

SAFETY INTERVIEW QUESTION & ANSWERS

1. What is Safety ?

- It is a condition which gives you freedom from hazard, risk, accident which may cause injury, damage and loss to material or property damage and even death.
- Safety is defined as freedom from those condition that can cause injury to persons including death or damage to property or environment.

2. What is accident ?

- It is an unexpected or unplanned event which may or may not result in injury or damage or property loss or death.

3. What is injury ?

- It is defined as a harmful condition sustained by the body as a result of an accident.

4. What is hazard ?

- Inherent property of a substance or an occurrence which has potential to cause loss or damage property, person or environment.

5. What is risk ?

- In probability of the realization of potential for loss or damage or injury.

6. What is incident?

- It is an event which represents deviation from the intended sequence of designed steps.

7. What is safety policy?

- Any company has a social and legal obligation to provide a safe and health working environment to all his improvement to all his employees.

8. What is safety audit?

- The safety audit is the process that identifies un-safe conditions and unsafe acts the plant and recommended safety improvement. Walk through It evaluates the unsafe condition notice able to naked eye during work through the plant. (Stores, civil work, erection work) Inter mediate-more details study and review of plant design and plant operation.

Comprehensive –It evaluates the safety factors in the plant on the base engineering, analysis, testing, measurement.

9. What is safety tag?

- Safety tag can be defined a surface made of card board or paper board on which English local languages letters written for warning safety instructions to employees.

10. What is safety programme?

- Safety programme can be defined as five methods by which accident can be prevent easily they are engineering, education, enforcement, enthusiasm and example safety programmes are plain spoken and carry out certain legal steps.

11. What is attitude?

- Attitude may be described as continuous behavior . if man's behavior is good, then his action will be either correct or safe.

12. what is emergency planning?

- Emergency planning can defined as a control measurer. It can control the accidents safe guard people and provide information to media.

13. What is work permit system?

- Work permit system is a “ written documents” for permission to undertake a job by area in charge or it is written document issued by the area in charge to the performer to under take the specific job.

14. What is work at height?

- Any work above 2 meters from ground is caused work at height.

15. What is confined space?

- An area which is small and enclosed or an area where one entry and exits or where a man cannot work comfortable in any location is caused confined space.

16. What is excavation?

- Marking a hole or tunnel by digging the ground by man or machine is called excavation.

17. What is scaffolding?

- It is a temporary platform constructed for supporting both men and materials and working safety at a construction site.

18. What is welding?

- The process of joining of metals either by electrical or by gas is called welding.

19. What is gas cutting ?

- The process of joining of cutting metals by using oxygen and combustible gas is called gas cutting.

20. What is sand blasting?

- The process of removing rust dust, dirt, scales and old prints from the old surface using compressed air is called sand blasting.

21. What is painting?

- The process after sand blasting is called painting .

22. What is LEL?

- The minimum concentration of vapour, gasses and dust in air below which propagation of flame does not occur on contact with a source of ignition is called LEL.

23. What is UEL?

- The maximum proportion of vapour, gasses and dust in air above which proposal the flame does not occur on contact with a source of ignition is called UEL.

24. What is manual handling?

- The process of lifting, carrying and stacking materials by men is called manual handling.

25. What is house keeping?

- House keeping means not only cleanness but also orderly arrangement of operations, tools, equipments storage facilities and suppliers.

26. What is personal protective equipment?

- It is an equipments used to project the person from hazards such dust, dirt, fumes and sparks etc. It is the barrier between hazard and person.

27. What is grinding?

- Grinder is a portable machine with a wheel guard in position to reduced the danger.

28. What is Crane?

- A tall machine used for moving heavy objects by suspending them from a projecting arm with hook.

29. What is fork lift truck?

- Fork lift truck are designed to handle heavy loads.

30. What is JSA?

- The procedure of analyzing job for the specific purpose of finding the hazards and developing .

31. What are the duties of a safety officer?

- Prepare tool box talk
- Prepare monthly statistics
- Prepare the checklist
- Accident reports
- Management meetings
- Arrange the safety classes/training
- Arrange monthly safety bulletin
- Inspection of fire extinguisher
- Arrange first aid training classes
- Arrange safety competitions like quiz, slogan, poster competitions exhibition etc.

32. What are the duties of a supervisor?

- He has to instruct this workers about the work methods and procedures.
- He has to maintain discipline among the workers
- He has to supply necessary materials
- He has to control quality and cost of the job
- He has to guide has workers in doing a job in the correct and safe way
- He has to supply suitable personal protective equipment to his workers
- He should conduct periodical safety meetings.
- He should conduct safety inspection of his working area
- He should know about the fire fight equipments
- He should know investigate the accident and find out the cause of accident

33. What are the pre cautions for welding?

1. Remove all combustion material from the place of welding

- 2. Clear the work area and cover wooden floor with fire proof mats. (Welding mechanic should be kept with in the visibility of the welders.
- 3. Erect fire resistance screen around the work
- 4. All welding cables should be fully insulated
- 5. All welding mics shall be double earthed
- 6. Welding area should be dry and free from water
- 7. Keep the fire extinguisher / sand really
- 8. Use leather hand gloves, goggles and helmets
- 9. Switch off the power when welding is stopped
- 10. Do not allow the helper to do welding
- 11. Do not shift he welding cable unless the electric power is switched off.
- 12. Do not allow the helper to carry the welding. Terminal of the welding cables should be provided 3-cable with lugs and kept tight.
- 13. Oxygen hose in black and Acetylene hose in red in color as per standard
- 14. NRV of the blow torches should be maintained properly avoid back fire
- 15. Welders should be trained properly
- 16. Cylinders should be stored in a cold dry place away bottom heat and direct sunlight.
- 17. Proper house keeping, good ventilation in the working area
- 18. Smoking should be avoided from welding area
- 19. Hose connection should be proper made
- 20. Barricade the work area and put a sign board
- 21. Rolling of cylinders should be avoided
- 22. Flash back arrestor should be attached in each cylinders
- 23. Any leakage of cylinder should be kept separately

