



TNPSC CTSE 2025

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CODE: 532

**UNIT WISE 2000 MCQ
QUESTIONS WITH
ANSWER EXPLANATION**



ENGLISH MEDIUM



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Pdf Sample

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UNIT I: GENERAL SAFETY PRECAUTION

QUESTION

01. Which of the following is the primary objective of implementing the 5S (Kaizen) concept in a workplace?

- a) To increase production quantity only
- b) To maintain cleanliness, organization, and efficiency
- c) To reduce labor cost without safety measures
- d) To ensure maximum profit without employee welfare

02. Which first aid measure is most appropriate for a chemical burn on the skin?

- a) Apply ice directly on the burn
- b) Wash the area immediately with plenty of running water
- c) Cover the burn with cotton
- d) Apply ointment before washing

03. Which Personal Protective Equipment (PPE) is most essential when handling hazardous fumes in a design workshop?

- a) Safety helmet
- b) Respirator or mask
- c) Safety shoes
- d) Earplugs

04. In the context of occupational health, which of the following is classified as a cumulative injury?

- a) Fracture due to fall from height
- b) Burns from a single accident
- c) Carpal tunnel syndrome from repetitive strain
- d) Immediate electric shock injury

05. In product development, which stage focuses primarily on evaluating feasibility and risk assessment before prototype creation?

- a) Concept design stage
- b) Production stage
- c) Market launch stage
- d) Maintenance stage

06. Which is the correct order of steps in the 5S methodology?

- a) Shine, set in order, Sort, Standardize, Sustain
- b) Sort, Set in order, Shine, Standardize, Sustain
- c) Standardize, Sort, Shine, Set in order, Sustain
- d) Sort, Shine, Set in order, Sustain, Standardize

07. Which type of hazard is most associated with poor ergonomics in a design workshop?

- a) Chemical hazard
- b) Physical hazard
- c) Musculoskeletal disorder
- d) Electrical hazard

08. Which of the following is considered an essential part of the first aid kit in an ITI workshop?

- a) Mobile phone
- b) Sterile gauze, antiseptic, bandages
- c) Screwdriver set
- d) Welding goggles

09. While handling heavy materials, which lifting technique reduces the risk of back injury?

- a) Bending from the waist and lifting quickly
- b) Lifting with the legs while keeping the back straight
- c) Pulling the material while twisting the torso
- d) Using only one hand to lift

10. Which safety sign is mandatory in areas where flammable chemicals are stored?

- a) Green color "Safe Zone" sign
- b) Red color "No Entry" sign
- c) Yellow triangle with flame symbol
- d) Blue circle "Mandatory PPE" sign

11. Which of the following is a key principle of occupational health and safety management in workshops?

- a) Only focus on production targets
- b) Identify hazards, assess risks, and implement controls

- c) Allow employees to manage their own safety
- d) Eliminate PPE usage to reduce costs

12. During a chemical spill, what is the first safety action to take?

- a) Call the fire department immediately
- b) Evacuate the area and alert others
- c) Ignore if the spill is small
- d) Pour water directly on the chemical without checking

13. Which of the following PPE is most suitable for protection against loud machinery noise?

- a) Safety goggles
- b) Earplugs or earmuffs
- c) Safety gloves
- d) Respirator

14. Which stage of product development involves detailed drawings and specifications for manufacturing?

- a) Conceptualization
- b) Detailed design phase
- c) Prototype testing
- d) Market launch

15. Which 5S step focuses on maintaining workplace cleanliness and identifying potential issues?

- a) Sort
- b) Set in order
- c) Shine
- d) Standardize

16. What type of injury is caused by exposure to extreme temperatures over a prolonged period?

- a) Acute injury
- b) Chronic thermal injury
- c) Immediate chemical burn
- d) Fracture

17. Which method is most effective to prevent electrical hazards in workshops?

- a) Wearing leather gloves while operating machines
- b) Using insulated tools and proper grounding
- c) Avoiding all electrical work
- d) Only working during daylight

18. Which of the following best describes a hazard in an occupational environment?

- a) Something that causes pleasure
- b) A potential source of harm or adverse health effect
- c) A machine that increases production
- d) A type of product design

19. When designing a product, which factor ensures safety for end-users?

- a) Using minimal materials
- b) Compliance with ergonomic and safety standards
- c) Reducing production cost
- d) Prioritizing aesthetics over function

20. Which type of PPE is essential for protection against sparks during welding operations?

- a) Safety shoes
- b) Welding helmet and gloves
- c) Respirator
- d) Earplugs

21. In the 5S methodology, which step ensures the continuous application of all improvements?

- a) Sort
- b) Sustain
- c) Shine
- d) Standardize

22. Which of the following is a major occupational hazard in a metal design workshop?

- a) Exposure to bright lights
- b) Repetitive strain from drafting

- c) Handling hot metal and sharp tools
- d) Sitting on chairs

23. For chemical safety, which information is essential on a Material Safety Data Sheet (MSDS)?

- a) Price of the chemical
- b) Manufacturer's address only
- c) Hazards, first aid measures, and handling instructions
- d) Color of the chemical

24. Which type of fire extinguisher is used for electrical fires in a workshop?

- a) Water-based extinguisher
- b) Foam extinguisher
- c) CO₂ or dry powder extinguisher
- d) Wet chemical extinguisher

25. What is the main purpose of standardizing procedures in 5S?

- a) To reduce workload only
- b) To ensure consistent safety and efficiency
- c) To avoid employee involvement
- d) To increase production cost

26. Which type of hazard is caused by exposure to vibrating tools over a long period?

- a) Electrical hazard

- b) Vibration-induced musculoskeletal disorder
- c) Chemical hazard
- d) Thermal burn

27. Which first aid action should be taken for a person suffering from heatstroke?

- a) Give hot water to drink
- b) Move to a cool area and hydrate
- c) Keep the person in direct sunlight
- d) Apply ice directly on the skin

28. Which safety principle is applied when designing a machine to prevent accidental contact with moving parts?

- a) Cost reduction
- b) Ergonomics
- c) Safeguarding
- d) Standardization

29. In 5S, which step involves arranging tools and materials in a way that promotes efficiency?

- a) Sort
- b) Set in order
- c) Shine
- d) Sustain

30. Which chemical hazard is associated with inhaling dust particles during cutting or grinding?

- a) Allergic reaction
- b) Respiratory irritation
- c) Burns
- d) Electrical shock

31. What is the primary purpose of PPE in an industrial workshop?

- a) To increase production speed
- b) To protect workers from specific hazards
- c) To reduce labor cost
- d) To decorate the workplace

32. Which ergonomic practice reduces strain on the eyes during drafting or designing?

- a) Using bright, overhead fluorescent lights only
- b) Maintaining proper distance and adequate lighting
- c) Reading in dim light
- d) Working for extended periods without breaks

33. Which stage of product development primarily evaluates customer requirements?

- a) Conceptual design stage
- b) Detailed design stage

- c) Prototype stage
- d) Production stage

34. Which 5S step involves checking equipment for wear and tear while cleaning?

- a) Sort
- b) Set in order
- c) Shine
- d) Standardize

35. What is the correct first aid for a person who receives an electric shock?

- a) Immediately touch the person to move them
- b) Turn off the electricity source and then provide first aid
- c) Pour water on the person
- d) Administer CPR without safety checks

36. Which PPE is essential for preventing eye injury from flying particles during grinding?

- a) Respirator
- b) Safety goggles
- c) Safety gloves
- d) Earplugs

37. Which type of hazard is most related to prolonged exposure to loud machinery?

- a) Chemical
- b) Noise-induced hearing loss
- c) Thermal
- d) Mechanical

38. During first aid for a fracture, which action is essential?

- a) Move the fractured limb freely
- b) Immobilize the limb with splints
- c) Massage the area
- d) Apply hot water

39. Which 5S principle emphasizes documentation and creating procedures for consistency?

- a) Sort
- b) Set in order
- c) Standardize
- d) Sustain

40. Which hazard arises from improper storage of flammable liquids?

- a) Electrical hazard
- b) Fire hazard
- c) Noise hazard
- d) Ergonomic hazard

41. In a design workshop, what is the safest way to handle sharp tools?

- a) Carry them in pockets
- b) Store in a designated holder or toolbox
- c) Leave on the workbench
- d) Wrap in cloth loosely

42. Which occupational health risk is associated with exposure to toxic chemicals over long periods?

- a) Acute injuries
- b) Chronic illnesses like respiratory or liver damage
- c) Fractures
- d) Burns

43. Which stage of product development tests design functionality before mass production?

- a) Prototype stage
- b) Concept stage
- c) Detailed design stage
- d) Marketing stage

44. Which PPE is mandatory for handling corrosive acids?

- a) Safety shoes
- b) Chemical-resistant gloves and goggles
- c) Earplugs
- d) Welding mask

45. Which 5S step involves separating necessary items from unnecessary items?

- a) Sort
- b) Set in order
- c) Shine
- d) Sustain

46. Which first aid measure is required for nosebleeds?

- a) Tilt head backward
- b) Lean forward and apply pressure to nostrils
- c) Pack with cotton deep inside the nose
- d) Apply heat directly

47. Which ergonomic principle improves workstation comfort and prevents repetitive strain injuries?

- a) Adjustable seating and proper posture
- b) Using chairs without back support
- c) Keeping monitors at floor level
- d) Extended continuous work hours

48. Which type of fire extinguisher is suitable for paper or wood fires?

- a) Water-based extinguisher
- b) CO₂ extinguisher

- c) Foam extinguisher
- d) Wet chemical extinguisher

49. Which hazard is created by exposed electrical wires in a workshop?

- a) Chemical
- b) Electrical shock
- c) Thermal burn
- d) Noise

50. Which safety measure is recommended for preventing slips and falls in a workshop?

- a) Ignoring wet floors
- b) Keeping walkways clear and using anti-slip mats
- c) Wearing loose footwear
- d) Walking quickly to save time

51. Which type of injury is commonly caused by repetitive hand movements in drafting or design work?

- a) Fracture
- b) Carpal tunnel syndrome
- c) Burn
- d) Eye strain

52. Which 5S principle encourages employees to maintain improvements consistently over time?

- a) Sort
- b) Set in order
- c) Sustain
- d) Shine

53. What is the first step in providing first aid to a person with a suspected spinal injury?

- a) Move them immediately to a comfortable chair
- b) Avoid moving them and call for medical assistance
- c) Make them walk to reduce stiffness
- d) Apply hot compress

54. In occupational health, which of the following is a psychosocial hazard?

- a) Repetitive strain
- b) Stress due to excessive workload
- c) Exposure to chemicals
- d) Noise from machinery

55. Which PPE is essential when working with UV light or lasers in design workshops?

- a) Earplugs
- b) UV-protective goggles
- c) Respirator
- d) Safety shoes

56. Which fire classification corresponds to electrical fires?

- a) Class A
- b) Class B
- c) Class C
- d) Class D

57. Which type of workplace hazard is caused by slippery floors, uneven surfaces, or obstacles?

- a) Chemical hazard
- b) Mechanical hazard
- c) Physical hazard
- d) Biological hazard

58. During first aid for minor cuts, which of the following is essential?

- a) Clean the wound, apply antiseptic, and cover with a sterile bandage
- b) Apply glue immediately
- c) Leave the wound open
- d) Rub alcohol directly without cleaning

59. Which 5S step involves labeling and arranging tools for easy access?

- a) Sort
- b) Set in order
- c) Shine
- d) Standardize

60. Which occupational hazard is associated with continuous exposure to vibration from heavy equipment?

- a) Burn
- b) Vibration-induced white finger
- c) Eye strain
- d) Nosebleed

61. Which first aid measure is recommended for a person fainting?

- a) Stand them upright immediately
- b) Lay them flat, elevate legs, and ensure fresh air
- c) Give them hot drinks
- d) Shake them vigorously

62. Which type of PPE is necessary for handling toxic powders?

- a) Respirator, gloves, and goggles
- b) Safety shoes only
- c) Earplugs
- d) Welding helmet

