

prepared by @bluenileacademy

@For more join us on Telegram

@bluenileacademy

@samuelfromethiopia



100 multiple-choice questions based on the provided list, with answers included: On Grade 12 chemistry unit 3

1. What is the chemical formula of ammonia?

- A) NH_3
- B) N_2H_4
- C) NH_2
- D) N_2

Answer: A) NH_3

2. Ammonia is primarily used in the production of which of the following?

- A) Nitric acid
- B) Sulphuric acid
- C) Sodium carbonate
- D) Paper and pulp

Answer: A) Nitric acid

3. Which of the following is a nitrogen-based fertilizer?

- A) Urea
- B) Ammonium nitrate
- C) Potassium nitrate
- D) All of the above

Answer: D) All of the above

4. What is the primary use of nitric acid in industry?

- A) Glass manufacturing
- B) Fertilizer production
- C) Cement production
- D) Food preservation

Answer: B) Fertilizer production

For more join us on Telegram
@bluenileacademy
@samuelfromethiopia



5. Which substance is used as a catalyst in the manufacture of nitric acid?

- A) Manganese dioxide
- B) Platinum
- C) Aluminum oxide
- D) Iron

Answer: B) Platinum

6. Sulphuric acid is commonly used in the production of:

- A) Fertilizers
- B) Glass
- C) Cement
- D) All of the above

Answer: D) All of the above

7. Which of the following is an example of a common nitrogen-based fertilizer?

- A) Potassium chloride
- B) Ammonium nitrate
- C) Sodium carbonate
- D) Sulfur dioxide

Answer: B) Ammonium nitrate

8. Which of the following pesticides is commonly used to control insects?

- A) Glyphosate
- B) DDT
- C) Ammonium sulfate
- D) Sodium carbonate

Answer: B) DDT

9. What is the primary function of herbicides?

- A) Kill fungi
- B) Kill insects
- C) Kill unwanted plants
- D) Kill bacteria

Answer: C) Kill unwanted plants

10. Sodium carbonate is commonly used in the manufacture of

For more join us on
Telegram
@bluenileacademy
@samuelfromethiopia

- A) Glass
- B) Detergents
- C) Soap
- D) All of the above

Answer: D) All of the above

11. Which of the following is an important property of sodium hydroxide?

- A) It is highly acidic.
- B) It is a strong base.
- C) It is a weak acid.
- D) It is a neutral compound.

Answer: B) It is a strong base.

12. Sodium hydroxide is used in the manufacture of which of the following?

- A) Soap
- B) Paper
- C) Detergents
- D) All of the above

Answer: D) All of the above

13. Which of the following is used in the manufacturing of glass?

- A) Sodium carbonate
- B) Sulfuric acid
- C) Ammonia
- D) Nitric acid

Answer: A) Sodium carbonate

14. Which of the following is a raw material in the manufacturing of ceramics?

- A) Sodium carbonate
- B) Silica
- C) Sulfuric acid
- D) Nitric acid

Answer: B) Silica

15. In cement production, which compound is a primary ingredient?

- A) Calcium carbonate

For more join us on
Telegram
@bluenileacademy
@samuelfromethiopia

- B) Sodium hydroxide
- C) Potassium nitrate
- D) Ammonium nitrate

Answer: A) Calcium carbonate

16. Sugar manufacturing commonly uses which of the following?

- A) Sodium carbonate
- B) Ammonia
- C) Sulphuric acid
- D) Sodium hydroxide

Answer: C) Sulphuric acid

17. Which chemical is involved in the production of paper and pulp?

- A) Sodium hydroxide
- B) Potassium chloride
- C) Nitric acid
- D) Ammonium sulfate

Answer: A) Sodium hydroxide

18. In the tanning industry, which compound is often used?

- A) Sodium hydroxide
- B) Sulfuric acid
- C) Chromium compounds
- D) Nitric acid

Answer: C) Chromium compounds

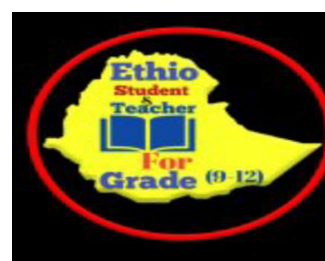
19. Which of the following chemicals is used in food processing and preservation?

