



BHARAT SEVAK SAMAJ

NATIONAL DEVELOPMENT AGENCY, PROMOTED BY GOVERNMENT OF INDIA
CENTRAL BOARD OF EXAMINATIONS
BSS NATIONAL VOCATIONAL EDUCATION MISSION

FSS010-BSS DIPLOMA IN FIRE & SAFETY ENGINEERING TECHNIQUES

ONE YEAR EXAMINATION APRIL-2013

FSS010-01 COMMUNICATIVE ENGLISH AND COMPUTER FUNDAMENTALS

TIME: 3 Hours

Marks: 100

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

1 x 10 = 10

- 1) Lotus is lovely flowers
- 2) They are playing the tree.
- 3) Call out
- 4) Joystick is a.....device
- 5) Key board shortcut for undo command is
- 6) Function keys are
- 7) The extension of word file is
- 8) Corel draw is based on.....graphics.
- 9) ALU stands for.....
- 10) She is B.sc graduate

II. DEFINE THE FOLLOWING

2 x 10 = 20

- 1) What are the types of letters?
- 2) What is meant by preposition?
- 3) Define vowels?
- 4) Define countable nouns?
- 5) Verb
- 6) Write short notes on Super Computer
- 7) Briefly explain the table menu in MS Excel
- 8) Web layout
- 9) Active form
- 10) Write about characteristics of computer?

III. WRITE BRIEF ANSWER FOR ANY 5 QUESTIONS**5 x 5 = 25**

- 1) Explain few sentences using "am, is, are"?
- 2) Define kinds of nouns?
- 3) Classification of the computer
- 4) Tool menu
- 5) Explain Cut, Copy and 'Paste'
- 6) Hybrid computer
- 7) Importance of information technology
- 8) Write details about Charles Babbage?

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS**15 x 3 = 45**

- 1) Write a letter to your father asking permission join the N.C.C?
- 2) Write about the conversation to two person?
- 3) Explain the MS word and its applications
- 4) Explain details of Accessories in windows?
- 5) Explain about mail merge



BHARAT SEVAK SAMAJ

NATIONAL DEVELOPMENT AGENCY, PROMOTED BY GOVERNMENT OF INDIA
CENTRAL BOARD OF EXAMINATIONS
BSS NATIONAL VOCATIONAL EDUCATION MISSION

FSS010-BSS DIPLOMA IN FIRE & SAFETY ENGINEERING TECHNIQUES

ONE YEAR EXAMINATION APRIL-2013

FSS010-02 ACCIDENT PREVENTION AND RISK MANAGEMENT

TIME: 3 Hours

Marks: 100

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

1 x 10 = 10

- 1) In metabolic Heat production the heat production of heavy physical work is _____.
- 2) Air supply rate for the work place should be, per occupant -----
- 3) Which of the following have been provided for the workmen to work in hot atmosphere? -----
- 4) In a hazardous work area, hot work permit is required for -----
- 5) Noise level below _____ decibel is considered to be safe for human
- 6) _____ is used for photo electric and a light.
- 7) TLV stands for _____
- 8) The example of main water pollution are _____
- 9) The main green house gases are _____, _____ and _____
- 10) Green house effects was discovered by _____

II. DEFINE THE FOLLOWING

2 x 10 = 20

- 1) Define Electromagnetic sensor?
- 2) Define corrected effective temperature?
- 3) What is contaminants control?
- 4) Expand FMEA?
- 5) Explain the causes of landslides?
- 6) What are the two alternatives of the risk manager?
- 7) What are the types of pollution?
- 8) Define water pollution?
- 9) What states have the largest amounts of industrial pollution?
- 10) What is land pollution?

III. WRITE BRIEF ANSWER FOR ANY 5 QUESTIONS**5 x 5 = 25**

- 1) Explain the methods of Risk assessment?
- 2) What are the applications of ergonomics?
- 3) Explain - hazard symbols?
- 4) Explain the fundamentals of loss control?
- 5) Give a short note on Home safety & explain its benefits?
- 6) Why should we maintain health & safety at home?
- 7) What are the points to be remembered about work station design?
- 8) Describe the safe handling of tank trucks in refinery site?

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS**15 x 3 = 45**

- 1) Explain the types of landslide?
- 2) Describe the advantages of good ventilation?
- 3) Explain briefly about the on site and off site planning?
- 4) Mention any two of natural disaster and its control measure for prevention?
- 5) What are the advantages of insurance in commercial hazard?