63. Which hazard is related to poor workstation design causing strain on the back and neck?

- a) Chemical hazard
- b) Ergonomic hazard

- c) Noise hazard
- d) Fire hazard

64. During product development, which activity ensures feasibility of production methods?

- a) Conceptual design
- b) Process planning
- c) Marketing
- d) Post-sales service

65. Which 5S step involves regular inspection to maintain cleanliness and efficiency?

- a) Sort
- b) Shine
- c) Standardize
- d) Sustain

66. Which PPE is necessary for protecting feet from heavy falling objects in workshops?

- a) Safety shoes with steel toe caps
- b) Sandals
- c) Regular shoes
- d) Barefoot

67. Which first aid action is appropriate for an insect bite causing allergic reaction?

- a) Leave it untreated
- b) Wash the area and monitor for symptoms, use antihistamines if needed
- c) Apply ice immediately without cleaning
- d) Cover tightly with cloth

68. Which hazard is related to improper handling of hot metal during design work?

- a) Burn hazard
- b) Chemical hazard
- c) Noise hazard
- d) Ergonomic hazard

69. Which 5S principle encourages documenting procedures and creating visual management tools?

- a) Sort
- b) Standardize
- c) Shine
- d) Sustain

70. Which type of fire extinguisher is suitable for flammable liquid fires like oil or paint?

- a) Water-based
- b) Foam or dry chemical

- c) CO₂
- d) Wet chemical

71. Which type of hazard is posed by prolonged exposure to cold environments?

- a) Thermal hazard
- b) Electrical hazard
- c) Chemical hazard
- d) Ergonomic hazard

72. Which ergonomic design principle reduces eye strain for designers using monitors?

- a) Monitor at eye level, proper lighting, and breaks
- b) Monitor on the floor
- c) Use only one light source behind the screen
- d) Continuous work without breaks

73. Which first aid treatment is recommended for a minor burn?

- a) Apply cold water for at least 10–20 minutes
- b) Apply ice directly
- c) Use oil immediately
- d) Rub salt on the burn

74. Which type of hazard arises from poor ventilation in a design workshop?

- a) Chemical inhalation hazard
- b) Burn hazard

- c) Electrical hazard
- d) Noise hazard

75. Which PPE is mandatory when cutting metal using power tools?

- a) Safety goggles, gloves, and ear protection
- b) Sandals
- c) Respirator only
- d) Apron only

76. Which type of hazard is caused by excessive vibration from hand tools and machinery?

- a) Chemical hazard
- b) Vibration-induced musculoskeletal disorder
- c) Noise hazard
- d) Thermal hazard

77. During first aid for fainting, what is the proper action?

- a) Lay the person flat, elevate legs, and ensure fresh air
- b) Give hot drinks immediately
- c) Keep the person sitting upright
- d) Shake the person to regain consciousness

78. Which PPE is essential when handling toxic liquids in a workshop?

- a) Gloves, goggles, and apron
- b) Safety shoes only

- c) Earplugs only
- d) Welding mask only

79. Which 5S principle focuses on removing unnecessary items to reduce clutter?

- a) Shine
- b) Sort
- c) Standardize
- d) Sustain

80. Which first aid measure is appropriate for a person with a sprained ankle?

- a) Apply heat immediately
- b) Rest, ice, compression, and elevation (RICE)
- c) Massage vigorously
- d) Keep walking to avoid stiffness

81. Which type of fire extinguisher is suitable for flammable gases?

- a) Water-based extinguisher
- b) Dry chemical or CO₂ extinguisher
- c) Foam extinguisher
- d) Wet chemical extinguisher

82. Which hazard arises from poor ergonomics while sitting at drafting tables?

- a) Chemical hazard
- b) Musculoskeletal disorder

- c) Electrical hazard
- d) Fire hazard

83. During product development, which stage ensures functional testing of prototypes?

- a) Concept design stage
- b) Prototype testing stage
- c) Marketing stage
- d) Mass production stage

84. Which PPE is critical when welding metals?

- a) Welding helmet, gloves, and apron
- b) Earplugs only
- c) Respirator only
- d) Safety shoes only

85. Which 5S principle involves arranging tools and materials for efficient workflow?

- a) Sort
- b) Set in order
- c) Shine
- d) Sustain

86. Which first aid measure is appropriate for minor chemical splashes in the eye?

- a) Rinse immediately with plenty of running water for at least 15 minutes
- b) Rub eyes vigorously
- c) Apply ointment immediately
- d) Close eyes and wait

87. Which type of PPE protects hearing from continuous exposure to loud machinery?

- a) Safety goggles
- b) Earplugs or earmuffs
- c) Gloves
- d) Apron

88. Which occupational hazard is associated with handling hot surfaces or molten metals?

- a) Electrical hazard
- b) Thermal/burn hazard
- c) Chemical hazard
- d) Noise hazard

89. Which first aid action is suitable for a nosebleed?

- a) Tilt head backward
- b) Lean forward and pinch nostrils for 10 minutes
- c) Pack cotton deep inside the nostrils
- d) Apply heat directly

90. Which type of hazard arises from inhaling dust or fumes in workshops?

- a) Chemical/respiratory hazard
- b) Electrical hazard
- c) Physical hazard
- d) Fire hazard

91. Which PPE is essential when handling sharp cutting tools?

- a) Cut-resistant gloves
- b) Earplugs
- c) Safety goggles only
- d) Safety shoes only

92. Which 5S principle ensures procedures and standards are consistently followed?

- a) Shine
- b) Standardize
- c) Sort
- d) Sustain

93. Which stage of product development involves assessing the market feasibility of a new product?

- a) Concept design stage
- b) Market research and feasibility analysis
- c) Prototype stage
- d) Mass production

94. Which first aid measure is recommended for minor cuts?

- a) Clean, apply antiseptic, and cover with sterile bandage
- b) Apply glue immediately
- c) Leave open to air
- d) Apply ice

95. Which type of hazard is caused by poorly maintained electrical equipment?

- a) Chemical hazard
- b) Electrical shock/fire hazard
- c) Noise hazard
- d) Ergonomic hazard

96. Which PPE is mandatory for eye protection when using power tools that generate flying particles?

- a) Safety goggles
- b) Earplugs
- c) Gloves only
- d) Respirator only

97. Which 5S step encourages continuous improvement and long-term practice?

- a) Sort
- b) Sustain

- c) Shine
- d) Standardize

98. Which type of hazard arises from prolonged standing or repetitive movements?

- a) Chemical hazard
- b) Musculoskeletal/ergonomic hazard
- c) Electrical hazard
- d) Fire hazard

99. During first aid for a suspected fracture, what is the recommended action?

- a) Move the limb freely
- b) Immobilize with splints and seek medical help
- c) Massage the area
- d) Apply heat

100. Which PPE is required to prevent inhalation of dust during sanding operations?

- a) Safety goggles
- b) Respirator or dust mask
- c) Earplugs
- d) Gloves

101. Which occupational hazard is caused by prolonged exposure to extreme heat in a workshop?

- a) Hypothermia
- b) Heatstroke and dehydration
- c) Frostbite
- d) Noise-induced hearing loss

102. Which 5S step focuses on maintaining cleanliness and inspecting tools regularly?

- a) Sort
- b) Shine
- c) Standardize
- d) Sustain

103. Which PPE is critical for protection against molten metal splashes?

- a) Gloves, apron, and face shield
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

104. Which first aid action is suitable for a person experiencing shock?

- a) Lay them down and elevate legs
- b) Let them walk to relieve symptoms
- c) Give them food immediately
- d) Ignore symptoms

105. During product development, which activity identifies material and manufacturing requirements?

- a) Conceptual design
- b) Detailed design stage
- c) Market research
- d) Prototype testing

106. Which type of hazard arises from inhaling fine dust particles during cutting or grinding?

- a) Noise hazard
- b) Respiratory hazard
- c) Burn hazard
- d) Ergonomic hazard

107. Which 5S principle emphasizes documenting work standards and procedures?

- a) Sort
- b) Standardize
- c) Shine
- d) Set in order

108. Which PPE is mandatory for eye protection while using power tools that produce flying debris?

- a) Safety goggles
- b) Dust mask

- c) Earplugs
- d) Safety shoes

109. Which first aid measure is recommended for minor burns?

- a) Apply cold water for 10–20 minutes
- b) Rub ice directly
- c) Apply butter or oil
- d) Cover immediately with bandage

110. Which occupational hazard arises from prolonged use of vibrating machinery?

- a) Electrical hazard
- b) Vibration-induced hand-arm syndrome
- c) Chemical hazard
- d) Fire hazard

111. Which PPE is essential for handling corrosive chemicals?

- a) Chemical-resistant gloves, apron, and goggles
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

112. Which 5S step focuses on arranging tools and materials for quick access?

- a) Sort
- b) Set in order

- c) Shine
- d) Sustain

113. Which first aid action is appropriate for a person with a nosebleed?

- a) Tilt head backward
- b) Lean forward and pinch nostrils
- c) Pack cotton deeply inside
- d) Apply heat directly

114. Which type of hazard is caused by poor workstation ergonomics?

- a) Chemical hazard
- b) Musculoskeletal disorder
- c) Electrical hazard
- d) Noise hazard

115. Which stage of product development tests design feasibility before mass production?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

116. Which PPE is required for protection against loud workshop noise?

- a) Earplugs or earmuffs
- b) Safety goggles

- c) Gloves
- d) Apron

117. Which first aid measure is appropriate for a sprained wrist?

- a) RICE – Rest, Ice, Compression, Elevation
- b) Massage vigorously
- c) Apply heat immediately
- d) Keep moving the wrist

118. Which occupational hazard arises from slippery floors?

- a) Chemical hazard
- b) Slip, trip, and fall hazard
- c) Noise hazard
- d) Burn hazard

119. Which PPE is necessary when handling sharp cutting tools?

- a) Cut-resistant gloves
- b) Earplugs
- c) Safety shoes only
- d) Safety goggles only

120. Which 5S principle ensures long-term adherence to workplace improvements?

- a) Sustain
- b) Sort

- c) Shine
- d) Set in order

121. Which first aid action is suitable for a chemical burn on the skin?

- a) Wash immediately with plenty of water
- b) Apply oil
- c) Cover without washing
- d) Rub alcohol

122. Which stage of product development focuses on converting concepts into detailed drawings?

- a) Detailed design stage
- b) Conceptual design
- c) Prototype testing
- d) Marketing

123. Which occupational hazard is associated with prolonged computer work?

- a) Eye strain and repetitive strain injury
- b) Chemical exposure
- c) Burn hazard
- d) Noise exposure

124. Which PPE is essential when working with power grinders?

- a) Safety goggles, gloves, and ear protection
- b) Safety shoes only

- c) Dust mask only
- d) Apron only

125. Which 5S principle involves regular inspections to detect equipment wear and safety issues?

- a) Shine
- b) Set in order
- c) Standardize
- d) Sustain

126. Which occupational hazard arises from improper lifting techniques?

- a) Chemical burns
- b) Musculoskeletal injury
- c) Noise exposure
- d) Electrical shock

127. Which PPE is required to protect hands from hot metal surfaces?

- a) Heat-resistant gloves
- b) Earplugs
- c) Safety goggles
- d) Apron only

128. Which 5S principle involves arranging items so that frequently used tools are easily accessible?

- a) Set in order

- b) Shine
- c) Standardize
- d) Sort

129. Which first aid measure is recommended for a deep cut?

- a) Clean, apply pressure to stop bleeding, and cover with sterile dressing
- b) Leave open to air
- c) Apply oil
- d) Rinse with water only

130. Which stage of product development focuses on testing the product under real conditions?

- a) Prototype testing
- b) Detailed design
- c) Conceptual design
- d) Market research

131. Which hazard is caused by prolonged exposure to loud machinery?

- a) Noise-induced hearing loss
- b) Eye strain
- c) Burn
- d) Chemical exposure

132. Which PPE is essential when handling flammable liquids?

- a) Chemical-resistant gloves and goggles

- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

133. Which 5S principle emphasizes continuous adherence to workplace standards?

- a) Sustain
- b) Sort
- c) Shine
- d) Set in order

134. Which first aid measure is recommended for minor burns?

- a) Apply cold running water for 10–20 minutes
- b) Apply butter or oil
- c) Rub ice directly
- d) Cover immediately without cooling