- A) Sodium bicarbonate
- B) Sulfuric acid
- C) Ammonium nitrate
- D) Nitric acid

Answer: A) Sodium bicarbonate

20. Ethanol is primarily manufactured from:

- A) Sugarcane
- B) Nitric acid
- C) Ammonia



D) Sulphuric acid

Answer: A) Sugarcane

21. Which of the following chemicals is used in soap and detergent manufacturing?

A) Sodium carbonate

B) Sodium hydroxide

C) Ammonium nitrate

D) Both A and B

Answer: D) Both A and B

22. Which acid is commonly used in the petroleum industry?

A) Sulphuric acid

B) Hydrochloric acid

C) Nitric acid

D) Phosphoric acid

Answer: A) Sulphuric acid

23. Ammonia is commonly used as a:

A) Fertilizer

B) Pesticide

C) Refrigerant

D) All of the above

Answer: D) All of the above

24. In glass manufacturing, sodium carbonate reacts with:

A) Silica

B) Calcium oxide

C) Ammonia

D) Potassium nitrate

Answer: A) Silica

25. Which is the main component of cement?

A) Calcium carbonate

B) Magnesium oxide

C) Silica

D) Sodium carbonate

Answer: A) Calcium carbonate

26. What is the key raw material in paper production?

- A) Silica
- B) Sodium hydroxide
- C) Wood pulp
- D) Potassium nitrate

Answer: C) Wood pulp

27. What is the primary use of sodium carbonate in the soap industry?

- A) As a base for soap synthesis
- B) As an acid to neutralize oils
- C) As a solvent
- D) As a preservative

Answer: A) As a base for soap synthesis

28. Which of the following is used in food preservation to maintain the pH balance?

- A) Ammonium nitrate
- B) Sodium bicarbonate
- C) Nitric acid
- D) Sulfuric acid

Answer: B) Sodium bicarbonate

29. Which acid is typically used in the production of detergents?

- A) Sulfuric acid
- B) Nitric acid
- C) Hydrochloric acid
- D) Phosphoric acid

Answer: A) Sulfuric acid

30. Which chemical is commonly used as a raw material in the manufacturing of ceramics?

- A) Sodium bicarbonate
- B) Silica
- C) Ammonia
- D) Potassium nitrate

Answer: B) Silica

For more join us on
Telegram
[@bluenileacademy](#)
[@samuelfromethiopia](#)

31. What chemical is commonly used to neutralize acids in the soap manufacturing process?

- A) Sodium bicarbonate
- B) Sodium hydroxide
- C) Potassium nitrate
- D) Ammonium sulfate

Answer: B) Sodium hydroxide

32. Which of the following is used in the process of making nitric acid?

- A) Ammonia
- B) Sodium hydroxide
- C) Sodium carbonate
- D) Potassium sulfate

Answer: A) Ammonia

33. Which of the following chemicals is used in the manufacture of explosives and fertilizers?

- A) Ammonium nitrate
- B) Sodium hydroxide
- C) Sulphuric acid
- D) Sodium carbonate

Answer: A) Ammonium nitrate

34. Sulphuric acid is used in the refining of:

- A) Gold
- B) Petroleum
- C) Aluminum
- D) Iron

Answer: B) Petroleum

35. Which compound is used in glass production to lower the melting point of silica?

- A) Sodium carbonate
- B) Sulfuric acid
- C) Sodium hydroxide
- D) Nitric acid

Answer: A) Sodium carbonate

36. Which of the following chemicals is used in the manufacturing of ceramics to create a strong

structure?

- A) Silica
- B) Calcium carbonate
- C) Ammonia
- D) Potassium nitrate

Answer: A) Silica

37. In the paper and pulp industry, which substance is used to break down lignin?

- A) Sodium hydroxide
- B) Sulfuric acid
- C) Ammonia
- D) Potassium nitrate

Answer: A) Sodium hydroxide

38. What is a common use of ammonium nitrate in agriculture?

- A) Pesticide
- B) Fertilizer
- C) Herbicide
- D) Fungicide

Answer: B) Fertilizer

39. Which of the following is commonly used in the food industry to enhance the flavor of food?

- A) Nitric acid
- B) Sulfuric acid
- C) Sodium bicarbonate
- D) Sodium hydroxide

Answer: C) Sodium bicarbonate

40. What chemical is used to neutralize acids in the manufacturing of soap?

- A) Sodium carbonate
- B) Sodium hydroxide
- C) Ammonium nitrate
- D) Potassium hydroxide