34. What is the precaution for gas cutting?

- 1. Keep fire extinguisher nearby
- 2. Keep fire watch near by
- 3. Remove all combustible from work area
- 4. Use all necessary PPE
- 5. Never put welding gas cylinder in side a confined space
- 6. Hoses shall not be laid in path ways
- 7. Gas cutting torch should have flash back arrestors
- 8. Gas test to be done to check for presence of flammable gas in site.
- 9. Good house keeping and ventilation necessary in working area.
- 10. Hose connections should be made properly

35. What are the precaution for “sandblasting”?

- 1. Compressed airline, hoses and other fitting must installment firmly with out leaks the hose.
- 2. Mis use compress are should be avoided
- 3. A fresh air hood or mask must be worn
- 4. House keeping can be done period cally
- 5. Fire extinguish her shall be kept near by

- 6. Dust mask ear plugs / muffs should be used
- 7. No sand blasting shall be done on top of floating roof tank in service.
- 8. Use goggles & face shield
- 9. Sand blasting operation must be gas free

36. What are the precaution for “painting”?

- 1. All flammable material should be cleared from the work area
- 2. The required protective clothing and equipment must be worn
- 3. Cartridge respirators shall always be worn
- 4. Adequate ventilation is necessary
- 5. Adequate washing facilities must be readily available
- 6. Barrier cream should be applied to the skin

37. What are the hazards in welding?

- Eye injury
- Burn injury Arc realization
- Electrical shock Light arc radiation
- Heat, light and radiation effect Heat fume
- Poisonous gases Chipped price of weld metal
- Fire
- Explosion Scattering
- Noise Sparking
- Sparking
- Flying sand

38. What are hazards and injuries in manual handling?

- 1. Cutting fingers due to sharp edges
- 2. Burns due to handing of hot articles
- 3. Foot injuries due to dropped articles
- 4. Slipped disc due to improper posture in lifting on object
- 5. Strains to wrist or fingers
- 6. Sprains, wounds hernias, fractures

39. Cause of accidents in manual handling?

- 1. Improper lifting
- 2. Carrying too heavy loads
- 3. Improper gripping
- 4. Failure to use PPE
- 5. Lifting greasy, oily and irregular objects
- 6. Poor physique

40. What precautions are need to avoid accident in manhandling?

- 1. Stand at safe distance from the load
- 2. Sharp edge and burns are removed before lifting a material.
- 3. PPE such as safety gloves and safety shoes are to be used.
- 4. If the weight is too heavy for one person to lift, then he has to seek the assistance.
- 5. The pathway is not blocked by obstacles while carrying the load.
- 6. The different actions, movements and forces necessary while carrying the load.
- 7. Modify the task by using hooks and crow bars.
- 8. Mechanical equipments like cranes shall be used.
- 9. Modify the objects
- 10. Change the way things are used.

41. Tips for manual handling?

- 1. Plan
- 2. Clear the path
- 3. Move in close to the load
- 4. Secure your grip
- 5. Hold your head upright
- 6. Maintain normal curves of the spine
- 7. Power the lift with legs and body weight
- 8. Don't twist

42 Cause of accidents in mechanical handling?

- 1. The sudden failure of wire rope or a chain
- 2. Slipping of the load from the sling
- 3. Swinging of the load at the time of lifting
- 4. The load sometimes hits the man

43. What are the accidents in "poor house keeping"?

- 1. Men getting hit by falling from overhead
- 2. Men slipping on greasy, wet or dirty floor
- 3. Men falling in open tank without cover in level floor
- 4. Accidents due to poor lighting
- 5. Fire accidents due to faulty electrical wires

44. What are the advantages in good house keeping?

- 1. It helps in the reduction of accidents including fire accidents
- 2. It saves the property damages
- 3. It improves employee moral
- 4. Better productivity
- 5. Working area becomes presentable
- 6. Human energy is conserved
- 7. Visitors are very much satisfied

- 8. The burden of supervisor is reduced

45. How to care and maintenance of hand tools?

- 1. Tools must be kept clean and free from corrosion
- 2. Keep metal parts lightly oiled
- 3. Remove burrs from edges of tools and heads of chisels.
- 4. Tools which are not in used must be stored separately
- 5. A good worker regularly inspects his tools
- 6. Do not use tools without handles

46. How to prevent accidents of “power tools”?

- 1. The operators should wear face shields or safety glasses
- 2. Power tools should be placed in the store room after use
- 3. power tools should have protected by guards
- 4. Pneumatic hoses or electric cables of power tools should not pass through passage ways.
- 5. The electrical power tools should be properly earthed
- 6. Never horse play with hose of pneumatic tools
- 7. Power tools machines should be maintained and operated properly.