BHARAT SEVAK SAMAJ

NATIONAL DEVELOPMENT AGENCY, PROMOTED BY GOVERNMENT OF INDIA
CENTRAL BOARD OF EXAMINATIONS
BSS NATIONAL VOCATIONAL EDUCATION MISSION

FSS010-BSS DIPLOMA IN FIRE & SAFETY ENGINEERING TECHNIQUES

ONE YEAR EXAMINATION APRIL-2013

FSS010-03 FIRE HYDRAULICS AND FIRE LOSS CONTROL

TIME: 3 Hours

Marks: 100

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

1 x 10 = 10

- 1) 0 Kelvin = _____
- 2) The expansion ratio of CO₂ is _____
- 3) Employment of women in factory are permitted only _____
- 4) _____ extinguisher contain a dry chemical powder
- 5) If a substance has a vapor density of 1.5, it is _____ times as heavy as air
- 6) _____ means the lowest temperature at which a substance continues to burn in air.
- 7) _____ is an electrical charge that accumulates on the surfaces of two materials that have been brought together and then separated.
- 8) Which of the following is a scalar quantity
- 9) In a gas turbine, the combustion of fuel and air is carried out in
- 10) Aerofoil shape is imparted to the aircraft wing by structures known as

II. DEFINE THE FOLLOWING

2 x 10 = 20

- 1) What are the proven methods of reducing the risk of fire?
- 2) State the colour coding requirements for portable fire extinguishers?
- 3) What is stand-by pump?
- 4) What is CO₂ flooding system?
- 5) What radiant energy will be form if hot 'gases' fire releases?
- 6) Mention two advantages and disadvantages of detectors?
- 7) What is light hazard?
- 8) Explain Annual testing?
- 9) What are the aircraft types of fuel?
- 10) What is cargo?

III. WRITE BRIEF ANSWER FOR ANY 5 QUESTIONS**5 x 5 = 25**

- 1) what are the types of Natural fibber ropes?
- 2) Explain fire safety in go downs?
- 3) What are the fire precautions needed while cooking?
- 4) Explain about any two extinguishing agents?
- 5) Write a short note on aarm device?
- 6) Explain Dry Riseer System?
- 7) What are the general safety precautions to be followe?
- 8) What are the things to be considered while en-route to a crash site?

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS**15 x 3 = 45**

- 1) Describe the effects of fire in an unprotected steel beam?
- 2) what are the types of positive displacement pump and its Explain?
- 3) what are the causes of bus and coach engine fires?
- 4) what is the emergency plan for fire safety?
- 5) What we should do in an interior rescue operation?



BHARAT SEVAK SAMAJ

NATIONAL DEVELOPMENT AGENCY, PROMOTED BY GOVERNMENT OF INDIA
CENTRAL BOARD OF EXAMINATIONS
BSS NATIONAL VOCATIONAL EDUCATION MISSION

FSS010-BSS DIPLOMA IN FIRE & SAFETY ENGINEERING TECHNIQUES

ONE YEAR EXAMINATION APRIL-2013

FSS010-04 SAFETY IN ELECTRICAL SYSTEMS

TIME: 3 Hours

Marks: 100

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

1 x 10 = 10

- 1) The name of gas contain with in the cylinder shall be clearly stenciled in letter not less than _____ cm height on the cylinder body.
- 2) Testing with air or other gases under pressure can be hazardous due to the _____
- 3) Safety net should install more than _____ feet below the working surface.
- 4) _____ dyes are usually added to the water to make leaks easier to see in powered hydraulic pressure test.
- 5) Temporary electrical system shall conform to the standard of _____
- 6) which of the following factor could cause a fall?
- 7) Means a total spread out and smooth the concrete.
- 8) True/False A) Dampers and dump Trucks Designed to carry Passengers. B) The fixed excavator loosen the soil and loads on Moving position
- 9) When Traveling with a load on the forks the forks should be Possible.
- 10) In Generator And Extinguishers are recommended.

II. DEFINE THE FOLLOWING

2 x 10 = 20

- 1) What is Risk assessment?
- 2) What are the main hazards in working at height?
- 3) How much weight must an "Anchor point" for lifelines, lanyards and deceleration devices hold?
- 4) When putting on your fall protection full body harness, where should the dorsal "D-Ring" be located?
- 5) When and who must inspect scaffolding, and does this information need to be documented?
- 6) What are some of the underground utilities / hazards workers may encounter during excavations?
- 7) What are the two methods used in welding safety?
- 8) What are the hazards of portable power tools?
- 9) Mention the tyoes of static electricity?
- 10) List out various hazards of electricity?

III. WRITE BRIEF ANSWER FOR ANY 5 QUESTIONS**5 x 5 = 25**

- 1) Explain the safety procedure in site planning & house keeping
- 2) Explain the scaffolding regulations?
- 3) what are the hazard and prevention measure for forklift safety?
- 4) what are safety measures to prevent ladder and its types of ladder?
- 5) what are factors of manual handling materials?
- 6) Explain the statutory provisions?
- 7) Explain confined space working?
- 8) How the confined space entry permit will be look like. Explain it?

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS**15 x 3 = 45**

- 1) Mention the use of safety nets.
- 2) what are the precautions should follow on scaffold by worker?
- 3) What is a fire lift? How is it different from ordinary lift?
- 4) Write notes on the requirements other than the general requirement to ensure fire safety in the case of residential and storage buildings?
- 5) What are the safety measures to be taken in belt conveyor systems?