Answer: B) Sodium hydroxide

41. Which of the following is a chemical that is used in the tanning process of leather?

- A) Chromium compounds
- B) Sulfuric acid
- C) Sodium hydroxide
- D) Nitric acid

Answer: A) Chromium compounds

42. Which chemical is most commonly used in the manufacturing of detergents?

- A) Sodium hydroxide
- B) Sodium bicarbonate
- C) Sulfuric acid
- D) Ammonium nitrate

Answer: C) Sulfuric acid

43. Which of the following chemicals is used in the synthesis of ethanol?

- A) Nitric acid
- B) Sulphuric acid
- C) Ammonia
- D) Yeast

Answer: D) Yeast

44. Which chemical is commonly used in the paper and pulp industry to bleach wood pulp?

- A) Ammonia
- B) Sodium hydroxide
- C) Chlorine dioxide
- D) Potassium nitrate

Answer: C) Chlorine dioxide

45. Which chemical compound is often used in the manufacture of explosives?

- A) Sodium hydroxide
- B) Ammonium nitrate
- C) Sulphuric acid
- D) Nitric acid

Answer: B) Ammonium nitrate

46. What is the main chemical used in soap production that reacts with oils to form soap?

- A) Sodium hydroxide
- B) Potassium hydroxide

For more join us on
Telegram
@bluenileacademy
@samuelfromethiopia

C) Ammonium chloride

D) Sodium bicarbonate

Answer: A) Sodium hydroxide

47. Which of the following is a raw material used in the production of cement?

A) Calcium carbonate

B) Ammonium nitrate

C) Silica

D) Sodium hydroxide

Answer: A) Calcium carbonate

48. Which of the following chemicals is commonly used in the production of glass?

A) Sodium carbonate

B) Calcium hydroxide

C) Nitric acid

D) Sulphuric acid

Answer: A) Sodium carbonate

49. What is the primary purpose of sulfuric acid in the production of fertilizers?

A) To neutralize nitrogen

B) To convert phosphate rocks to usable forms

C) To create a base for herbicides

D) To stabilize potassium compounds

Answer: B) To convert phosphate rocks to usable forms

50. Which acid is commonly used in the paper production industry for cooking wood chips?

A) Hydrochloric acid

B) Sodium hydroxide

C) Sulfuric acid

D) Nitric acid

Answer: B) Sodium hydroxide

51. Which chemical is used in the production of ammonia through the Haber process?

A) Nitric acid

B) Hydrogen

C) Carbon dioxide

D) Potassium chloride

Answer: B) Hydrogen

52. Which of the following compounds is used in the manufacture of ceramic glazes?

- A) Sodium bicarbonate
- B) Silica
- C) Ammonia
- D) Sodium hydroxide

Answer: B) Silica

53. In soap making, what is the primary role of sodium hydroxide?

- A) It acts as a preservative.
- B) It acts as a neutralizer.
- C) It reacts with oils to produce soap.
- D) It acts as a coloring agent.

Answer: C) It reacts with oils to produce soap.

54. Which of the following is used in the production of detergents to help remove stains?

- A) Sodium carbonate
- B) Sulfuric acid
- C) Ammonium nitrate
- D) Sodium bicarbonate

Answer: A) Sodium carbonate

55. Which acid is used in food processing to maintain the desired acidity of food products?

- A) Nitric acid
- B) Sulfuric acid
- C) Lactic acid
- D) Citric acid

Answer: D) Citric acid

56. In the sugar manufacturing industry, which acid is used to clarify the juice extracted from sugarcane?

- A) Sulfuric acid
- B) Nitric acid
- C) Sodium hydroxide
- D) Ammonia

Answer: A) Sulfuric acid

57. Which of the following chemicals is used as a neutralizing agent in paper and pulp manufacturing?

- A) Sodium hydroxide
- B) Sodium carbonate
- C) Potassium hydroxide
- D) Nitric acid

Answer: A) Sodium hydroxide

58. Which compound is used in the manufacture of certain fertilizers to provide phosphorus?

- A) Ammonium nitrate
- B) Phosphoric acid
- C) Calcium carbonate
- D) Sodium hydroxide

Answer: B) Phosphoric acid

59. Which of the following chemicals is used in the production of plastics?

- A) Nitric acid
- B) Sulfuric acid
- C) Sodium carbonate
- D) None of the above

Answer: D) None of the above

60. Which of the following is commonly used in glass production to help form a smooth finish?

- A) Silica
- B) Calcium carbonate
- C) Sodium carbonate
- D) Potassium nitrate

Answer: C) Sodium carbonate

61. What is the key ingredient in the manufacturing of cement?

- A) Sodium hydroxide
- B) Calcium carbonate
- C) Potassium chloride
- D) Nitric acid