47. What are the causes of accidents of “hard tools”?

- 1. Due to wrong way using of tools.
- 2. Due to defective condition of tools
- 3. Due to failure of using right tools for right job
- 4. Due to wrong way of carrying tools
- 5. Due to strong of tools un safety

48 What precautions are necessary in electrical work?

- 1. All electrical installations shall be as per Indian electricity rules
- 2. Only competent persons should handle the electrical equipments
- 3. The equipments should be earthed properly
- 4. All temporary electric lines should be drawn at least above man’s height
- 5. Cable should be completely insulated
- 6. Cable should not have any joints
- 7. Only connection for one point
- 8. Good house keeping on the area
- 9. Fire protection equipment to be kept near by
- 10. Use rubber gloves and rubber boots
- 11. Use good quality of wire
- 12. Power isolation close to the job
- 13. Use three pin plug instead of loose wire
- 14. Never operate any electrical equipment with wet hands

- 15. Never stand wet surface while working electrical equipments
- 16. During thunder storm do not stand under tree
- 17. Proper sign board is necessary
- 18. No person shall work on any live electrical conductor
- 19. The switch shall only be put on by person who switched it off

49. What are the hazards in construction?

- 1. Fall of person from top and getting injured
- 2. Fall of objects from top and below person injury
- 3. Fall of materials from top and damaged
- 4. Person fall into excavated pit
- 5. Collapse of soil and below person get injury or may
- 6. Damage of UG cables and sewage pipe
- 7. Collapse of scaffolding and person fall from height, get injury
- 8. Electrical shock
- 9. Fire and explosion
- 10. Burn injury
- 11. Health and lung problems
- 12. Snakes bite
- 13. Poisonous gas
- 14. Foreign body in eye

50. Cause of accident in construction?

- 1. Erection equipment failure
- 2. Falling of persons from height
- 3. Electrical shocks
- 4. Improper lighting
- 5. Non stop working by worker
- 6. Up safe work methods
- 7. Collapsing of earth during trench excavation
- 8. Failure of use safety equipment
- 9. Working a height without safety belt

51 General safety precautions in construction?

- 1. Adequate first aid equipment should be kept ready
- 2. Adequate fire fighting equipment should be available
- 3. All general electrical rules should be followed
- 4. suitable lighting arrangements should be necessary at night work
- 5. Work men at height should be wear safety belts
- 6. Work men handling cement should be provided with goggles, rubber gloves and rubber boots by nose mask.
- 7. The moving parts of grinding machines used construction site should be covered with guards

- 8. The moving parts of grinding machines used construction site should be covered with guards
- 9. Excavated material should not kept near the excavated
- 10. Very short duration of work red flags must be hoisted and more duration red banners must be stretched
- 11. Defective tools should not be used
- 12. The worker should not carry tools in his hands when climbing a ladder
- 13. Excavation should be guarded by suitable fencing

52. How to erect scaffolding?

- 1. It should be erected on levels firm ground
- 2. It erected by trained / skilled person
- 3. It is constructed using metal pipes and wooden boards
- 4. It should be design and constructed from good and sound material
- 5. Not to be erected on loose earth
- 6. Clamps should fixed
- 7. Properly bracing
- 8. Sole plate is necessary the base of vertical pipe

53. Safety precaution of scaffold?

- 1. Wooden board not be painted
- 2. Wooden board should not to any cracks
- 3. Check for rust in pipes / clamps
- 4. Clamps should fixed and good quality
- 5. Boards thickness should be 3.4 cms and no bending
- 6. The construction must be rigid, properly based
- 7. Use of good and sound materials
- 8. The wooden bellies has not joints
- 9. Vertical poles should not be more than 6 feet
- 10. Chains, ropes used for the suspension of scaffoldings
- 11. Never throw any materials from height
- 12. Use safety harness while working at above 6 feet
- 13. Properly ties to be arrangement

54 What control measures area necessary in confined space?

- 1. Enter with air line BA sets
- 2. Use 24v flame proof hand lamps
- 3. A hole watch to be kept near man hole
- 4. Keep fire fighting equipment ready
- 5. Gas test to be done to check for oxygen level
- 6. Provide blowers
- 7. Don't smoke in confined space
- 8. Use ropes and harness

- 9. The spaces clean before entry
- 10. Use non sparking tools if there is any risk of flammable vapors being present.

55. Safety rules when using ladders?

- 1. The foot wear is not greasy, oily and muddy and has a good grip on the rungs.
- 2. When climbing or coming down a ladder should be face the ladder side and had on with both hand.
- 3. Carry light tools in pockets in a shoulder bag.
- 4. Hold on with at least new hand if use of both hands then, use safety belt
- 5. Never climb higher than the third rung from the top on straight or second tiered from the top on extension ladder.
- 6. Step ladder must be fully open and the divider locked
- 7. Metal ladder shall not be used near electrical equipments.
- 8. Metal ladder shall not be place on firm footing and at angle of 75
- 9. Any ladder found defect in any way should be marked do not use
- 10. Ladder shall not be placed on a box or drum.
- 11. Rubber protection on head and heel of a ladder is necessary.

56. Safety rules insuring oxygen cylinders?

- 1. Oxygen cylinders should not be kept near combustible materials.
- 2. Oxygen cylinders should not be handled with grassy hands or gloves.
- 3. Oxygen cylinders and their fittings should not be tested with oil based soap solution.
- 4. Oxygen cylinders and other combustible gas cylinders should not be stored together.
- 5. The top cover of the cylinder should be kept in position and screwed safety when not in use.
- 6. Cylinders should not be used as rollers for moving materials
- 7. Oxygen must not be use for ventilating confined spaces.

57. Safety rules in using compressed air?

- 1. Only authorized persons should used compressed air.
- 2. The body or clothes should not be cleaned with compressed air.
- 3. Compressed air hose pipes should not be placed across passage ways
- 4. Leakage of compressed air should not be tested with hands.
- 5. While working with tools run by compressed air safety shoes are to be used.
- 6. The tools should not be kept on position when not in use.

58. Handling of compressed gas cylinders?

- 1. They are not to be dragged or dropped
- 2. They should be stored in dry and well ventilated places
- 3. Chins and slings should not be used for lifting cylinders.
- 4. the caps of the cylinders should not be removed when they are not the use.
- 5. Cylinders should not be stored near hot sources

- 6. Acetylene cylinders should not be stored horizontally
- 7. Empty cylinders and fully cylinders should be stored separately
- 8. Leakage cylinders removed to open space and release the gas without getting ignited.