135. Which occupational hazard is caused by exposure to toxic fumes?

- a) Respiratory diseases
- b) Electrical shock
- c) Burn
- d) Noise hazard

136. Which PPE protects eyes from UV light during welding?

- a) UV-protective welding goggles

- b) Earplugs
- c) Gloves only
- d) Apron only

137. Which 5S principle focuses on cleaning and inspecting the workplace regularly?

- a) Shine
- b) Sort
- c) Set in order
- d) Standardize

138. Which hazard arises from slippery or cluttered walkways?

- a) Slip, trip, and fall hazard
- b) Noise hazard
- c) Chemical hazard
- d) Electrical hazard

139. Which first aid action is recommended for a person experiencing shock?

- a) Lay flat, elevate legs, and maintain calm
- b) Make the person walk
- c) Give food immediately
- d) Ignore symptoms

140. Which stage of product development converts ideas into technical drawings and specifications?

- a) Detailed design stage
- b) Conceptual design
- c) Prototype testing
- d) Marketing stage

141. Which PPE is required to prevent inhalation of dust during sanding operations?

- a) Respirator or dust mask
- b) Gloves only
- c) Earplugs only
- d) Safety goggles only

142. Which occupational hazard arises from prolonged computer work?

- a) Eye strain and repetitive strain injury
- b) Burn
- c) Chemical exposure
- d) Noise exposure

143. Which first aid measure is appropriate for a sprained ankle?

- a) RICE – Rest, Ice, Compression, Elevation
- b) Heat application immediately
- c) Massage vigorously
- d) Keep moving the ankle

144. Which 5S principle involves identifying and removing unnecessary items?

- a) Sort
- b) Set in order
- c) Shine
- d) Sustain

145. Which PPE protects hands from cuts while handling sharp tools?

- a) Cut-resistant gloves
- b) Earplugs
- c) Safety goggles only
- d) Safety shoes only

146. Which hazard is caused by improper storage of flammable liquids?

- a) Fire hazard
- b) Electrical hazard
- c) Ergonomic hazard
- d) Noise hazard

147. Which first aid action is recommended for a nosebleed?

- a) Lean forward and pinch nostrils
- b) Tilt head backward
- c) Pack cotton deep inside
- d) Apply heat directly

148. Which stage of product development ensures usability and functionality?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

149. Which PPE is required when handling corrosive acids?

- a) Chemical-resistant gloves, goggles, and apron
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

150. Which 5S principle involves maintaining procedures, standards, and visual management?

- a) Standardize
- b) Shine
- c) Sort
- d) Set in order

151. Which occupational hazard arises from prolonged exposure to cold environments?

- a) Hypothermia and frostbite
- b) Heatstroke
- c) Noise-induced hearing loss
- d) Chemical burns

152. Which 5S principle emphasizes cleaning and inspecting tools and workplace regularly?

- a) Shine
- b) Sort
- c) Standardize
- d) Sustain

153. Which PPE protects eyes from flying particles during grinding operations?

- a) Safety goggles
- b) Earplugs only
- c) Gloves only
- d) Apron only

154. Which first aid measure is recommended for a person experiencing shock?

- a) Lay flat, elevate legs, and maintain calm
- b) Make them walk
- c) Give food immediately
- d) Ignore symptoms

155. Which stage of product development involves selecting materials and determining manufacturing methods?

- a) Detailed design stage
- b) Conceptual design

- c) Market research
- d) Prototype testing

156. Which occupational hazard arises from repetitive hand movements during drafting?

- a) Carpal tunnel syndrome
- b) Chemical exposure
- c) Noise hazard
- d) Burn hazard

157. Which PPE is essential when working with molten metals?

- a) Gloves, apron, and face shield
- b) Safety shoes only
- c) Dust mask only
- d) Earplugs only

158. Which 5S principle focuses on removing unnecessary items from the workplace?

- a) Sort
- b) Set in order
- c) Shine
- d) Standardize

159. Which first aid measure is suitable for a minor chemical splash on skin?

- a) Wash immediately with running water

- b) Apply oil
- c) Cover without washing
- d) Rub alcohol

160. Which hazard is caused by poor ventilation in workshops?

- a) Respiratory hazard
- b) Fire hazard
- c) Electrical hazard
- d) Noise hazard

161. Which PPE is required to prevent hearing damage from loud machinery?

- a) Earplugs or earmuffs
- b) Safety goggles
- c) Gloves only
- d) Apron only

162. Which first aid action is appropriate for a sprained wrist?

- a) RICE – Rest, Ice, Compression, Elevation
- b) Massage vigorously
- c) Heat immediately
- d) Keep moving

163. Which occupational hazard arises from cluttered or obstructed walkways?

- a) Slip, trip, and fall hazard
- b) Chemical hazard

- c) Electrical hazard
- d) Burn hazard

164. Which PPE is essential for handling sharp tools?

- a) Cut-resistant gloves
- b) Earplugs only
- c) Safety shoes only
- d) Safety goggles only

165. Which hazard is caused by improper storage of flammable liquids?

- a) Fire hazard
- b) Noise hazard
- c) Electrical hazard
- d) Ergonomic hazard

166. Which 5S principle ensures long-term maintenance of workplace standards?

- a) Sustain
- b) Shine
- c) Set in order
- d) Sort

167. Which first aid action is recommended for a nosebleed?

- a) Lean forward and pinch nostrils
- b) Tilt head backward

- c) Pack cotton deep inside
- d) Apply heat directly

168. Which stage of product development ensures functionality before mass production?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

169. Which PPE is required when handling corrosive chemicals?

- a) Chemical-resistant gloves, goggles, and apron
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

170. Which 5S principle involves standardizing work procedures and visual management?

- a) Standardize
- b) Shine
- c) Sort
- d) Set in order

171. Which occupational hazard arises from prolonged computer use?

- a) Eye strain and repetitive strain injury

- b) Chemical exposure
- c) Burn hazard
- d) Noise hazard

172. Which PPE is required when using power grinders?

- a) Safety goggles, gloves, and ear protection
- b) Safety shoes only
- c) Dust mask only
- d) Apron only

173. Which first aid measure is recommended for minor cuts?

- a) Clean, apply antiseptic, and cover with sterile dressing
- b) Leave open to air
- c) Apply glue immediately
- d) Apply ice

174. Which hazard arises from prolonged exposure to vibrating machinery?

- a) Vibration-induced hand-arm syndrome
- b) Electrical hazard
- c) Chemical exposure
- d) Burn hazard

175. Which PPE is essential when handling hot metal surfaces?

- a) Heat-resistant gloves
- b) Safety shoes only

- c) Safety goggles only
- d) Earplugs only

176. Which 5S principle involves arranging items for easy accessibility?

- a) Set in order
- b) Shine
- c) Standardize
- d) Sort

177. Which first aid measure is appropriate for a chemical eye splash?

- a) Rinse with running water for at least 15 minutes
- b) Rub eyes vigorously
- c) Apply ointment immediately
- d) Close eyes and wait

178. Which hazard arises from improper workstation ergonomics?

- a) Musculoskeletal disorder
- b) Burn
- c) Chemical exposure
- d) Electrical hazard

179. Which PPE is required for protection against molten metal splashes?

- a) Gloves, apron, and face shield
- b) Earplugs only

- c) Safety shoes only
- d) Dust mask only

180. Which first aid measure is recommended for a suspected fracture?

- a) Immobilize with splints and seek medical help
- b) Move the limb freely
- c) Massage
- d) Apply heat

181. Which occupational hazard arises from prolonged exposure to noise?

- a) Hearing loss
- b) Burn
- c) Chemical exposure
- d) Musculoskeletal disorder

182. Which 5S principle focuses on removing unnecessary items?

- a) Sort
- b) Set in order
- c) Shine
- d) Standardize

183. Which PPE is required for chemical handling?

- a) Gloves, apron, and goggles
- b) Earplugs only

- c) Dust mask only
- d) Safety shoes only

184. Which first aid measure is suitable for minor burns?

- a) Apply cold water for 10-20 minutes
- b) Apply butter
- c) Rub ice
- d) Cover without cooling

185. Which hazard is caused by poor ventilation in workshops?

- a) Respiratory hazard
- b) Burn
- c) Noise
- d) Electrical hazard

186. Which stage of product development tests the product under real conditions?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

187. Which PPE is required to prevent hearing damage?

- a) Earplugs or earmuffs
- b) Gloves only

- c) Safety goggles only
- d) Apron only

188. Which first aid action is suitable for a sprained ankle?

- a) RICE – Rest, Ice, Compression, Elevation
- b) Massage vigorously
- c) Apply heat immediately
- d) Keep moving

189. Which occupational hazard arises from slippery floors?

- a) Slip, trip, and fall hazard
- b) Burn
- c) Chemical exposure
- d) Electrical hazard

190. Which PPE protects hands from cuts?

- a) Cut-resistant gloves
- b) Safety goggles only
- c) Earplugs only
- d) Safety shoes only

191. Which hazard arises from improper storage of flammable liquids?

- a) Fire hazard
- b) Noise hazard

- c) Electrical hazard
- d) Ergonomic hazard

192. Which 5S principle ensures long-term adherence to workplace standards?

- a) Sustain
- b) Shine
- c) Set in order
- d) Sort

193. Which first aid measure is recommended for a nosebleed?

- a) Lean forward and pinch nostrils
- b) Tilt head backward
- c) Pack cotton deep inside
- d) Apply heat

194. Which stage of product development ensures functionality and usability?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

195. Which PPE is essential when handling corrosive acids?

- a) Chemical-resistant gloves, goggles, and apron
- b) Earplugs only

- c) Safety shoes only
- d) Dust mask only

196. Which 5S principle involves standardizing work procedures and visual management?

- a) Standardize
- b) Shine
- c) Sort
- d) Set in order

197. Which occupational hazard arises from prolonged computer work?

- a) Eye strain and repetitive strain injury
- b) Burn
- c) Chemical exposure
- d) Noise hazard

198. Which PPE is required when using power grinders?

- a) Safety goggles, gloves, and ear protection
- b) Safety shoes only
- c) Dust mask only
- d) Apron only

199. Which first aid measure is recommended for minor cuts?

- a) Clean, apply antiseptic, and cover with sterile dressing
- b) Leave open to air

- c) Apply glue immediately
- d) Apply ice

200. Which hazard arises from prolonged exposure to vibrating machinery?

- a) Vibration-induced hand-arm syndrome
- b) Electrical hazard
- c) Chemical exposure
- d) Burn hazard



RLA ACADEMY

UNIT I: GENERAL SAFETY PRECAUTION

ANSWER AND EXPLANATION

01. Which of the following is the primary objective of implementing the 5S (Kaizen) concept in a workplace?

- a) To increase production quantity only
- b) To maintain cleanliness, organization, and efficiency
- c) To reduce labor cost without safety measures
- d) To ensure maximum profit without employee welfare

Answer: b) To maintain cleanliness, organization, and efficiency

Explanation: The 5S concept (Sort, set in order, Shine, Standardize, Sustain) focuses on maintaining workplace organization, cleanliness, and efficiency, which improves productivity and safety.

02. Which first aid measure is most appropriate for a chemical burn on the skin?

- a) Apply ice directly on the burn
- b) Wash the area immediately with plenty of running water
- c) Cover the burn with cotton
- d) Apply ointment before washing

Answer: b) Wash the area immediately with plenty of running water

Explanation: Chemical burns should be rinsed immediately with water to remove the harmful substance and prevent further tissue damage. Immediate washing is critical.

03. Which Personal Protective Equipment (PPE) is most essential when handling hazardous fumes in a design workshop?

- a) Safety helmet
- b) Respirator or mask
- c) Safety shoes
- d) Earplugs

Answer: b) Respirator or mask

Explanation: Respirators or masks protect the respiratory system from inhaling hazardous fumes, which can cause serious health issues such as lung irritation or long-term respiratory diseases.