BHARAT SEVAK SAMAJ

NATIONAL DEVELOPMENT AGENCY, PROMOTED BY GOVERNMENT OF INDIA
CENTRAL BOARD OF EXAMINATIONS
BSS NATIONAL VOCATIONAL EDUCATION MISSION

FSS010-BSS DIPLOMA IN FIRE & SAFETY ENGINEERING TECHNIQUES

ONE YEAR EXAMINATION APRIL-2013

FSS010-05 SAFETY AND PREVENTION IN CHEMICAL/PETRO CHEMICAL INDUSTRIES, REFINERIES

TIME: 3 Hours

Marks: 100

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

1 x 10 = 10

- 1) The flash point of Petrol is _____
- 2) The smell agent added to LPG gas is _____
- 3) Which of the following are the three main elements of WHMIS?
- 4) What materials should you avoid when working with propane?
- 5) If you are required to stop at railroad crossings, you must...
- 6) When transporting both hazardous and non hazardous materials, your bills must.
- 7) When transporting hazardous loads, you must check the tires at least _____
- 8) If you are in an accident involving hazardous materials, you should _____
- 9) What placard must be used with an inhalation hazard load?
- 10) You may not park a vehicle carrying hazardous materials within _____ feet of an open fire.

II. DEFINE THE FOLLOWING

2 x 10 = 20

- 1) Hazards are mainly classified into two categories. What are they?
- 2) What is Lockout?
- 3) Define PPE?
- 4) What is natural gas?
- 5) What is a pesticide?
- 6) What is the definition of a 'hazardous substance'?
- 7) What are exposure standards and where are they listed?
- 8) Does all spray painting have to be carried out in a booth?
- 9) What are flammable and combustible liquids?
- 10) Does the liquid itself burn?

III. WRITE BRIEF ANSWER FOR ANY 5 QUESTIONS**5 x 5 = 25**

- 1) How can we control the hazards?
- 2) Briefly explain about the highly hazardous chemicals?
- 3) What are the causes of major accidents in chemical, oil field?
- 4) Explain the various hazards of combustion?
- 5) What is the difference of onsite and offsite emergency?
- 6) What are the reasons for tank farm trucks?
- 7) How can we suppress substation fires?
- 8) What are the nine classes of hazardous materials?

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS**15 x 3 = 45**

- 1) How can we eliminate the harmful contamination of air and water?
- 2) How often should health surveillance be undertaken?
- 3) Who can be an Appointed Medical Practitioner?
- 4) Explain Static Electricity?
- 5) What considerations do we need to make when shipping a biological substance?



BHARAT SEVAK SAMAJ

NATIONAL DEVELOPMENT AGENCY, PROMOTED BY GOVERNMENT OF INDIA
CENTRAL BOARD OF EXAMINATIONS
BSS NATIONAL VOCATIONAL EDUCATION MISSION

FSS010-BSS DIPLOMA IN FIRE & SAFETY ENGINEERING TECHNIQUES

ONE YEAR EXAMINATION APRIL-2013

FSS010-06 FIRE PREVENTION & CONTROL

TIME: 3 Hours

Marks: 100

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

1 x 10 = 10

- 1) _____ is a rapid, self - sustaining oxidation accompanied by heat and light in varying intensities
- 2) Compound formed from identical molecules can only be broken down or changed by rearrangement of the atoms, which is known as _____
- 3) _____ can be converted into other forms of energies
- 4) What is industrial Psychology
- 5) Name Fire Personal protective equipments
- 6) Atom can be split by _____
- 7) In a hazardous work area, hot work permit is required for a) Welding b) stress relieving c) Grinding d) all of the above.
- 8) _____ materials should be identified and stored properly.
- 9) _____ gas works by means of smothering the supply of oxygen.
- 10) _____ are created when a center of low pressure develops, with a system of high pressure surrounding it.

II. DEFINE THE FOLLOWING

2 x 10 = 20

- 1) Explain the abbreviation of AFFF and PFFP?
- 2) Explain what is pyrolysis?
- 3) What is FM - 200?
- 4) Explain Infra red detector?
- 5) What is ultra violet detector?
- 6) Explain how the topography of the site plays a role in the disasters caused by floods and cyclones.
- 7) Explain how the shape and orientation of buildings could reduce the damages due to cyclones.
- 8) What is a fire escape in multistoried buildings? What are its requirements?
- 9) Define Disaster Management.
- 10) What is danger?

III. WRITE BRIEF ANSWER FOR ANY 5 QUESTIONS**5 x 5 = 25**

- 1) Explain about any two extinguishing agents?
- 2) Explain about safety audit
- 3) what should one do in case of fire?
- 4) Write any fire types of fire tender?
- 5) What relief works that have to be carried out to save the lives of workers when the factory area is suddenly affected by a dangerous gas leak / sudden flooding?
- 6) What are the difficulties faced by an Industry when there is a sudden power failure?
- 7) What will be the problems faced by the management of an Industry when a worker dies because of the failure of a mechanical device due to poor maintenance? How to manage such a situation?
- 8) How landslides are occurring?

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS**15 x 3 = 45**

- 1) What are the advantages and disadvantages of centrifugal pumps?
- 2) Describe the effects of fire in an unprotected steel beam?
- 3) what are the types foam and foam making equipment
- 4) what are halon 1301 systems?
- 5) what are the steps followed for fire in public places?