59. Storage of gas cylinders.

- 1. Cylinders should be stored in a safe, dry and well ventilated store
- 2. Oxygen cylinders should be stored horizontally and acetylene cylinders shall be stored vertically.
- 3. The standing cylinders should be secured properly to avoid falling.
- 4. Flammable gas shall be stored at least 50 feet away from another building
- 5. Oxygen cylinder shall never be stored near a flammable gas cylinder
- 6. Empty cylinder shall be identified by marking with a chalk (MT) and checked for damage before returning to suppliers.
- 7. Cylinders should not be kept as supports.

60. Give a brief note about crane and LE?

- 1. Only authorized and competent person should operate cranes
- 2. The correct sling must be used for the load to be lifted
- 3. Lifting equipment must be certified from competent authority and marked with its SWL
- 4. Never be used for loads in excess of its SWL
- 5. Cables and slings must be padded when passing over sharp edges of equipment
- 6. Check the condition of the ground before parking the crane and use outriggers
- 7. All moving parts must be guarded
- 8. Uncertified chains, ropes, slings and hooks should not be used
- 9. All slings to be inspected by third party inspectors
- 10. Never stand or work under a suspended load
- 11. Place the outriggers on firm ground
- 12. Guide ropes shall be used to control swing of lifted material
- 13. Never operate the crane at the time of speed wind
- 14. Lifting over live equipment should not be encouraged
- 15. The crane should undergo periodical maintenance as per manufacturer's

61 Give brief note about fork lift truck?

- 1. Check brakes, lift tilt and tires.
- 2. Check the stability of load before moving it
- 3. Never leave your fork lift truck unattended with motor running
- 4. Never park fork lift truck on passage way
- 5. Never drive with wet or greasy hands
- 6. Always drive with a safe speed and slow down at turning point
- 7. When driving without load forks about 6 inches above the floor or ground
- 8. Never operate truck in gaseous area
- 9. Never carry a load so high that you cannot see the head, If necessary operate truck in reverse
- 10. Avoid carrying loose materials on forks

- 11. Never allow one to go under elevated loads
- 12. Warn other employees to stand clear when staking or removing materials
- 13. Exhaust pipe should have flame arrestor
- 14. Fork should be lowered to the floor when the truck is unattended
- 15. Stay alert t all times

62 Give a brief about grinding?

- 1. Proper wheel shall be used a per the grinding M/c's specification
- 2. All the grinding M/c's shall be used with wheel guard
- 3. Grinding cables shall not mingle with welding cables
- 4. All the cables shall be protected from damage
- 5. Provide face shield with safety helmet
- 6. Never use fracture wheel
- 7. Excessive tightening of maintaining is dangerous
- 8. All guards should be in position before the machine operated
- 9. The speed of the grinding should match in the speeds of the grinding machines
- 10. Only skill person should be handle this work
- 11. Testing of wheel is necessary

63 Describe about vehicles and plants?

- 1. All vehicles requiring security vehicles pass
- 2. All drivers should have valid driving licence
- 3. Drivers should not use fork lift trucks for carrying passengers
- 4. All traffic regulations and speed limit should be strictly followed in side the plant area
- 5. All vehicles area in a road worthy condition
- 6. Vehicles park in the operation area must always unlocked with in ignition key in position

64 Precaution of excavation?

- 1. Excavation area should be suitable barricade
- 2. Put sign boards lights and flags
- 3. Avoid heavy vehicle coming near the sides
- 4. PPE like helmet, safety shoes should be used
- 5. Keep the excavated soil at least 5 feet distance
- 6. Excavated sides should be sloped bake to a safe angle
- 7. Hand excavation should be done at the present of UG pipes or cables place
- 8. Cutting shall be done from top to bottom
- 9. All narrow trenches 4 feet or more deep shall be supplied at least one ladder
- 10. While excavating on the slope on the slope whose height is over 10 feet men should use safety belts

65 What are advantages of JSA? (Job safety Analysis)

- 1. It helps to identify hazards and prevent accident
- 2. It helps to establish safe work method, working conditions and suitable plant safety rules
- 3. It helps to assess the safety training four heading can be used for JSA.
- 4. It helps to inspect the plant
 - a) Name of operation for JSA
 - b) Description of the operation
 - c) Hazards
 - d) Precautions

66 What is tool box talk?

- 1. Job related safety aspects
- 2. Job related hazards / risk
- 3. Control / preventive measure
- 4. Adequacy of PPE's / condition
- 5. Following safety rules / procedures
- 6. Safe work procedures / methods

67 Describe different types of hazards?

- 1. Mechanical hazards — in inadequately guarded machines parts
- 2. Chemical hazards — of toxic gasses, vapours, fumes, smoke in dust.
- 3. Electrical hazards : in inadequately insulated line wires
- 4. Fire hazards – chemical reaction, electrical Arcs
- 5. Radiation hazards – dazzling light in frayed rays ultra violet rays
- 6. Pollution — water pollution & noise pollution

68 What is inspection?

- 1. Inspection means to find out hazards according to checklist prepared with reference to the department operations by the people who are familiar with the plant.

69 Plant safety inspection by whom?

- Safety officer
- By line management personal
- By senior management personnel
- First line supervisor
- By maintenance engineers
- By workers
- By safety committee
- By statutory authorities

70 How many types inspection?

- There are 5 types inspection ; pressures of boilers(supervisor)
- 1. Continuous inspection – select employees / operator
- 2. Periodical Inspection – material storage, fire fighting equipments, handling equipments
- 3. Intermittent inspection – un announced inspection done by safety officer, safety committee. (Particular work spot)
- 4. Statutory inspection – storage area, location at height (cranes, ropes, chains, it my tackles inspection)
- 5. Special inspection – accident investigation
- 6. Inspection of new building, general lighting, use of PPE's etc. construction work.