04. In the context of occupational health, which of the following is classified as a cumulative injury?

- a) Fracture due to fall from height
- b) Burns from a single accident
- c) Carpal tunnel syndrome from repetitive strain
- d) Immediate electric shock injury

Answer: c) Carpal tunnel syndrome from repetitive strain

Explanation: Cumulative injuries develop over time due to repetitive motions, improper ergonomics, or prolonged exposure to stressors, unlike acute injuries which occur suddenly.

05. In product development, which stage focuses primarily on evaluating feasibility and risk assessment before prototype creation?

- a) Concept design stage

- b) Production stage
- c) Market launch stage
- d) Maintenance stage

Answer: a) Concept design stage

Explanation: The concept design stage involves analyzing feasibility, material selection, and risk assessment to ensure that the product can be developed efficiently and safely.

06. Which is the correct order of steps in the 5S methodology?

- a) Shine, set in order, Sort, Standardize, Sustain
- b) Sort, Set in order, Shine, Standardize, Sustain
- c) Standardize, Sort, Shine, Set in order, Sustain
- d) Sort, Shine, Set in order, Sustain, Standardize

Answer: b) Sort, set in order, Shine, Standardize, Sustain

Explanation: The 5S methodology starts with sorting items, arranging them systematically, cleaning the workspace, standardizing practices, and sustaining the improvements for long-term efficiency.

07. Which type of hazard is most associated with poor ergonomics in a design workshop?

- a) Chemical hazard
- b) Physical hazard
- c) Musculoskeletal disorder
- d) Electrical hazard

Answer: c) Musculoskeletal disorder

Explanation: Poor ergonomics, such as incorrect workstation height or repetitive movements, leads to musculoskeletal disorders, causing pain or long-term injury to muscles and joints.

08. Which of the following is considered an essential part of the first aid kit in an ITI workshop?

- a) Mobile phone
- b) Sterile gauze, antiseptic, bandages
- c) Screwdriver set
- d) Welding goggles

Answer: b) Sterile gauze, antiseptic, bandages

Explanation: A proper first aid kit must include items to clean, cover, and protect minor injuries, ensuring immediate treatment and prevention of infection.

09. While handling heavy materials, which lifting technique reduces the risk of back injury?

- a) Bending from the waist and lifting quickly
- b) Lifting with the legs while keeping the back straight
- c) Pulling the material while twisting the torso
- d) Using only one hand to lift

Answer: b) Lifting with the legs while keeping the back straight

Explanation: Proper lifting techniques involve bending the knees and using leg muscles to lift heavy objects, keeping the back straight to minimize spinal strain and prevent injury.

10. Which safety sign is mandatory in areas where flammable chemicals are stored?

- a) Green color "Safe Zone" sign
- b) Red color "No Entry" sign
- c) Yellow triangle with flame symbol
- d) Blue circle "Mandatory PPE" sign

Answer: c) Yellow triangle with flame symbol

Explanation: The yellow triangle with a flame indicates flammable material hazard, warning personnel to handle the area with extreme care and use proper PPE.

11. Which of the following is a key principle of occupational health and safety management in workshops?

- a) Only focus on production targets
- b) Identify hazards, assess risks, and implement controls
- c) Allow employees to manage their own safety
- d) Eliminate PPE usage to reduce costs

Answer: b) Identify hazards, assess risks, and implement controls

Explanation: Occupational health and safety management requires systematic hazard identification, risk assessment, and implementing appropriate control measures to prevent accidents and ensure worker safety.

12. During a chemical spill, what is the first safety action to take?

- a) Call the fire department immediately

- b) Evacuate the area and alert others
- c) Ignore if the spill is small
- d) Pour water directly on the chemical without checking

Answer: b) Evacuate the area and alert others

Explanation: Safety protocols require evacuating personnel from hazardous areas and notifying others to prevent exposure and injuries. Cleanup should only be done by trained personnel.

13. Which of the following PPE is most suitable for protection against loud machinery noise?

- a) Safety goggles
- b) Earplugs or earmuffs
- c) Safety gloves
- d) Respirator

Answer: b) Earplugs or earmuffs

Explanation: Earplugs or earmuffs protect hearing by reducing exposure to high decibel levels from machinery, preventing long-term auditory damage.

14. Which stage of product development involves detailed drawings and specifications for manufacturing?

- a) Conceptualization
- b) Detailed design phase
- c) Prototype testing
- d) Market launch

Answer: b) Detailed design phase

Explanation: The detailed design phase translates concepts into precise technical drawings, specifications, and material requirements to guide production accurately.

15. Which 5S step focuses on maintaining workplace cleanliness and identifying potential issues?

- a) Sort
- b) Set in order
- c) Shine
- d) Standardize

Answer: c) Shine

Explanation: 'Shine' involves cleaning the workplace regularly and inspecting equipment, which helps identify maintenance issues and maintain a safe environment.

16. What type of injury is caused by exposure to extreme temperatures over a prolonged period?

- a) Acute injury
- b) Chronic thermal injury
- c) Immediate chemical burn
- d) Fracture

Answer: b) Chronic thermal injury

Explanation: Prolonged exposure to extreme heat or cold can cause chronic thermal injuries, such as heat exhaustion, frostbite, or long-term tissue damage.

17. Which method is most effective to prevent electrical hazards in workshops?

- a) Wearing leather gloves while operating machines
- b) Using insulated tools and proper grounding
- c) Avoiding all electrical work
- d) Only working during daylight

Answer: b) Using insulated tools and proper grounding

Explanation: Proper grounding and insulated tools prevent electric shocks, short circuits, and potential fires, ensuring safe handling of electrical equipment.

18. Which of the following best describes a hazard in an occupational environment?

- a) Something that causes pleasure
- b) A potential source of harm or adverse health effect
- c) A machine that increases production
- d) A type of product design

Answer: b) A potential source of harm or adverse health effect

Explanation: A hazard is any condition or element in the workplace that has the potential to cause injury, illness, or damage to people, property, or the environment.

19. When designing a product, which factor ensures safety for end-users?

- a) Using minimal materials
- b) Compliance with ergonomic and safety standards

- c) Reducing production cost
- d) Prioritizing aesthetics over function

Answer: b) Compliance with ergonomic and safety standards

Explanation: Product design must consider user safety, ergonomics, and compliance with regulations to prevent accidents or discomfort during use.

20. Which type of PPE is essential for protection against sparks during welding operations?

- a) Safety shoes
- b) Welding helmet and gloves
- c) Respirator
- d) Earplugs

Answer: b) Welding helmet and gloves

Explanation: Welding produces sparks, ultraviolet radiation, and hot metal fragments. Helmets and gloves protect the face, eyes, and hands from burns and injuries.

21. In the 5S methodology, which step ensures the continuous application of all improvements?

- a) Sort
- b) Sustain
- c) Shine
- d) Standardize

Answer: b) Sustain

Explanation: 'Sustain' involves creating habits, training, and monitoring to maintain the improvements achieved through 5S, ensuring long-term efficiency and safety.

22. Which of the following is a major occupational hazard in a metal design workshop?

- a) Exposure to bright lights
- b) Repetitive strain from drafting
- c) Handling hot metal and sharp tools
- d) Sitting on chairs

Answer: c) Handling hot metal and sharp tools

Explanation: Metal workshops involve risks like cuts, burns, and punctures from sharp and hot materials, requiring proper PPE and safety protocols.

23. For chemical safety, which information is essential on a Material Safety Data Sheet (MSDS)?

- a) Price of the chemical
- b) Manufacturer's address only
- c) Hazards, first aid measures, and handling instructions
- d) Color of the chemical

Answer: c) Hazards, first aid measures, and handling instructions

Explanation: MSDS provides detailed information on chemical properties, potential hazards, handling, storage, and emergency measures to ensure safe use.

24. Which type of fire extinguisher is used for electrical fires in a workshop?

- a) Water-based extinguisher
- b) Foam extinguisher
- c) CO₂ or dry powder extinguisher
- d) Wet chemical extinguisher

Answer: c) CO₂ or dry powder extinguisher

Explanation: CO₂ and dry powder extinguishers are suitable for electrical fires because they do not conduct electricity and can safely suppress flames.

25. What is the main purpose of standardizing procedures in 5S?

- a) To reduce workload only
- b) To ensure consistent safety and efficiency
- c) To avoid employee involvement
- d) To increase production cost

Answer: b) To ensure consistent safety and efficiency

Explanation: Standardization creates uniform procedures, improving workplace efficiency, quality, and safety while making practices easy to follow and sustain.

26. Which type of hazard is caused by exposure to vibrating tools over a long period?

- a) Electrical hazard
- b) Vibration-induced musculoskeletal disorder
- c) Chemical hazard
- d) Thermal burn

Answer: b) Vibration-induced musculoskeletal disorder

Explanation: Prolonged exposure to vibrating tools can damage nerves and tissues, causing disorders like hand-arm vibration syndrome.

27. Which first aid action should be taken for a person suffering from heatstroke?

- a) Give hot water to drink
- b) Move to a cool area and hydrate
- c) Keep the person in direct sunlight
- d) Apply ice directly on the skin

Answer: b) Move to a cool area and hydrate

Explanation: Heatstroke requires immediate cooling and hydration to reduce body temperature and prevent organ failure.

28. Which safety principle is applied when designing a machine to prevent accidental contact with moving parts?

- a) Cost reduction
- b) Ergonomics
- c) Safeguarding
- d) Standardization

Answer: c) Safeguarding

Explanation: Safeguards prevent operators from coming into contact with hazardous machine parts, reducing injury risk.

29. In 5S, which step involves arranging tools and materials in a way that promotes efficiency?

- a) Sort
- b) Set in order
- c) Shine
- d) Sustain

Answer: b) Set in order

Explanation: Set in order organizes tools, materials, and equipment logically for easy access, saving time and reducing mistakes.

30. Which chemical hazard is associated with inhaling dust particles during cutting or grinding?

- a) Allergic reaction
- b) Respiratory irritation
- c) Burns
- d) Electrical shock

Answer: b) Respiratory irritation

Explanation: Dust inhalation can irritate the respiratory tract, cause long-term lung disease, or trigger allergies. Proper masks and ventilation are essential.

31. What is the primary purpose of PPE in an industrial workshop?

- a) To increase production speed
- b) To protect workers from specific hazards
- c) To reduce labor cost
- d) To decorate the workplace

Answer: b) To protect workers from specific hazards

Explanation: PPE such as helmets, gloves, goggles, and respirators provide a barrier against mechanical, chemical, and physical hazards.

32. Which ergonomic practice reduces strain on the eyes during drafting or designing?

- a) Using bright, overhead fluorescent lights only
- b) Maintaining proper distance and adequate lighting
- c) Reading in dim light
- d) Working for extended periods without breaks

Answer: b) Maintaining proper distance and adequate lighting

Explanation: Proper lighting and work distance reduce eye strain and prevent vision-related health issues.

33. Which stage of product development primarily evaluates customer requirements?

- a) Conceptual design stage
- b) Detailed design stage
- c) Prototype stage
- d) Production stage

Answer: a) Conceptual design stage

Explanation: The conceptual stage gathers customer needs and expectations to ensure the product meets market demands.

34. Which 5S step involves checking equipment for wear and tear while cleaning?

- a) Sort
- b) Set in order
- c) Shine
- d) Standardize

Answer: c) Shine

Explanation: Shining includes cleaning and inspecting tools and equipment to identify damage or maintenance requirements, improving safety.

35. What is the correct first aid for a person who receives an electric shock?

- a) Immediately touch the person to move them
- b) Turn off the electricity source and then provide first aid
- c) Pour water on the person
- d) Administer CPR without safety checks

Answer: b) Turn off the electricity source and then provide first aid

Explanation: Never touch a person under electrical current. Cut the power first, then check breathing, pulse, and provide first aid.

36. Which PPE is essential for preventing eye injury from flying particles during grinding?

- a) Respirator
- b) Safety goggles
- c) Safety gloves
- d) Earplugs

Answer: b) Safety goggles

Explanation: Goggles protect eyes from sparks, dust, and debris during operations like grinding or cutting.

37. Which type of hazard is most related to prolonged exposure to loud machinery?

- a) Chemical
- b) Noise-induced hearing loss
- c) Thermal
- d) Mechanical

Answer: b) Noise-induced hearing loss

Explanation: Extended exposure to loud noise damages auditory nerves, causing permanent hearing loss if protective measures like earplugs are not used.

