene.

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CP–8203	Sub. Code
	31

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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 an anthropogenic disaster?

2. Define —siren coding.

3. Define cyclone.

4. Write short notes on Bhopal gas leak disaster.

5. Write short notes on avalanches.

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) What is the organizational structure for disaster management?

Or

(b) Explain drought management.

7. (a) Explain the natural disaster and mitigation efforts.

Or

(b) What are the roles of armed forces and other agencies in disaster management?

8. (a) Explain about impact of disaster on development programs.

Or

(b) Explain about the disaster recovery plan.

9. (a) Explain about human failures during evacuation.

Or

(b) Explain about human behavior during evacuation

10. (a) What are the responsibilities of APELL partners?

Or

(b) Write a Case study about Bhopal gas leak disaster.

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CP–8204	Sub. Code
	32

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

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 Hazard and Risk.

2. Define Frequency Rate & Severity Rate with Formula.

3. What are the benefits of JSA?

4. What is Safe-T-Score?

5. Define FMEA.

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Explain about hierarchy of accident prevention.

Or

(b) What are the types of hazards? Explain each hazard with suitable examples.

7. (a) What is JSA? Explain steps of JSA in detail.

Or

(b) Explain about HAZOP. Mention any six keywords with examples.

8. (a) Explain in detail about Event Tree Analysis.

Or

(b) Explain in detail about Fault Tree Analysis.

9. (a) Define accident. What are the types of accident? Explain about types of accidents.

Or

(b) Explain the following :

(i) Domino's Sequence.

(ii) SHELL model.

10. (a) What is meant by accident investigation and reporting? What are the steps involved in AIR?

Or

(b) Conduct HIRA for any six activities at a construction site.

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CP–8205	Sub. Code
	33

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

Fire and Industrial Safety Management

SAFETY INSPECTION AND AUDIT

(Upto 2015 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (5 × 3 = 15)

Answer **all** questions.

1. Explain the duties of inspection team.
2. Write short notes on the different types of NCR.
3. Explain the principle of OH & S policy.
4. Explain — Environmental aspect and Environmental impact with examples.
5. Explain the accident report.

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Explain in detail about the general inspection procedures.

Or

(b) What are the various steps involved in developing an "Inspection Report"? Make a sample report.

7. (a) Describe the audit checklists and reports.

Or

(b) Explain the implementation of audit indications.

8. (a) Explain the structure and features of OHSAS 18001 : 2007.

Or

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

9. (a) State the three levels of documentation for an ISO 14000 based EMS.

Or

(b) Describe the auditing ISO 14000.

10. (a) Discuss the process and procedure of reporting accidents.

Or

(b) (i) Write short notes on" records management".

(ii) Explain the measurement techniques and equipments.

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CP–8206

Sub. Code
34

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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. What is work permit?

2. List safety precautions needed while working in confined spaces.

3. Explain the function of fall arrestors.

4. Discuss briefly the inspection checklist for cranes.

5. What are the types of trusses available? Explain them.

Part B (5 × 12 = 60)

Answer **all** questions.

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

Or

(b) Discuss about the recording of accidents and safety measures.

7. (a) What is blasting? Explain about pre blast and post blast inspection.

Or

(b) Write short notes on :

(i) Confined space and list out hazards in confined space

(ii) Power plant constructions

(iii) Excavation, Shoring, and Trench.

8. (a) What are the safety monitoring systems? Explain them.

Or

(b) Write short notes on :

(i) Education and training

(ii) Quality assurance in construction

(iii) Recording of accidents and safety measures.

9. (a) Write short notes on :

(i) Excavators

(ii) Concrete pumps

(iii) Dumpers.

Or

(b) Describe the safety precautions needed while operating hoisting cranes, mobile cranes and winches.

10. (a) Write short notes on :

(i) Pre survey inspection

(ii) Site supervision

(iii) Safe clearance zone.

Or

(b) Write in detail about the interesting experience at the construction site against the fire accidents.

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CP–8207

Sub. Code
35

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

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. How to choose the safe location for chemical storage?
2. List the benefits of good machine guarding systems.
3. Describe about leak detection.
4. What are the hazards created by radiation?
5. How the OSHA standards are developed?

Part B (5 × 12 = 60)

Answer **all** questions.

6. (a) Explain the points to be considered for the selection of plant location.

Or

(b) Describe briefly about the safe layout of nuclear power station and thermal power station.

7. (a) Define ZMS. List out the policies for ZMS. How it is used for machine guarding?

Or

(b) Describe the following terms :

(i) Forge hammer

(ii) Sprockets wheels

(iii) Fly wheels.

8. (a) Explain the safety precautions in brazing, soldering and metalizing.

Or

(b) What do you mean by safety in generation, distribution and handling of industrial gases? Explain.

9. (a) Describe (i) Sand and shot blasting (ii) Electroplating.

Or

(b) How the safety measures are executed in hydro testing, steam testing and blasting?

10. (a) List out the benefits of OSHA standard and certification. Write down the features of OSHA standard.

Or

(b) Explain the guidelines, developments, procedure and content of OH and S policy.

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