71 What is safety management?

- Safety management is an act and science of setting safety objectives of the industrial company.

72 What is accident investigation?

- Accident investigation means to carried out immediately the occurrence of accident to find out real facts to avoid the future accident.

73 What is accident statistics?

- It means to maintenance of accident details

74 How to investigate an accidents?

- Injured persons name, address, designation age
- Exact place and types of hazards
- Date, shift, time
- To find out the causes/ reasons
- To take correction action
- Fact finding not fault finding

75 How to report an accident?

- 1. Date and time
- 2. Activity
- 3. What happened
- 4. Person involved
- 5. What went wrong
- 6. Causes
- 7. Corrective action suggested
- 8. Signature
- 9. Safety officer
- 10. Safety in charge
- 11. Project manager

76 What is accident prevention?

- Accident prevention may be defined as an integrated programme and directed to control an unsafe mechanical or physical condition.

77 Role of management in industrial safety?

- 1. A written safety policy be issued by the management's towards men, material and machines.
- 2. The safety policy should bring out the management's towards men, material machine.
- 3. The safety policy should be circulated to top, middle and to workers
- 4. Management meeting should be in a position
- 5. Management should arrange for safety inspection (once in 3 months) and safety audit (once in year) to be carried out.

78 Give a brief note about safety policy ?

- 1. The safety and health of all employees is one of prime concern of the company.
- 2. Every company will be required to the policy both in letter and in spirit.
- 3. The company shall comply strictly with act, laws, rules and regulations
- 4. The company shall impart training in health safety and occupational health to all employees.
- 5. The company will adopt own safety and health standards where laws may not be available.

79 Safety in the use of hand trucks?

- 1. The truck should be inspected
- 2. The axles should be greased well
- 3. Safety shoes should be worn by the operators.
- 4. The load should be balanced and the weight of the load should not fall on the axle
- 5. The hand cart should not be wider than the width of the hand truck.
- 6. The hand cart should be pushed and not pulled
- 7. The truck should not be placed on path ways.

80 How many types of safety?

- There are three types of safety.
 1. Plant safety
 2. Workers safety
 3. Consumer safety

81. Human factors causing accidents?

- 1. Carelessness

- 2. Fooling about it
- 3. Hurrying to increase production
- 4. Laziness in house keeping
- 5. Hurrying in Lunchtime
- 6. Lack of attention due to worry
- 7. Alcohol and drugs
- 8. Lack of skill and experience
- 9. Not using PPE

82. How many steps in safety?

- There are 4 steps in safety
 1. Policy
 2. Implementation
 3. Take advantages of factory act
 4. Safe working conditions.

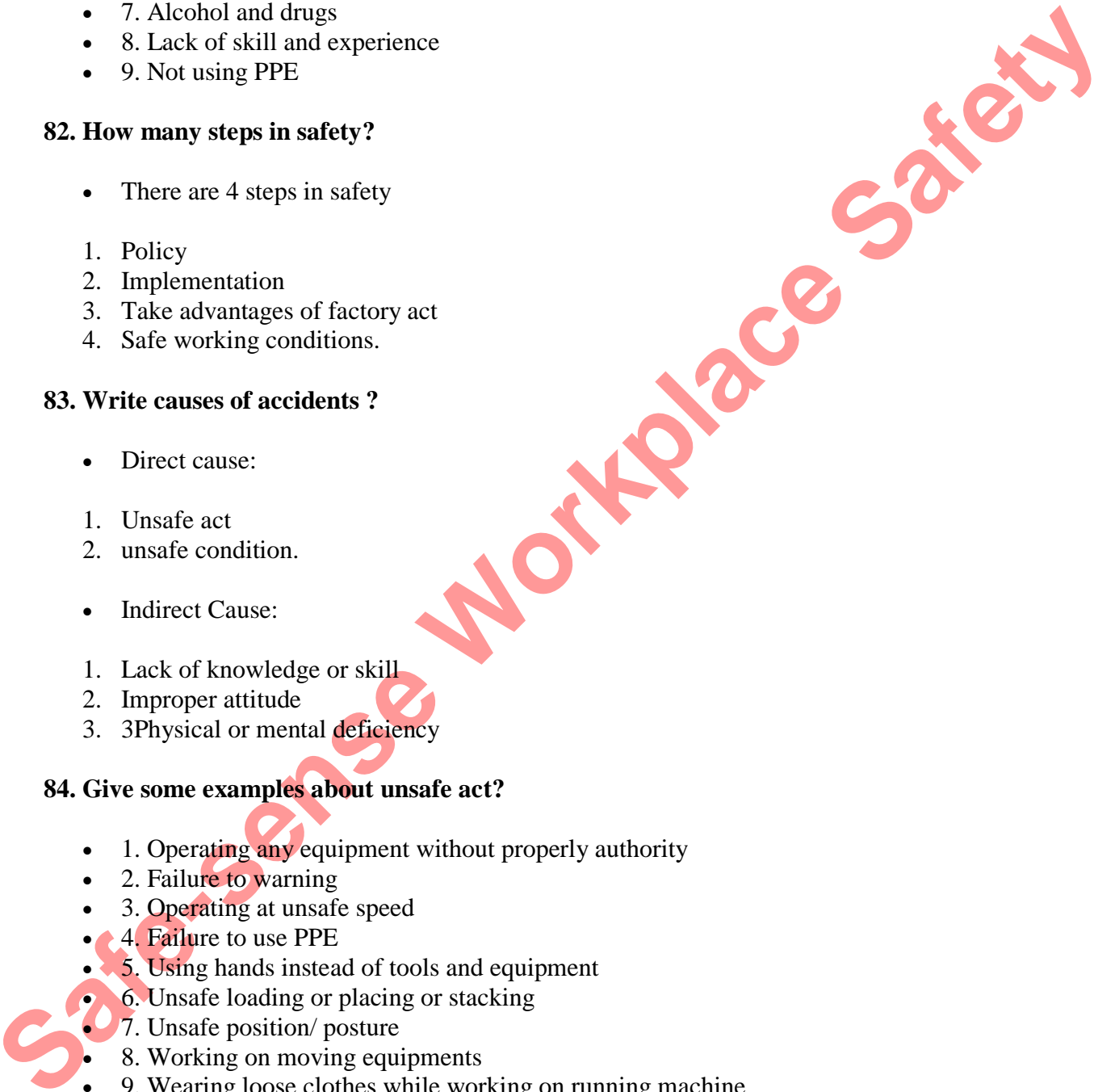
83. Write causes of accidents ?