38. During first aid for a fracture, which action is essential?

- a) Move the fractured limb freely
- b) Immobilize the limb with splints
- c) Massage the area
- d) Apply hot water

Answer: b) Immobilize the limb with splints

Explanation: Immobilizing prevents further injury, reduces pain, and facilitates safe transport to medical care.

39. Which 5S principle emphasizes documentation and creating procedures for consistency?

- a) Sort
- b) Set in order
- c) Standardize
- d) Sustain

Answer: c) Standardize

Explanation: Standardization ensures consistent processes, safety, and efficiency, and makes training easier for all personnel.

40. Which hazard arises from improper storage of flammable liquids?

- a) Electrical hazard
- b) Fire hazard
- c) Noise hazard
- d) Ergonomic hazard

Answer: b) Fire hazard

Explanation: Flammable liquids must be stored in proper containers and locations to prevent accidental ignition and potential fire disasters.

41. In a design workshop, what is the safest way to handle sharp tools?

- a) Carry them in pockets
- b) Store in a designated holder or toolbox
- c) Leave on the workbench
- d) Wrap in cloth loosely

Answer: b) Store in a designated holder or toolbox

Explanation: Proper storage prevents accidental cuts and ensures tools are easily accessible when needed.

42. Which occupational health risk is associated with exposure to toxic chemicals over long periods?

- a) Acute injuries
- b) Chronic illnesses like respiratory or liver damage
- c) Fractures
- d) Burns

Answer: b) Chronic illnesses like respiratory or liver damage

Explanation: Toxic chemicals can accumulate in the body, leading to long-term organ damage or systemic diseases.

43. Which stage of product development tests design functionality before mass production?

- a) Prototype stage
- b) Concept stage
- c) Detailed design stage
- d) Marketing stage

Answer: a) Prototype stage

Explanation: Prototypes help identify design flaws, functional issues, and usability problems before large-scale manufacturing.

44. Which PPE is mandatory for handling corrosive acids?

- a) Safety shoes
- b) Chemical-resistant gloves and goggles
- c) Earplugs
- d) Welding mask

Answer: b) Chemical-resistant gloves and goggles

Explanation: Protective gloves and goggles prevent skin and eye contact with corrosive substances, reducing injury risk.

45. Which 5S step involves separating necessary items from unnecessary items?

- a) Sort
- b) Set in order
- c) Shine
- d) Sustain

Answer: a) Sort

Explanation:

Sort: removes unneeded items, reducing clutter and improving efficiency and safety.

46. Which first aid measure is required for nosebleeds?

- a) Tilt head backward
- b) Lean forward and apply pressure to nostrils
- c) Pack with cotton deep inside the nose
- d) Apply heat directly

Answer: b) Lean forward and apply pressure to nostrils

Explanation: Leaning forward prevents blood from entering the throat and applying gentle pressure helps stop bleeding.

47. Which ergonomic principle improves workstation comfort and prevents repetitive strain injuries?

- a) Adjustable seating and proper posture
- b) Using chairs without back support
- c) Keeping monitors at floor level
- d) Extended continuous work hours

Answer: a) Adjustable seating and proper posture

Explanation: Ergonomically designed workstations reduce fatigue, prevent musculoskeletal disorders, and enhance productivity.

48. Which type of fire extinguisher is suitable for paper or wood fires?

- a) Water-based extinguisher
- b) CO₂ extinguisher
- c) Foam extinguisher
- d) Wet chemical extinguisher

Answer: a) Water-based extinguisher

Explanation: Water-based extinguishers cool and suppress Class A fires involving combustibles like paper, wood, or cloth.

49. Which hazard is created by exposed electrical wires in a workshop?

- a) Chemical
- b) Electrical shock
- c) Thermal burn
- d) Noise

Answer: b) Electrical shock

Explanation: Exposed wires can cause electrocution, short circuits, or fire hazards. Proper insulation and regular inspection are critical.

50. Which safety measure is recommended for preventing slips and falls in a workshop?

- a) Ignoring wet floors
- b) Keeping walkways clear and using anti-slip mats
- c) Wearing loose footwear
- d) Walking quickly to save time

Answer: b) Keeping walkways clear and using anti-slip mats

Explanation: Proper housekeeping, clear pathways, and anti-slip flooring reduce the risk of workplace slips, trips, and falls.

51. Which type of injury is commonly caused by repetitive hand movements in drafting or design work?

- a) Fracture
- b) Carpal tunnel syndrome
- c) Burn
- d) Eye strain

Answer: b) Carpal tunnel syndrome

Explanation: Repetitive hand movements can compress the median nerve in the wrist, causing pain, numbness, and weakness in the hand.

52. Which 5S principle encourages employees to maintain improvements consistently over time?

- a) Sort
- b) Set in order
- c) Sustain
- d) Shine

Answer: c) Sustain

Explanation: Sustain focuses on creating habits, training, and audits to ensure that the benefits of 5S are maintained long-term.

53. What is the first step in providing first aid to a person with a suspected spinal injury?

- a) Move them immediately to a comfortable chair
- b) Avoid moving them and call for medical assistance
- c) Make them walk to reduce stiffness
- d) Apply hot compress

Answer: b) Avoid moving them and call for medical assistance

Explanation: Movement can worsen spinal injuries. Stabilizing the person and calling for professional help prevents further damage.

54. In occupational health, which of the following is a psychosocial hazard?

- a) Repetitive strain
- b) Stress due to excessive workload
- c) Exposure to chemicals
- d) Noise from machinery

Answer: b) Stress due to excessive workload

Explanation: Psychosocial hazards relate to mental health, stress, fatigue, and poor work-life balance, affecting employee well-being.

55. Which PPE is essential when working with UV light or lasers in design workshops?

- a) Earplugs
- b) UV-protective goggles
- c) Respirator
- d) Safety shoes

Answer: b) UV-protective goggles

Explanation: UV or laser radiation can damage the eyes. Special goggles absorb harmful wavelengths, preventing injury.

56. Which fire classification corresponds to electrical fires?

- a) Class A
- b) Class B
- c) Class C
- d) Class D

Answer: c) Class C

Explanation: Class C fires involve electrical equipment and require non-conductive extinguishing methods like CO₂ or dry powder.

57. Which type of workplace hazard is caused by slippery floors, uneven surfaces, or obstacles?

- a) Chemical hazard
- b) Mechanical hazard
- c) Physical hazard
- d) Biological hazard

Answer: c) Physical hazard

Explanation: Slips, trips, and falls are physical hazards that can result in injuries if proper housekeeping and flooring precautions are not taken.

58. During first aid for minor cuts, which of the following is essential?

- a) Clean the wound, apply antiseptic, and cover with a sterile bandage
- b) Apply glue immediately
- c) Leave the wound open
- d) Rub alcohol directly without cleaning

Answer: a) Clean the wound, apply antiseptic, and cover with a sterile bandage

Explanation: Proper cleaning prevents infection and promotes healing, while sterile dressing protects the wound.

59. Which 5S step involves labeling and arranging tools for easy access?

- a) Sort

- b) Set in order
- c) Shine
- d) Standardize

Answer: b) Set in order

Explanation: Proper arrangement and labeling reduce time searching for tools and enhance workflow efficiency.

60. Which occupational hazard is associated with continuous exposure to vibration from heavy equipment?

- a) Burn
- b) Vibration-induced white finger
- c) Eye strain
- d) Nosebleed

Answer: b) Vibration-induced white finger

Explanation: Long-term vibration exposure damages blood vessels in fingers, causing numbness, pain, and reduced dexterity.

61. Which first aid measure is recommended for a person fainting?

- a) Stand them upright immediately
- b) Lay them flat, elevate legs, and ensure fresh air
- c) Give them hot drinks
- d) Shake them vigorously

Answer: b) Lay them flat, elevate legs, and ensure fresh air

Explanation: This restores blood flow to the brain and helps the person regain consciousness safely.

62. Which type of PPE is necessary for handling toxic powders?

- a) Respirator, gloves, and goggles
- b) Safety shoes only
- c) Earplugs
- d) Welding helmet

Answer: a) Respirator, gloves, and goggles

Explanation: Protective equipment prevents inhalation, skin contact, and eye exposure to toxic substances.

63. Which hazard is related to poor workstation design causing strain on the back and neck?

- a) Chemical hazard
- b) Ergonomic hazard
- c) Noise hazard
- d) Fire hazard

Answer: b) Ergonomic hazard

Explanation: Improper workstation height, seating, or posture leads to musculoskeletal problems and chronic pain.

64. During product development, which activity ensures feasibility of production methods?

- a) Conceptual design
- b) Process planning
- c) Marketing
- d) Post-sales service

Answer: b) Process planning

Explanation: Process planning evaluates production methods, resource requirements, and safety considerations for efficient manufacturing.

65. Which 5S step involves regular inspection to maintain cleanliness and efficiency?

- a) Sort
- b) Shine
- c) Standardize
- d) Sustain

Answer: b) Shine

Explanation: Shining includes cleaning and inspection to detect issues early and maintain a safe and efficient workspace.

66. Which PPE is necessary for protecting feet from heavy falling objects in workshops?

- a) Safety shoes with steel toe caps
- b) Sandals
- c) Regular shoes
- d) Barefoot

Answer: a) Safety shoes with steel toe caps

Explanation: Steel-toe shoes protect feet from crushing injuries caused by falling tools or heavy materials.

67. Which first aid action is appropriate for an insect bite causing allergic reaction?

- a) Leave it untreated
- b) Wash the area and monitor for symptoms, use antihistamines if needed
- c) Apply ice immediately without cleaning
- d) Cover tightly with cloth

Answer: b) Wash the area and monitor for symptoms, use antihistamines if needed

Explanation: Cleaning prevents infection, and antihistamines help reduce allergic reactions. Seek medical attention if severe.

68. Which hazard is related to improper handling of hot metal during design work?

- a) Burn hazard
- b) Chemical hazard
- c) Noise hazard
- d) Ergonomic hazard

Answer: a) Burn hazard

Explanation: Hot metal can cause skin burns. PPE like gloves and aprons prevent injury.

69. Which 5S principle encourages documenting procedures and creating visual management tools?

- a) Sort
- b) Standardize
- c) Shine
- d) Sustain

Answer: b) Standardize

Explanation: Standardization ensures consistent work methods, safety, and quality by using checklists, labels, and SOPs.

70. Which type of fire extinguisher is suitable for flammable liquid fires like oil or paint?

- a) Water-based
- b) Foam or dry chemical
- c) CO₂
- d) Wet chemical

Answer: b) Foam or dry chemical

Explanation: Flammable liquids (Class B fires) require foam or dry chemical extinguishers that suppress flames without spreading them.

71. Which type of hazard is posed by prolonged exposure to cold environments?

- a) Thermal hazard
- b) Electrical hazard
- c) Chemical hazard
- d) Ergonomic hazard

Answer: a) Thermal hazard

Explanation: Cold exposure can cause hypothermia, frostbite, and reduced dexterity. Protective clothing and breaks are essential.

72. Which ergonomic design principle reduces eye strain for designers using monitors?

- a) Monitor at eye level, proper lighting, and breaks
- b) Monitor on the floor
- c) Use only one light source behind the screen
- d) Continuous work without breaks

Answer: a) Monitor at eye level, proper lighting, and breaks

Explanation: Proper monitor positioning and adequate lighting prevent eye fatigue and posture-related issues.

73. Which first aid treatment is recommended for a minor burn?

- a) Apply cold water for at least 10–20 minutes
- b) Apply ice directly
- c) Use oil immediately
- d) Rub salt on the burn

Answer: a) Apply cold water for at least 10–20 minutes

Explanation: Cold water cools the burn, reduces tissue damage, and relieves pain. Avoid ice or oils that may worsen the injury.

74. Which type of hazard arises from poor ventilation in a design workshop?

- a) Chemical inhalation hazard
- b) Burn hazard
- c) Electrical hazard
- d) Noise hazard

Answer: a) Chemical inhalation hazard

Explanation: Poor ventilation allows accumulation of toxic fumes or dust, increasing respiratory risks.