Answer: B) Calcium carbonate

62. Which of the following is used in food preservation to maintain pH levels?

- A) Sodium bicarbonate
- B) Ammonium nitrate
- C) Sulfuric acid
- D) Sodium hydroxide

Answer: A) Sodium bicarbonate

63. In soap manufacturing, sodium hydroxide reacts with which of the following?

- A) Alcohols
- B) Oils
- C) Proteins
- D) Sugars

Answer: B) Oils

64. What is the main raw material for manufacturing ethanol?

- A) Corn
- B) Sodium bicarbonate
- C) Nitric acid
- D) Water

Answer: A) Corn

65. Which of the following is used to extract oils from seeds in soap production?

- A) Sulfuric acid
- B) Ammonium nitrate
- C) Sodium hydroxide
- D) Sodium carbonate

Answer: C) Sodium hydroxide

66. In the production of sugar, which chemical is used to purify and clarify sugarcane juice?

- A) Ammonium hydroxide
- B) Sulfuric acid
- C) Nitric acid
- D) Sodium carbonate

Answer: B) Sulfuric acid

67. What role does sodium hydroxide play in the paper and pulp industry?

- A) It is used to bleach the paper.
- B) It helps break down lignin.
- C) It provides the structure for paper.
- D) It neutralizes acids.

Answer: B) It helps break down lignin.

68. In the production of ammonia, what other element is combined with nitrogen to form NH_3 ?

- A) Oxygen
- B) Hydrogen
- C) Carbon
- D) Chlorine

Answer: B) Hydrogen

69. Which of the following is commonly used in tanning leather?

- A) Sodium hydroxide
- B) Chromium sulfate
- C) Nitric acid
- D) Calcium carbonate

Answer: B) Chromium sulfate

70. What chemical is commonly used in the production of detergents to soften water?

- A) Sodium chloride
- B) Sodium carbonate
- C) Ammonium hydroxide
- D) Potassium nitrate

Answer: B) Sodium carbonate

71. What is the role of sulfuric acid in fertilizer production?

- A) It neutralizes ammonia.
- B) It reacts with phosphate rock to form phosphoric acid.
- C) It oxidizes nitrogen.
- D) It helps in the production of nitrogen-based fertilizers.

Answer: B) It reacts with phosphate rock to form phosphoric acid.

72. Which of the following acids is used in the manufacturing of detergents to help break down grease?

- A) Hydrochloric acid
- B) Phosphoric acid
- C) Sulfuric acid
- D) Acetic acid

Answer: C) Sulfuric acid

73. What is a primary use of sodium carbonate in the glass industry?

- A) To create a glossy finish
- B) To increase the melting point
- C) To lower the melting point of silica
- D) To add color to glass

Answer: C) To lower the melting point of silica

74. Which chemical is involved in the production of detergents and soaps as a cleaning agent?

- A) Sodium hydroxide
- B) Potassium hydroxide
- C) Sodium carbonate
- D) Both A and C

Answer: D) Both A and C

75. In the production of ethanol, which type of raw material is used primarily?

- A) Grains
- B) Vegetables
- C) Animal products
- D) Nitrogenous compounds

Answer: A) Grains

76. Which of the following chemicals is most commonly used as a descaling agent in industrial processes?

- A) Nitric acid
- B) Sulfuric acid
- C) Ammonium nitrate
- D) Sodium hydroxide

Answer: A) Nitric acid

77. Which of the following is commonly used in the paper industry to break down lignin?

- A) Sodium hydroxide
- B) Sulfuric acid
- C) Potassium hydroxide
- D) Ammonium chloride

Answer: A) Sodium hydroxide

78. Which of the following chemicals is used to preserve fruits and vegetables during food processing?

- A) Nitric acid
- B) Sodium bicarbonate
- C) Ammonium nitrate
- D) Calcium carbonate

Answer: B) Sodium bicarbonate

79. Which chemical is used to manufacture ceramics for high-temperature applications?

- A) Silica
- B) Sodium hydroxide
- C) Potassium chloride
- D) Calcium carbonate

Answer: A) Silica

80. In the manufacture of cement, which compound is primarily used for binding?

- A) Calcium sulfate
- B) Calcium carbonate
- C) Potassium chloride
- D) Ammonium nitrate