- Direct cause:
 1. Unsafe act
 2. unsafe condition.
- Indirect Cause:
 1. Lack of knowledge or skill
 2. Improper attitude
 3. Physical or mental deficiency

84. Give some examples about unsafe act?

- 1. Operating any equipment without properly authority
- 2. Failure to warning
- 3. Operating at unsafe speed
- 4. Failure to use PPE
- 5. Using hands instead of tools and equipment
- 6. Unsafe loading or placing or stacking
- 7. Unsafe position/ posture
- 8. Working on moving equipments
- 9. Wearing loose clothes while working on running machine
- 10. Working at height without safety belt

85. Give some examples about un safe conditions?



- 1. Un guarded machine/ equipment
- 2. Poor lighting
- 3. Narrow road
- 4. Improper stacking
- 5. Oil on floor
- 6. Unsafe ventilation
- 7. Unsafe defective construction
- 8. Defective condition of tools and equipment
- 9. Unsafe method or procedure
- 10. Bad housekeeping

86. Write about accident sequence?

- A personal injury occurs only as the result of an accidents
- An accident occurs only as the result of a unsafe action or un safe mechanical or physical conditions or both.
- Unsafe action or unsafe condition or mechanical or physical condition exist only because of faulting the part of persons.
- Fault of persons acquires from the environment and the causes for lack of knowledge or skills or improper attitude.

87. Write a brief about classification of fire?

- They are mainly five types of fire.
1. Class A Fire : Wood, paper, clothes, rubbers etc.
 2. Class B Fire : Oil, grease, paint, petroleum etc.
 3. Class C Fire : Acetylene, ethane, methane etc.
 4. Class D Fire : Sodium, magnesium, potassium etc.
 5. Class E Fire : Electrical equipment etc.

88. Write uses of extinguisher for purpose ?

- 1. Water type extinguisher – Class A fire (not be B & E)
- 2. Foam type extinguisher – Class B fire (S.B + A.S.= Co2)
- 3. Carbon dioxide extinguisher Class C Fire
- 4. DCP Extinguisher – Class C, D or E

89. What precaution are necessary for protect of fires ?

- 1. Buildings and plants shall be so laid out and roads, passage ways etc.
- 2. Doors and windows shall be located in suitable positions on all external walls of the building.
- 3. Smoking lighting or carrying matches are to be prohibited
- 4. Gas cylinders should not be stored near high flammable substances
- 5. Flammable liquids shall be stored in suitable containers with close fitting covers.

- 6. In every factory has to suitable fire fighting equipment
- 7. All fire fighting equipment shall be subjected to routine maintenance inspection and testing by proper trained persons.
- 8. Sufficient number of persons shall be trained in the proper handling of fire fighting equipment.

90. Precaution for burn person?

- 1. If fire catches a single person's cloth; he should immediately roll on the floor.
- 2. No lotion of any kind should be applied on the burn area
- 3. In case of burns due to corrosive chemicals, the burn parts should be flooded with water
- 4. The burn area should be covered with dry sterile dressing
- 5. Physical shock of the person is treated by giving him weak tea or coffee
- 6. In major cases the patient should be sent to hospital as quickly as possible

91. Factory act?

1. Sec.'6' Registration of a factory
2. Sec.'11' Cleanliness
3. Sec.'13' Ventilation and temperature
4. Sec.'17' Lighting
5. Sec.'18,19' Drinking water and sanitary
6. Sec.'23' Employment of young person on dangerous mechanical
7. Sec.'28' Hoist and lifts
8. Sec.'29' Lifting machines and tackles
9. Sec.'35' protection of eyes
10. Sec.'36' Precaution against danger furnes
11. Sec.'36(A)' Use of portable electric light
12. Sec.'38' Protection in case of fire
13. Sec.'40(A)' Maintenance of building
14. Sec.'40(B)' Safety officers duty
15. Sec.'45' First aid boxes
16. Sec.'111' Obligation of workers

92. Personal protective equipments? P.P.E

1. Head protection – Hard hat, cap, and helmet

- Made – aluminum, PVC, fiber glass, Plastic
- Protect – heal, spark, danger materials

2. Face and eye protection – Spectacles, Welding goggles, face shield

- Protect – flying particles, radation

3. Hand protection – Gloves, hand pads

- Made – leather, rubber, PVC, asbestos
- Protect – acid, oil grease, pure Alex rubber gloves electrical

4. Foot and leg protection – Safety shoes, gum boots, foot leg guard

- Made – Metal, leather, rubber
- Project – falling materials and electrical work

5. Body protection – Apron, hood, coverall, jacket

- Made rubber, leather canvas, lead, PVC asbestos
- Asbestos hood – Fire fighting
- Rubber, PVC full suit – (Corrosively liquid, fumes, vapour
- Safety belts – work exceeds 3 mts

6. Ear protection – earmuff – noise – 30 – 135DB

7. Ear plug – 115 – 120 DB

93. What is safety management?

Safety management is an art and science of setting safety objectives of the Industrial company and related activities of planning, administration, Improving, Various functions to achieve the safety objectives.