75. Which PPE is mandatory when cutting metal using power tools?

- a) Safety goggles, gloves, and ear protection
- b) Sandals
- c) Respirator only
- d) Apron only

Answer: a) Safety goggles, gloves, and ear protection

Explanation: Power tools generate sparks, metal debris, and loud noise. Full PPE protects eyes, hands, and hearing.

76. Which type of hazard is caused by excessive vibration from hand tools and machinery?

- a) Chemical hazard
- b) Vibration-induced musculoskeletal disorder
- c) Noise hazard
- d) Thermal hazard

Answer: b) Vibration-induced musculoskeletal disorder

Explanation: Prolonged exposure to vibration can damage nerves, blood vessels, and muscles, causing pain, numbness, and reduced grip strength.

77. During first aid for fainting, what is the proper action?

- a) Lay the person flat, elevate legs, and ensure fresh air
- b) Give hot drinks immediately
- c) Keep the person sitting upright
- d) Shake the person to regain consciousness

Answer: a) Lay the person flat, elevate legs, and ensure fresh air

Explanation: This position helps restore blood flow to the brain, preventing injury and aiding recovery.

78. Which PPE is essential when handling toxic liquids in a workshop?

- a) Gloves, goggles, and apron
- b) Safety shoes only
- c) Earplugs only
- d) Welding mask only

Answer: a) Gloves, goggles, and apron

Explanation: Protective clothing prevents skin, eye, and body contact with toxic or corrosive substances.

79. Which 5S principle focuses on removing unnecessary items to reduce clutter?

- a) Shine

- b) Sort
- c) Standardize
- d) Sustain

Answer: b) Sort

Explanation: Sorting eliminates unneeded tools and materials, improving workflow, safety, and efficiency.

80. Which first aid measure is appropriate for a person with a sprained ankle?

- a) Apply heat immediately
- b) Rest, ice, compression, and elevation (RICE)
- c) Massage vigorously
- d) Keep walking to avoid stiffness

Answer: b) Rest, ice, compression, and elevation (RICE)

Explanation: The RICE method reduces swelling, pain, and promotes healing of sprained ligaments.

81. Which type of fire extinguisher is suitable for flammable gases?

- a) Water-based extinguisher
- b) Dry chemical or CO₂ extinguisher
- c) Foam extinguisher
- d) Wet chemical extinguisher

Answer: b) Dry chemical or CO₂ extinguisher

Explanation: Flammable gases (Class B/C) require non-conductive extinguishing agents to prevent ignition and spread.

82. Which hazard arises from poor ergonomics while sitting at drafting tables?

- a) Chemical hazard
- b) Musculoskeletal disorder
- c) Electrical hazard
- d) Fire hazard

Answer: b) Musculoskeletal disorder

Explanation: Poor seating posture can cause back, neck, and shoulder strain over time, leading to chronic discomfort and injury.

83. During product development, which stage ensures functional testing of prototypes?

- a) Concept design stage
- b) Prototype testing stage
- c) Marketing stage
- d) Mass production stage

Answer: b) Prototype testing stage

Explanation: Prototypes are tested for functionality, safety, and usability to identify design flaws before production.

84. Which PPE is critical when welding metals?

- a) Welding helmet, gloves, and apron
- b) Earplugs only
- c) Respirator only
- d) Safety shoes only

Answer: a) Welding helmet, gloves, and apron

Explanation: Welding produces sparks, heat, and UV radiation; proper PPE prevents burns, eye damage, and clothing ignition.

85. Which 5S principle involves arranging tools and materials for efficient workflow?

- a) Sort
- b) Set in order
- c) Shine
- d) Sustain

Answer: b) Set in order

Explanation: Proper organization reduces time searching for tools, improves productivity, and minimizes accidents.

86. Which first aid measure is appropriate for minor chemical splashes in the eye?

- a) Rinse immediately with plenty of running water for at least 15 minutes
- b) Rub eyes vigorously
- c) Apply ointment immediately
- d) Close eyes and wait

Answer: a) Rinse immediately with plenty of running water for at least 15 minutes

Explanation: Immediate flushing removes chemicals and prevents severe eye damage. Medical attention should follow.

87. Which type of PPE protects hearing from continuous exposure to loud machinery?

- a) Safety goggles
- b) Earplugs or earmuffs
- c) Gloves
- d) Apron

Answer: b) Earplugs or earmuffs

Explanation: Prolonged exposure to high decibel noise can cause permanent hearing loss. Ear protection mitigates this risk.

88. Which occupational hazard is associated with handling hot surfaces or molten metals?

- a) Electrical hazard
- b) Thermal/burn hazard
- c) Chemical hazard
- d) Noise hazard

Answer: b) Thermal/burn hazard

Explanation: Exposure to heat or molten metals can cause burns. PPE like gloves and aprons prevents injury.

89. Which first aid action is suitable for a nosebleed?

- a) Tilt head backward
- b) Lean forward and pinch nostrils for 10 minutes

- c) Pack cotton deep inside the nostrils
- d) Apply heat directly

Answer: b) Lean forward and pinch nostrils for 10 minutes

Explanation: Leaning forward prevents blood from flowing into the throat, and pressure helps stop bleeding.

90. Which type of hazard arises from inhaling dust or fumes in workshops?

- a) Chemical/respiratory hazard
- b) Electrical hazard
- c) Physical hazard
- d) Fire hazard

Answer: a) Chemical/respiratory hazard

Explanation: Inhalation of harmful particles or fumes can cause lung irritation, chronic respiratory disease, or allergies.

91. Which PPE is essential when handling sharp cutting tools?

- a) Cut-resistant gloves
- b) Earplugs
- c) Safety goggles only
- d) Safety shoes only

Answer: a) Cut-resistant gloves

Explanation: Gloves prevent lacerations and puncture injuries while handling knives or blades.

92. Which 5S principle ensures procedures and standards are consistently followed?

- a) Shine
- b) Standardize
- c) Sort
- d) Sustain

Answer: b) Standardize

Explanation: Standardization maintains consistent practices, enhances safety, and improves efficiency in the workplace.

93. Which stage of product development involves assessing the market feasibility of a new product?

- a) Concept design stage
- b) Market research and feasibility analysis
- c) Prototype stage
- d) Mass production

Answer: b) Market research and feasibility analysis

Explanation: Market research ensures the product meets customer needs and identifies potential risks before production.

94. Which first aid measure is recommended for minor cuts?

- a) Clean, apply antiseptic, and cover with sterile bandage
- b) Apply glue immediately
- c) Leave open to air
- d) Apply ice

Answer: a) Clean, apply antiseptic, and cover with sterile bandage

Explanation: Cleaning prevents infection and covering protects the wound, promoting healing.

95. Which type of hazard is caused by poorly maintained electrical equipment?

- a) Chemical hazard
- b) Electrical shock/fire hazard
- c) Noise hazard
- d) Ergonomic hazard

Answer: b) Electrical shock/fire hazard

Explanation: Faulty or damaged equipment increases the risk of electric shock or fires. Regular inspections prevent accidents.

96. Which PPE is mandatory for eye protection when using power tools that generate flying particles?

- a) Safety goggles
- b) Earplugs
- c) Gloves only
- d) Respirator only

Answer: a) Safety goggles

Explanation: Flying debris can cause eye injuries. Goggles provide full protection during grinding or cutting operations.

97. Which 5S step encourages continuous improvement and long-term practice?

- a) Sort
- b) Sustain
- c) Shine
- d) Standardize

Answer: b) Sustain

Explanation: Sustain ensures the 5S principles are embedded in workplace culture through training, audits, and habit formation.

98. Which type of hazard arises from prolonged standing or repetitive movements?

- a) Chemical hazard
- b) Musculoskeletal/ergonomic hazard
- c) Electrical hazard
- d) Fire hazard

Answer: b) Musculoskeletal/ergonomic hazard

Explanation: Poor ergonomics and repetitive work cause fatigue, pain, and long-term musculoskeletal disorders.

99. During first aid for a suspected fracture, what is the recommended action?

- a) Move the limb freely
- b) Immobilize with splints and seek medical help
- c) Massage the area
- d) Apply heat

Answer: b) Immobilize with splints and seek medical help

Explanation: Immobilization prevents further injury and reduces pain until professional treatment is available.

100. Which PPE is required to prevent inhalation of dust during sanding operations?

- a) Safety goggles
- b) Respirator or dust mask
- c) Earplugs
- d) Gloves

Answer: b) Respirator or dust mask

Explanation: Masks prevent inhalation of fine dust particles that can cause respiratory problems.

101. Which occupational hazard is caused by prolonged exposure to extreme heat in a workshop?

- a) Hypothermia
- b) Heatstroke and dehydration
- c) Frostbite
- d) Noise-induced hearing loss

Answer: b) Heatstroke and dehydration

Explanation: High temperatures cause body overheating and fluid loss, leading to heat-related illnesses. Proper hydration and breaks are essential.

102. Which 5S step focuses on maintaining cleanliness and inspecting tools regularly?

- a) Sort
- b) Shine
- c) Standardize
- d) Sustain

Answer: b) Shine

Explanation: Shining involves cleaning and inspecting equipment to ensure functionality and prevent accidents.

103. Which PPE is critical for protection against molten metal splashes?

- a) Gloves, apron, and face shield
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

Answer: a) Gloves, apron, and face shield

Explanation: Molten metal can cause severe burns; protective clothing and shields prevent injuries.

104. Which first aid action is suitable for a person experiencing shock?

- a) Lay them down and elevate legs
- b) Let them walk to relieve symptoms
- c) Give them food immediately
- d) Ignore symptoms

Answer: a) Lay them down and elevate legs

Explanation: This helps improve blood flow to vital organs until professional medical care arrives.

105. During product development, which activity identifies material and manufacturing requirements?

- a) Conceptual design
- b) Detailed design stage
- c) Market research
- d) Prototype testing

Answer: b) Detailed design stage

Explanation: Detailed design ensures the product is manufacturable, safe, and cost-effective while meeting quality standards.

106. Which type of hazard arises from inhaling fine dust particles during cutting or grinding?

- a) Noise hazard
- b) Respiratory hazard
- c) Burn hazard
- d) Ergonomic hazard

Answer: b) Respiratory hazard

Explanation: Dust inhalation can cause respiratory irritation, chronic lung diseases, or allergies; dust masks are essential.

107. Which 5S principle emphasizes documenting work standards and procedures?

- a) Sort
- b) Standardize
- c) Shine
- d) Set in order

Answer: b) Standardize

Explanation: Standardization ensures consistent safety and workflow practices across all personnel.

108. Which PPE is mandatory for eye protection while using power tools that produce flying debris?

- a) Safety goggles
- b) Dust mask
- c) Earplugs
- d) Safety shoes

Answer: a) Safety goggles

Explanation: Flying particles can cause eye injuries; goggles provide full protection.

109. Which first aid measure is recommended for minor burns?

- a) Apply cold water for 10–20 minutes
- b) Rub ice directly
- c) Apply butter or oil
- d) Cover immediately with bandage

Answer: a) Apply cold water for 10-20 minutes

Explanation: Cooling the burn prevents tissue damage and alleviates pain; avoid ice or oil.

110. Which occupational hazard arises from prolonged use of vibrating machinery?

- a) Electrical hazard
- b) Vibration-induced hand-arm syndrome
- c) Chemical hazard
- d) Fire hazard

Answer: b) Vibration-induced hand-arm syndrome

Explanation: Prolonged vibration damages blood vessels and nerves, causing numbness, tingling, and reduced grip strength.

111. Which PPE is essential for handling corrosive chemicals?

- a) Chemical-resistant gloves, apron, and goggles
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

Answer: a) Chemical-resistant gloves, apron, and goggles

Explanation: These protect skin, eyes, and clothing from corrosive damage.

112. Which 5S step focuses on arranging tools and materials for quick access?

- a) Sort

- b) Set in order
- c) Shine
- d) Sustain

Answer: b) Set in order

Explanation: Proper arrangement and labeling reduce time searching for tools, improve efficiency, and enhance safety.