Answer: B) Calcium carbonate

81. What is the primary use of sodium bicarbonate in food processing?

- A) To enhance flavor
- B) To neutralize acidity
- C) To preserve food
- D) To add color

Answer: B) To neutralize acidity

82. Which of the following is used in the paper and pulp industry to bleach paper?

- A) Sodium carbonate

- B) Chlorine
 - C) Potassium nitrate
 - D) Nitric acid
- Answer: B) Chlorine

83. Which of the following is used to increase the acidity of food products for preservation?

- A) Citric acid
 - B) Sulfuric acid
 - C) Ammonium nitrate
 - D) Sodium hydroxide
- Answer: A) Citric acid

84. What chemical is commonly used to prevent the growth of bacteria in preserved foods?

- A) Sodium hydroxide
 - B) Sodium bicarbonate
 - C) Nitric acid
 - D) Sodium chloride
- Answer: D) Sodium chloride

85. Which of the following chemicals is used in the tanning process to preserve leather?

- A) Sodium hydroxide
 - B) Chromium sulfate
 - C) Nitric acid
 - D) Phosphoric acid
- Answer: B) Chromium sulfate

86. Which acid is most commonly used to clean mineral deposits from surfaces in industrial settings?

- A) Nitric acid
 - B) Sulfuric acid
 - C) Hydrochloric acid
 - D) Phosphoric acid
- Answer: A) Nitric acid

87. Which of the following is used to neutralize acidic wastewater in industrial processes?

- A) Sodium hydroxide
- B) Ammonium nitrate

C) Potassium hydroxide

D) Calcium carbonate

Answer: A) Sodium hydroxide

88. Which of the following chemicals is essential for producing ammonium sulfate, a common fertilizer?

A) Nitric acid

B) Sulfuric acid

C) Phosphoric acid

D) Potassium hydroxide

Answer: B) Sulfuric acid

89. What is the main role of ammonia in the agricultural industry?

A) Fungicide

B) Herbicide

C) Fertilizer

D) Insecticide

Answer: C) Fertilizer

90. Which of the following chemicals is commonly used to neutralize acidic soil in agriculture?

A) Ammonium nitrate

B) Lime

C) Phosphoric acid

D) Sodium carbonate

Answer: B) Lime

91. Which of the following chemicals is used in the paper industry to produce paper pulp?

A) Sodium hydroxide

B) Ammonium nitrate

C) Potassium chloride

D) Calcium carbonate

Answer: A) Sodium hydroxide

92. Which of the following chemicals is commonly used in detergent formulation to enhance cleaning power?

A) Sodium carbonate

B) Ammonium nitrate

C) Potassium hydroxide

D) Phosphoric acid

Answer: A) Sodium carbonate

93. In the soap industry, which chemical is used for saponification?

A) Sodium bicarbonate

B) Sodium hydroxide

C) Potassium chloride

D) Ammonium sulfate

Answer: B) Sodium hydroxide

94. What role does ammonia play in the production of nitric acid?

A) It acts as a reactant.

B) It acts as a solvent.

C) It acts as a catalyst.

D) It neutralizes the by-products.

Answer: A) It acts as a reactant.

95. Which of the following chemicals is used in the production of glass to reduce viscosity?

A) Potassium carbonate

B) Sodium carbonate

C) Calcium hydroxide

D) Ammonium nitrate

Answer: B) Sodium carbonate

96. Which chemical is used to produce phosphoric acid from phosphate rock?

A) Nitric acid

B) Sulfuric acid

C) Ammonium nitrate

D) Hydrochloric acid

Answer: B) Sulfuric acid

97. In which of the following industries is sodium bicarbonate used for pH regulation?

A) Soap manufacturing

B) Food processing

C) Paper production

D) Cement production

Answer: B) Food processing

98. Which of the following is a byproduct of ammonia production?

- A) Nitric acid
- B) Sulfuric acid
- C) Hydrogen
- D) Phosphoric acid

Answer: A) Nitric acid

99. Which of the following is used as a binder in the production of ceramics?

- A) Sodium hydroxide
- B) Silica
- C) Calcium carbonate
- D) Phosphoric acid

Answer: B) Silica

100. Which of the following is a common use of sodium carbonate in industry?

- A) Glass production
- B) Fertilizer production
- C) Paper production
- D) Soap production

Answer: A) Glass production

For more join us on Telegram
@bluenileacademy
@samuelfromethiopia