94. What are the objectives of safety management?

- 1. Taking care of workers and staff in the event of an accident
- 2. Providing health full environment and surrounding
- 3. Welfare
- 4. Continuous vigil and improvement

95. How many types of PPE?

- There are two types of PPE

1. Respiratory 2. Non respiratory

Respiratory — Air supplied

— Air purified

Air supplied — Compressed air breathing apparatus set

Air purified — Cannisters gas mask

— Chemical cartridges respirator

— Surgical cotton mask

Dust filter mask (dust respirator)

96. How many types work permit?

- There are two types of work permit
 1. Cold work permit
 2. Hot work permit
- The hot work permit further classified into 3 types
 1. Normal hot work permit
 2. Blanket hot work permit
 3. Delegate hot work permit

97. What is blanket permit?

- A blanket permit is a permit issued on the basis of location where the multiple jobs are to be carried out at safe location.

98. What is delegated work permit?

- Delegated work permit used for areas requiring light control. Ex : Fabrication, yards – valid – 30 days

99. How many types of accidents?

- There are 4 types of accidents
 1. Near miss accident – escape
 2. No lost time reported 48hrs. before
 3. Los time – reported 48hrs. after
 4. Fated – Death

100. Heinrich accident ratio?

- Major injury
- Minor injury
- No injury

Bird accident ratio?

- Serious
- Minor
- Property damage
- No visible injury

101. How to control risk?

- The risk is control by following process they are eliminate, replace, reduce, control and PPE.

102. What are the hazards in chemical safety?

- 1. Danger due to fire/ explosion
- 2. Danger due to toxicity

103. How to control the chemical hazards?

- The chemical hazards are control by engineering method, administrative method and PPE.

104. Give a brief note about act related with session?

- The factory Act – 1948 Petroleum Act – 1934
- The mines Act – 1952 Water Act – 1974
- Automatic energy Act – 1962 Air Act – 1948
- Railways Act – 1890
- Indian electricity Act – 1910
- Indian boilers Act – 1884
- Workmen compensation Act – 1948
- Employee's state insurance Act – 1948

105. What is first aid?

- First aid is temporary and immediate care given to the victim of an accident.

106. What are the hazards in petroleum industry?

1. Fire,
2. Explosion,
3. General hazards,
4. Frostbite

107. How to control the petroleum hazards

- 1. Proper design, operation and maintenance
- 2. Avoid leakage
- 3. Steel pressure cylinder
- 4. Vapor release is to be directed away from heat sources
- 5. Wear goggles and SCBA sets

108. What are the causes of industrial accidents?

- 1. Inadequate skill, improper supervision etc.

- 2. Rapid industrialization
- 3. Expansion of existing factories
- 4. Setting up new industries involving hazards not known earlier

109. What are the responsibility for workers for safety?

- 1. Report unsafe condition to supervisor
- 2. Do not operate the machine without knowing the operation
- 3. Before starting the machine, whether the machine is in condition not
- 4. Use correct tools
- 5. Follow the safety rules
- 6. Always do not horse play
- 7. Do not lift over load
- 8. Do not chit on at with others

110. What general precautions are necessary while driving?

- 1. Follow all traffic rules, signs and signals
- 2. Do not exceed the speed limit
- 3. Take ten minute break after every 2 hours on long driving
- 4. Drive in correct gear
- 5. Keep both hand on steering wheel
- 6. Do not drive if you are not feeling well or feeling sleep
- 7. Slow down while passing junctions, corners, crowded places and parking

111. What are cause of road accident?

- 1. Not following defensive driving techniques
- 2. Not observing lane discipline
- 3. Overtaking on turns or from wrong side
- 4. Not obey traffic signals
- 5. Poor road condition
- 6. Poor maintained vehicle

112. What are belongs to road safety?

- 1. The speed limits displayed along the road should be strictly
- 2. Short cuts and cutting across the corners should be avoid
- 3. No body should try to cross the level crossing when drop gates are closed
- 4. Signal given blocking the road ‘ stop’ look, listen and proceed should be followed.

113. What is factory act?

- The factory act is a social enactment to achieve social reform and given liberal construction to achieve legislative.

114. What are main provision in the factory act?

- Health, safety, welfare, hours of work, employment, person, occupational disease, special provision and penalties and procedures.

115. What the advantages of ventilation

- 1. It helps to reduce the chances of fire or explosion
- 2. It protects the occupational diseases
- 3. It provides comfort to the workmen

116. What the role of government in industrial safety?

- The Govt. responsible for protection workers, consumers from dangers at work, on the road, in the air in the water, from air and water pollution etc.

117. How does the workers health influence ?

- The workers health influences by occupational factors – physical, chemical, biological, social.
- Non occupational factors – food, cloth, water, housing, smoking & alcohol etc.

118. How is audit conducted?

- 1. Preliminary visit and understanding the factory
- 2. Identify the audit element
- 3. Prepare the questionnaire
- 4. Get the reply from the company
- 5. Discussion with management, executives & workers.
- 6. Cross Verification at site
- 7. Preparation of report.

119 What are the procedures for work permit?

- 3 copies of the permit
- At the work site.
- In the permit file
- On the permit board.