113. Which first aid action is appropriate for a person with a nosebleed?

- a) Tilt head backward
- b) Lean forward and pinch nostrils
- c) Pack cotton deeply inside
- d) Apply heat directly

Answer: b) Lean forward and pinch nostrils

Explanation: This prevents blood from entering the throat and promotes clotting.

114. Which type of hazard is caused by poor workstation ergonomics?

- a) Chemical hazard
- b) Musculoskeletal disorder
- c) Electrical hazard
- d) Noise hazard

Answer: b) Musculoskeletal disorder

Explanation: Improper posture and repetitive movements strain muscles and joints, causing chronic injuries.

115. Which stage of product development tests design feasibility before mass production?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

Answer: a) Prototype testing

Explanation: Testing prototypes ensures design functionality, safety, and user requirements before large-scale manufacturing.

116. Which PPE is required for protection against loud workshop noise?

- a) Earplugs or earmuffs
- b) Safety goggles
- c) Gloves
- d) Apron

Answer: a) Earplugs or earmuffs

Explanation: Long-term exposure to high decibel noise can cause permanent hearing loss.

117. Which first aid measure is appropriate for a sprained wrist?

- a) RICE – Rest, Ice, Compression, Elevation
- b) Massage vigorously
- c) Apply heat immediately
- d) Keep moving the wrist

Answer: a) RICE – Rest, Ice, Compression, Elevation

Explanation: The RICE method reduces swelling, pain, and promotes healing of ligaments.

118. Which occupational hazard arises from slippery floors?

- a) Chemical hazard
- b) Slip, trip, and fall hazard
- c) Noise hazard
- d) Burn hazard

Answer: b) Slip, trip, and fall hazard

Explanation: Proper housekeeping and anti-slip flooring prevent accidental injuries.

119. Which PPE is necessary when handling sharp cutting tools?

- a) Cut-resistant gloves
- b) Earplugs
- c) Safety shoes only
- d) Safety goggles only

Answer: a) Cut-resistant gloves

Explanation: Gloves prevent lacerations and puncture injuries.

120. Which 5S principle ensures long-term adherence to workplace improvements?

- a) Sustain

- b) Sort
- c) Shine
- d) Set in order

Answer: a) Sustain

Explanation: Sustain reinforces training, audits, and habitual adherence to 5S practices.

121. Which first aid action is suitable for a chemical burn on the skin?

- a) Wash immediately with plenty of water
- b) Apply oil
- c) Cover without washing
- d) Rub alcohol

Answer: a) Wash immediately with plenty of water

Explanation: Immediate rinsing removes chemicals and prevents tissue damage.

122. Which stage of product development focuses on converting concepts into detailed drawings?

- a) Detailed design stage
- b) Conceptual design
- c) Prototype testing
- d) Marketing

Answer: a) Detailed design stage

Explanation: Detailed drawings provide specifications, materials, and manufacturing instructions.

123. Which occupational hazard is associated with prolonged computer work?

- a) Eye strain and repetitive strain injury
- b) Chemical exposure
- c) Burn hazard
- d) Noise exposure

Answer: a) Eye strain and repetitive strain injury

Explanation: Extended computer use causes visual fatigue, wrist pain, and musculoskeletal disorders.

124. Which PPE is essential when working with power grinders?

- a) Safety goggles, gloves, and ear protection
- b) Safety shoes only
- c) Dust mask only
- d) Apron only

Answer: a) Safety goggles, gloves, and ear protection

Explanation: Protects against flying debris, sparks, and loud noise.

125. Which 5S principle involves regular inspections to detect equipment wear and safety issues?

- a) Shine
- b) Set in order

- c) Standardize
- d) Sustain

Answer: a) Shine

Explanation: Regular cleaning and inspection ensure equipment functionality and a safe working environment.

126. Which occupational hazard arises from improper lifting techniques?

- a) Chemical burns
- b) Musculoskeletal injury
- c) Noise exposure
- d) Electrical shock

Answer: b) Musculoskeletal injury

Explanation: Improper lifting strains the back, shoulders, and knees, potentially causing chronic injury.

127. Which PPE is required to protect hands from hot metal surfaces?

- a) Heat-resistant gloves
- b) Earplugs
- c) Safety goggles
- d) Apron only

Answer: a) Heat-resistant gloves

Explanation: Gloves prevent burns when handling hot metals or tools.

128. Which 5S principle involves arranging items so that frequently used tools are easily accessible?

- a) Set in order
- b) Shine
- c) Standardize
- d) Sort

Answer: a) Set in order

Explanation: Organizing tools logically improves efficiency and reduces time spent searching.

129. Which first aid measure is recommended for a deep cut?

- a) Clean, apply pressure to stop bleeding, and cover with sterile dressing
- b) Leave open to air
- c) Apply oil
- d) Rinse with water only

Answer: a) Clean, apply pressure to stop bleeding, and cover with sterile dressing

Explanation: Stopping bleeding and preventing infection are the priority. Professional medical attention may be required.

130. Which stage of product development focuses on testing the product under real conditions?

- a) Prototype testing
- b) Detailed design

- c) Conceptual design
- d) Market research

Answer: a) Prototype testing

Explanation: Testing prototypes identifies functional issues, safety concerns, and improvements before mass production.

131. Which hazard is caused by prolonged exposure to loud machinery?

- a) Noise-induced hearing loss
- b) Eye strain
- c) Burn
- d) Chemical exposure

Answer: a) Noise-induced hearing loss

Explanation: Consistent high-decibel exposure damages auditory nerves. Ear protection prevents permanent loss.

132. Which PPE is essential when handling flammable liquids?

- a) Chemical-resistant gloves and goggles
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

Answer: a) Chemical-resistant gloves and goggles

Explanation: These prevent burns, eye damage, and chemical absorption through skin.

133. Which 5S principle emphasizes continuous adherence to workplace standards?

- a) Sustain
- b) Sort
- c) Shine
- d) Set in order

Answer: a) Sustain

Explanation: Sustain ensures training, audits, and habit formation maintain 5S practices long-term.

134. Which first aid measure is recommended for minor burns?

- a) Apply cold running water for 10–20 minutes
- b) Apply butter or oil
- c) Rub ice directly
- d) Cover immediately without cooling

Answer: a) Apply cold running water for 10–20 minutes

Explanation: Cooling the burn prevents tissue damage and reduces pain.

135. Which occupational hazard is caused by exposure to toxic fumes?

- a) Respiratory diseases
- b) Electrical shock
- c) Burn
- d) Noise hazard

Answer: a) Respiratory diseases

Explanation: Inhaling toxic gases can damage the lungs and other organs; proper ventilation and PPE are required.

136. Which PPE protects eyes from UV light during welding?

- a) UV-protective welding goggles
- b) Earplugs
- c) Gloves only
- d) Apron only

Answer: a) UV-protective welding goggles

Explanation: UV radiation can damage eyes; protective goggles prevent corneal injuries and burns.

137. Which 5S principle focuses on cleaning and inspecting the workplace regularly?

- a) Shine
- b) Sort
- c) Set in order
- d) Standardize

Answer: a) Shine

Explanation: Regular cleaning ensures equipment functionality and a safe, efficient environment.

138. Which hazard arises from slippery or cluttered walkways?

- a) Slip, trip, and fall hazard

- b) Noise hazard
- c) Chemical hazard
- d) Electrical hazard

Answer: a) Slip, trip, and fall hazard

Explanation: Housekeeping and anti-slip measures prevent workplace accidents.

139. Which first aid action is recommended for a person experiencing shock?

- a) Lay flat, elevate legs, and maintain calm
- b) Make the person walk
- c) Give food immediately
- d) Ignore symptoms

Answer: a) Lay flat, elevate legs, and maintain calm

Explanation: Improves blood flow to vital organs until professional care is available.

140. Which stage of product development converts ideas into technical drawings and specifications?

- a) Detailed design stage
- b) Conceptual design
- c) Prototype testing
- d) Marketing stage

Answer: a) Detailed design stage

Explanation: Detailed design provides precise instructions for manufacturing and ensures safety and quality.

141. Which PPE is required to prevent inhalation of dust during sanding operations?

- a) Respirator or dust mask
- b) Gloves only
- c) Earplugs only
- d) Safety goggles only

Answer: a) Respirator or dust mask

Explanation: Masks prevent inhalation of harmful dust particles, reducing respiratory risks.

142. Which occupational hazard arises from prolonged computer work?

- a) Eye strain and repetitive strain injury
- b) Burn
- c) Chemical exposure
- d) Noise exposure

Answer: a) Eye strain and repetitive strain injury

Explanation: Extended computer use without proper ergonomics causes visual fatigue and musculoskeletal problems.

143. Which first aid measure is appropriate for a sprained ankle?

- a) RICE – Rest, Ice, Compression, Elevation

- b) Heat application immediately
- c) Massage vigorously
- d) Keep moving the ankle

Answer: a) RICE – Rest, Ice, Compression, Elevation

Explanation: Reduces swelling, alleviates pain, and promotes ligament healing.

144. Which 5S principle involves identifying and removing unnecessary items?

- a) Sort
- b) Set in order
- c) Shine
- d) Sustain

Answer: a) Sort

Explanation: Eliminating clutter improves workflow, safety, and efficiency.

145. Which PPE protects hands from cuts while handling sharp tools?

- a) Cut-resistant gloves
- b) Earplugs
- c) Safety goggles only
- d) Safety shoes only

Answer: a) Cut-resistant gloves

Explanation: Gloves prevent lacerations and puncture injuries.

146. Which hazard is caused by improper storage of flammable liquids?

- a) Fire hazard

- b) Electrical hazard
- c) Ergonomic hazard
- d) Noise hazard

Answer: a) Fire hazard

Explanation: Flammable liquids must be stored properly to prevent accidental ignition.

147. Which first aid action is recommended for a nosebleed?

- a) Lean forward and pinch nostrils
- b) Tilt head backward
- c) Pack cotton deep inside
- d) Apply heat directly

Answer: a) Lean forward and pinch nostrils

Explanation: Prevents blood from entering the throat and allows clotting.

148. Which stage of product development ensures usability and functionality?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

Answer: a) Prototype testing

Explanation: Testing under real conditions ensures the product works safely and meets requirements.

149. Which PPE is required when handling corrosive acids?

- a) Chemical-resistant gloves, goggles, and apron
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

Answer: a) Chemical-resistant gloves, goggles, and apron

Explanation: Protects skin and eyes from chemical burns.

150. Which 5S principle involves maintaining procedures, standards, and visual management?

- a) Standardize
- b) Shine
- c) Sort
- d) Set in order

Answer: a) Standardize

Explanation: Ensures consistent workflow, safety, and quality across personnel.

151. Which occupational hazard arises from prolonged exposure to cold environments?

- a) Hypothermia and frostbite
- b) Heatstroke
- c) Noise-induced hearing loss
- d) Chemical burns

Answer: a) Hypothermia and frostbite

Explanation: Cold exposure lowers body temperature and can damage extremities; protective clothing and breaks are essential.

152. Which 5S principle emphasizes cleaning and inspecting tools and workplace regularly?

- a) Shine
- b) Sort
- c) Standardize
- d) Sustain

Answer: a) Shine

Explanation: Regular cleaning detects faults early, improves safety, and ensures an organized workspace.

153. Which PPE protects eyes from flying particles during grinding operations?

- a) Safety goggles
- b) Earplugs only
- c) Gloves only
- d) Apron only

Answer: a) Safety goggles

Explanation: Flying debris can cause severe eye injuries; goggles offer full protection.

154. Which first aid measure is recommended for a person experiencing shock?

- a) Lay flat, elevate legs, and maintain calm
- b) Make them walk
- c) Give food immediately
- d) Ignore symptoms

Answer: a) Lay flat, elevate legs, and maintain calm

Explanation: Promotes blood flow to vital organs until professional medical help arrives.

155. Which stage of product development involves selecting materials and determining manufacturing methods?

- a) Detailed design stage
- b) Conceptual design
- c) Market research
- d) Prototype testing

Answer: a) Detailed design stage

Explanation: Material selection and process planning ensure functionality, safety, and manufacturability.

156. Which occupational hazard arises from repetitive hand movements during drafting?

- a) Carpal tunnel syndrome
- b) Chemical exposure
- c) Noise hazard
- d) Burn hazard

Answer: a) Carpal tunnel syndrome

Explanation: Repetitive movements compress nerves in the wrist, causing pain, numbness, and weakness.

157. Which PPE is essential when working with molten metals?

- a) Gloves, apron, and face shield
- b) Safety shoes only
- c) Dust mask only
- d) Earplugs only

Answer: a) Gloves, apron, and face shield

Explanation: Protects against burns and eye damage from splashes and sparks.

158. Which 5S principle focuses on removing unnecessary items from the workplace?

- a) Sort
- b) Set in order
- c) Shine
- d) Standardize

Answer: a) Sort

Explanation: Eliminating clutter improves safety, efficiency, and workflow.

159. Which first aid measure is suitable for a minor chemical splash on skin?

- a) Wash immediately with running water
- b) Apply oil

- c) Cover without washing
- d) Rub alcohol

Answer: a) Wash immediately with running water

Explanation: Removes chemicals to prevent burns or skin damage.

160. Which hazard is caused by poor ventilation in workshops?

- a) Respiratory hazard
- b) Fire hazard
- c) Electrical hazard
- d) Noise hazard

Answer: a) Respiratory hazard

Explanation: Accumulation of dust, fumes, or chemicals can cause respiratory illnesses: proper ventilation is essential.

161. Which PPE is required to prevent hearing damage from loud machinery?

- a) Earplugs or earmuffs
- b) Safety goggles
- c) Gloves only
- d) Apron only

Answer: a) Earplugs or earmuffs

Explanation: Long-term exposure to high decibel noise can cause permanent hearing loss.

162. Which first aid action is appropriate for a sprained wrist?

- a) RICE – Rest, Ice, Compression, Elevation
- b) Massage vigorously
- c) Heat immediately
- d) Keep moving

Answer: a) RICE – Rest, Ice, Compression, Elevation

Explanation: Reduces swelling and promotes healing of ligaments.

163. Which occupational hazard arises from cluttered or obstructed walkways?

- a) Slip, trip, and fall hazard
- b) Chemical hazard
- c) Electrical hazard
- d) Burn hazard

Answer: a) Slip, trip, and fall hazard

Explanation: Good housekeeping prevents accidents in the workplace.

164. Which PPE is essential for handling sharp tools?

- a) Cut-resistant gloves
- b) Earplugs only
- c) Safety shoes only
- d) Safety goggles only

Answer: a) Cut-resistant gloves

Explanation: Prevents lacerations and puncture injuries.

165. Which hazard is caused by improper storage of flammable liquids?

- a) Fire hazard
- b) Noise hazard
- c) Electrical hazard
- d) Ergonomic hazard

Answer: a) Fire hazard

Explanation: Flammable liquids must be stored safely to prevent ignition.

166. Which 5S principle ensures long-term maintenance of workplace standards?

- a) Sustain
- b) Shine
- c) Set in order
- d) Sort

Answer: a) Sustain

Explanation: Reinforces training, audits, and habitual adherence to 5S practices.

167. Which first aid action is recommended for a nosebleed?

- a) Lean forward and pinch nostrils
- b) Tilt head backward
- c) Pack cotton deep inside
- d) Apply heat directly

Answer: a) Lean forward and pinch nostrils

Explanation: Prevents blood from entering the throat and promotes clotting.

168. Which stage of product development ensures functionality before mass production?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

Answer: a) Prototype testing

Explanation: Testing identifies design flaws and ensures the product meets requirements.

169. Which PPE is required when handling corrosive chemicals?

- a) Chemical-resistant gloves, goggles, and apron
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

Answer: a) Chemical-resistant gloves, goggles, and apron

Explanation: Protects skin and eyes from chemical burns.

170. Which 5S principle involves standardizing work procedures and visual management?

- a) Standardize
- b) Shine

- c) Sort
- d) Set in order

Answer: a) Standardize

Explanation: Ensures consistent workflow, safety, and quality.

171. Which occupational hazard arises from prolonged computer use?

- a) Eye strain and repetitive strain injury
- b) Chemical exposure
- c) Burn hazard
- d) Noise hazard

Answer: a) Eye strain and repetitive strain injury

Explanation: Extended work without ergonomic practices causes visual fatigue and musculoskeletal disorders.

172. Which PPE is required when using power grinders?

- a) Safety goggles, gloves, and ear protection
- b) Safety shoes only
- c) Dust mask only
- d) Apron only

Answer: a) Safety goggles, gloves, and ear protection

Explanation: Protects against flying debris, sparks, and loud noise.

173. Which first aid measure is recommended for minor cuts?

- a) Clean, apply antiseptic, and cover with sterile dressing

- b) Leave open to air
- c) Apply glue immediately
- d) Apply ice

Answer: a) Clean, apply antiseptic, and cover with sterile dressing

Explanation: Prevents infection and promotes healing.

174. Which hazard arises from prolonged exposure to vibrating machinery?

- a) Vibration-induced hand-arm syndrome
- b) Electrical hazard
- c) Chemical exposure
- d) Burn hazard

Answer: a) Vibration-induced hand-arm syndrome

Explanation: Prolonged vibration damages blood vessels and nerves, causing numbness and reduced grip strength.

175. Which PPE is essential when handling hot metal surfaces?

- a) Heat-resistant gloves
- b) Safety shoes only
- c) Safety goggles only
- d) Earplugs only

Answer: a) Heat-resistant gloves

Explanation: Protects hands from burns while handling hot metals.

176. Which 5S principle involves arranging items for easy accessibility?

- a) Set in order
- b) Shine
- c) Standardize
- d) Sort

Answer: a) Set in order

Explanation: Reduces time searching for tools and improves efficiency.

177. Which first aid measure is appropriate for a chemical eye splash?

- a) Rinse with running water for at least 15 minutes
- b) Rub eyes vigorously
- c) Apply ointment immediately
- d) Close eyes and wait

Answer: a) Rinse with running water for at least 15 minutes

Explanation: Flushing removes harmful chemicals and prevents severe eye damage.

178. Which hazard arises from improper workstation ergonomics?

- a) Musculoskeletal disorder
- b) Burn
- c) Chemical exposure
- d) Electrical hazard

Answer: a) Musculoskeletal disorder

Explanation: Poor posture and repetitive work strain muscles and joints, leading to injury.

179. Which PPE is required for protection against molten metal splashes?

- a) Gloves, apron, and face shield
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

Answer: a) Gloves, apron, and face shield

Explanation: Prevents burns and eye injuries.

180. Which first aid measure is recommended for a suspected fracture?

- a) Immobilize with splints and seek medical help
- b) Move the limb freely
- c) Massage
- d) Apply heat

Answer: a) Immobilize with splints and seek medical help

Explanation: Prevents further injury and reduces pain until professional treatment is available.

181. Which occupational hazard arises from prolonged exposure to noise?

- a) Hearing loss
- b) Burn

- c) Chemical exposure
- d) Musculoskeletal disorder

Answer: a) Hearing loss

Explanation: High-decibel noise damages auditory nerves: ear protection is essential.

182. Which 5S principle focuses on removing unnecessary items?

- a) Sort
- b) Set in order
- c) Shine
- d) Standardize

Answer: a) Sort

Explanation: Eliminates clutter to improve safety and efficiency.

183. Which PPE is required for chemical handling?

- a) Gloves, apron, and goggles
- b) Earplugs only
- c) Dust mask only
- d) Safety shoes only

Answer: a) Gloves, apron, and goggles

Explanation: Protects skin and eyes from chemical burns.

184. Which first aid measure is suitable for minor burns?

- a) Apply cold water for 10–20 minutes

- b) Apply butter
- c) Rub ice
- d) Cover without cooling

Answer: a) Apply cold water for 10-20 minutes

Explanation: Cooling prevents tissue damage and reduces pain.

185. Which hazard is caused by poor ventilation in workshops?

- a) Respiratory hazard
- b) Burn
- c) Noise
- d) Electrical hazard

Answer: a) Respiratory hazard

Explanation: Accumulation of dust or fumes causes respiratory illnesses: proper ventilation is essential.

186. Which stage of product development tests the product under real conditions?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

Answer: a) Prototype testing

Explanation: Identifies functional issues, safety concerns, and improvements before mass production.

187. Which PPE is required to prevent hearing damage?

- a) Earplugs or earmuffs
- b) Gloves only
- c) Safety goggles only
- d) Apron only

Answer: a) Earplugs or earmuffs

Explanation: Protects against long-term hearing loss from loud machinery.

188. Which first aid action is suitable for a sprained ankle?

- a) RICE – Rest, Ice, Compression, Elevation
- b) Massage vigorously
- c) Apply heat immediately
- d) Keep moving

Answer: a) RICE – Rest, Ice, Compression, Elevation

Explanation: Reduces swelling and pain, promoting healing.

189. Which occupational hazard arises from slippery floors?

- a) Slip, trip, and fall hazard
- b) Burn
- c) Chemical exposure
- d) Electrical hazard

Answer: a) Slip, trip, and fall hazard

Explanation: Housekeeping and anti-slip measures prevent accidents.

190. Which PPE protects hands from cuts?

- a) Cut-resistant gloves
- b) Safety goggles only
- c) Earplugs only
- d) Safety shoes only

Answer: a) Cut-resistant gloves

Explanation: Prevents lacerations and puncture injuries.

191. Which hazard arises from improper storage of flammable liquids?

- a) Fire hazard
- b) Noise hazard
- c) Electrical hazard
- d) Ergonomic hazard

Answer: a) Fire hazard

Explanation: Proper storage prevents accidental ignition.

192. Which 5S principle ensures long-term adherence to workplace standards?

- a) Sustain
- b) Shine
- c) Set in order
- d) Sort

Answer: a) Sustain

Explanation: Training, audits, and habitual adherence maintain 5S practices.

193. Which first aid measure is recommended for a nosebleed?

- a) Lean forward and pinch nostrils
- b) Tilt head backward
- c) Pack cotton deep inside
- d) Apply heat

Answer: a) Lean forward and pinch nostrils

Explanation: Prevents blood from entering the throat and promotes clotting.

194. Which stage of product development ensures functionality and usability?

- a) Prototype testing
- b) Conceptual design
- c) Market research
- d) Post-production maintenance

Answer: a) Prototype testing

Explanation: Tests under real conditions ensure the product works safely and meets requirements.

195. Which PPE is essential when handling corrosive acids?

- a) Chemical-resistant gloves, goggles, and apron
- b) Earplugs only
- c) Safety shoes only
- d) Dust mask only

Answer: a) Chemical-resistant gloves, goggles, and apron

Explanation: Protects skin and eyes from chemical burns.

196. Which 5S principle involves standardizing work procedures and visual management?

- a) Standardize
- b) Shine
- c) Sort
- d) Set in order

Answer: a) Standardize

Explanation: Ensures consistent workflow, safety, and quality.

197. Which occupational hazard arises from prolonged computer work?

- a) Eye strain and repetitive strain injury
- b) Burn
- c) Chemical exposure
- d) Noise hazard

Answer: a) Eye strain and repetitive strain injury

Explanation: Extended work without ergonomics causes visual fatigue and musculoskeletal issues.

198. Which PPE is required when using power grinders?

- a) Safety goggles, gloves, and ear protection
- b) Safety shoes only

- c) Dust mask only
- d) Apron only

Answer: a) Safety goggles, gloves, and ear protection

Explanation: Protects against flying debris, sparks, and loud noise.

199. Which first aid measure is recommended for minor cuts?

- a) Clean, apply antiseptic, and cover with sterile dressing
- b) Leave open to air
- c) Apply glue immediately
- d) Apply ice

Answer: a) Clean, apply antiseptic, and cover with sterile dressing

Explanation: Prevents infection and promotes healing.

200. Which hazard arises from prolonged exposure to vibrating machinery?

- a) Vibration-induced hand-arm syndrome
- b) Electrical hazard
- c) Chemical exposure
- d) Burn hazard

Answer: a) Vibration-induced hand-arm syndrome

Explanation: Prolonged vibration damages blood vessels and nerves, causing numbness and reduced grip strength.