120. How many types of appliance

- 1. Safety appliance for PPE
- 2. Safety appliance for general protection

121. What are causes of accident of working at height (Personal)?

- a. Lack of knowledge and skill
- b. over work
- c. Feeling of dizziness
- d. Non usage of PPEs like safety belt cygnet
- e. Unsafe platform (Not covered having floor openings)
- f. Improper erecting
- g. Unlearning work at height?

122. Control measure of work at height ?

- i. Use safety belt with proper anchoring above head.
- ii. Special training must be given before starting the job.
- iii. All scaffolds must be erected by skill persons.
- iv. No work after sun set
- v. Every platform should free from unnecessary obstruction
- vi. Grease, mud, paint removed from working platform

123. What is earthing?

- Earthing means connecting the natural point of the supply system to the general mass of the earth by line.

124. What is ELCB?

- It is protection of living beings under electro charging by fast isolation from the live conductor to avoid permanent disability or death.

125. Precaution for electric shock

- Use dry hard gloves & rubber sole, safety boots, gum boots
- The electric holder must be fully insulated
- Proper protection for the body
- During chipping of slag use white goggles

126. What is term card

- It is legal requirements in case of emergency in violin vehicles carrying hazards substance.

127. What are audit elements

- OS & H policy, educational training, safety manual and rules, new equipments, safety inspection, machine guarding, material handling safe operating procedures noise.

128. What are five rules of forth job

- 1. Select the right ladders for the job
- 2. Inspect ladder before you use it
- 3. Setup the ladder with care
- 4. Climb in carefully
- 5. Use safe practices

129. What are 4 Ps

- Procedure – Rules, regulation
- Protective gear – PPE
- Promotional aspects – Competitions, rewards
- Publicity – Bulleting, posters

130. How many types of sign boards

- Mandatory
- Information
- Fire or explosion
- Caution
- Wiring

131. What is TWA ? – for 8 Hrs. exposure per day

- It is defined as the limit of air-borne concentration of substances under which personnel may be exposed for 8 hrs. per day without any adverse effect.

132. What is STEL 0 for 15 minutes continuous exposure

- It is considered as maximum allowable concentration not to be exceeded at any time during 15 minutes continuous exposure period.
- It is a maximum concentration to which workers or can be exposed to a period of up to 15 minutes continuously without suffering from irritation.

133. What are the duties of a factory inspector ?

- He takes up the license and registration of factories
- He also verifies the documents related to factory workers
- He suggests suitable and welfare measures

134. What are welfare measures of factory act ?

- Adequate and suitable washing facilities should be provided
- Facilities for sitting during rest hours should be provided
- If more than 250 workers are employed in a factory a canteen facility shall be provided.
- Shelters, rest rooms and drinking water shall be provided.
- Welfare officer shall be employed where more than 50 workers are working.

135. What is safety inventory system ?

- It is a safety data collecting technique and carried out to promote full employee co-operation condition in the implementation of the company's safety surveys.

136. What is safety surveys ?

- Safety surveys are made to have detailed observations of all types of unsafe physical and environment conditions as well as unsafe practices committed the health and comfort of workers.

137. what is industrial hygiene ?

- Industrial hygiene is defined as the art and science of the presentation and improvement of the health and comfort of workers.

138. What are belongs to un hygienic working environment ?

- Presence of toxic,
- High temp.
- Excessive noise
- Emission of radiation
- Improper lighting
- Improper ventilation
- Process involving handling of poisonous.

139. What is ingestion ?

- Entry of harmful materials through mouth is called ingestion

140. What is inhalation ?

- Entry of harm full materials through mouth is called ingestion

141. What are of four legs of fire safety ?

- Fire protection
- Fire prevention
- Quantity control
- Preventive Maintenance

142. What are the important points to be observed for fire prevention ?

- Good house keeping
- No smoking
- Use of fire resistant paint

- Electrical safety
- Fire check doors
- Naked flame safety
- Separate storage of hazardous chemicals

143. Safety Triangle – Green ?

- Safety day – 4th March
- Fire Day – 14th April
- Hot Work – Red or pink
- Cold Work – Green
- Confined – Blue
- Radiography – Yellow
- Water type extinguisher – Red
- Foam type extinguisher – Cream (green)
- Co2 extinguisher Black
- DCR extinguisher Blue

144. What is lathe ?

- Lathe is an equipment use for cutting, threading, milling or facing etc.

145. What is Noise ?

- Unwanted sound which causes irritation to the ears caused by mechanical movement.

146. What is respiration ?

- The process of inhaling fresh air and exhaling, to entering a confined place is called respiration.

147. What is hot work permit ?

- Any work which involves spark flame, temperature is called HWP

148. What is cold work permit ?

- Any work which does not involve production of spark flame, heat, temp. is called

149. What

- A form of energy resulting from the existence of charged particles by dynamically as a current.
- It requires for worker on electrical equipments, machinery, cables, switch boards, pumps and other distribution boards.

150. What is radiography ?

- It is conducted to check the welding joints for any blow holes defects through x-ray.

151. What is vehicles / Mobile permit ?

- The permit is required for taking any vehicle are mobile equipments having a diesel equipment having a diesel or petrol operated engine in to hazardous area.

152. What are risks in vehicle permit ?

1. Sparks,
2. Accidents
3. Pollution

153. Control measures of vehicles permit ?

- Fitted spark arrester
- Speed 30 km./hours
- Proper warring lights
- No over load
- Correct parking
- Pollution check
- 3rd party inspection

154. Control measures of radiography?

- Barricade the area
- Remove all un-necessary persons away from site
- Check radiation level with dosimeter
- Use lead shields
- Put a sign board
- Risk tissue damaged
- Use special filter glass
- Use lead coated aprons