

**GENERAL SCIENCE MODEL WORKSHEET FOR GRADE 8 MEDIUM LEVEL SCHOOL  
STUDENTS**

**Choose the correct answer from the following four alternatives**

1. Which one of the following is **NOT** the indigenous unit of length measurement?  
A. Hand Span  
B. Cubit  
C. Weqet  
D. Foot
2. Which one of the following is **NOT** fundamental physical quantity that does not match with its SI units?  
A. Length- meter  
B. Mass- kilogram  
C. Temperature- candela  
D. Time - second
3. Which one of the following indigenous units of measurement used to measure the mass of peppers and coffees in different Ethiopian local markets?  
A. Feresula  
B. Quintal  
C. Weqet  
D. Tassa
4. Which one of the following is **NOT** a derived physical quantity?  
A. Area  
B. Mass  
C. Volume  
D. Speed
5. If the distance from the Sun to the Earth is 150,000,000,000m, which one of the following is the appropriate way of expressing this distance in terms of prefixes?  
A. 150Km  
B. 150,000Mm  
C. 150,000,000cm  
D. 0.00015 $\mu$ m
6. Abel is a grade eight student. He decided to measure his height, weight and the time taken from his school to home. As the result of his measurements; his height is 160cm, his weight is 55kg and he takes eight minutes to arrive his school from his home. Which one of the following describes his measurements in their respective SI units?  
A. 1.6m, 55kg and 240s.  
B. 160cm, 5500g and 480s.  
C. 160cm, 55kg and 240s.  
D. 1.6m, 55kg and 480s
7. Which one of the following is the first step of the scientific methods of scientific investigation?  
A. Performing Background Research  
B. Ask Questions  
C. Establish Your Hypothesis  
D. Analyze the Results and Draw Conclusion

8. Grade eight students want to do an activity. They first take a candle, fix it on a table & lit the candle and the candle will continue to be burned due to the presence of oxygen. Which scientific investigation do the students confirm in their activity?

A. Ask Questions

B. Background Research

C. Formulate Hypothesis

D. Test the Hypothesis by Experiment

9. Which one of the following is the SI unit of speed?

A. M/s

B.  $M^2$

C.  $Kg/m^3$

D.  $M/s^2$

10. Which one of the following device is used to measure the temperature of your body?

A. Thermometere

B. Stop watch

C. Vernier Caliper

D. Spring Balance

***A DART PLAYER HITS THE TARGET AFTER MANY TRIALS AS SHOWN IN THE FIGURE BELOW.***



Figure 1. The Target of a Dart player

11. Which one of the following best describes the precision and accuracy of the player in hitting the center of the target of the game?

A. Precise but not accurate

B. Accurate but not precise

C. Both precise and accurate

D. Neither precise nor accurate

12. Fetiya is a grade 8 student and she observed the measurements of different quantities when she visited one of the Markets in Addis Ababa with her mother. She classified the methods of measurements into indigenous or not after her observation. Which one of the following **IS NOT** the indigenous method of measuring quantities in her observation?

A. Measuring the amount of oil by Jog.

B. Measuring the length of a cloth by Meter Tape.

C. Measuring the amount of teff by Quintal.

D. Measuring the amount of coffee by Sini.

13. Who was the scientist that studied about the discreteness of matter?

A. Democratus

B. Aristotle

C. Dalton

D. Plato

14. Which of the following fundamental subatomic particles are found in the nucleus of an atom?

A. Protons and electrons

B. Protons and neutrons

C. Neutrons and electrons

D. Protons, neutrons and electrons

15. Which one of the following fundamental subatomic particle is negatively charged?
- A. Electron  
B. Proton  
C. Neutron  
D. Both proton and neutron
16. The atomic number and atomic mass of an atom is represented by the symbol  $^{16}_8\text{X}$ . How many numbers of protons, electrons and neutrons are there in this atom?
- A. 8 protons, 8 electrons and 7 neutrons.  
B. 7 protons, 8 electrons and 8 neutrons.  
C. 8 protons, 7 electrons and 8 neutrons.  
D. 8 protons, 8 electrons and 8 neutrons.
17. Which one of the following is **NOT TRUE** about the fundamental subatomic particles of an atom?
- A. The protons and electrons have the same numbers.  
B. The protons and neutrons have equal masses.  
C. The protons and electrons are located in the nucleus of an atom.  
D. The protons and electrons have opposite charges.
18. Which one of the following subatomic particle is located around an atom?
- A. Electron  
B. Proton  
C. Neutron  
D. Both proton and electron
19. Which one of the following is not a diatomic molecule?
- A.  $\text{O}_2$   
B.  $\text{H}_2$   
C.  $\text{I}_2$   
D. He
20. Which one of the following molecules contain more than three atoms of an element?
- A. Monoatomic molecules  
B. Diatomic molecules  
C. Polyatomic molecules  
D. Both monoatomic & diatomic molecules
21. Which one of the following is **NOT** the molecule of compound?
- A.  $\text{H}_2\text{O}$   
B. HCl  
C. Ne  
D.  $\text{CO}_2$
22. Which type of compound is obtained from living organisms?
- A. Organic compounds.  
B. Inorganic compounds.  
C. Both organic and inorganic compounds.  
D. Neither organic nor inorganic compounds.
23. Which one of the following is the formula of an alkyne with four carbon atom?
- A.  $\text{C}_4\text{H}_8$   
B.  $\text{C}_4\text{H}_{10}$   
C.  $\text{C}_4\text{H}_6$   
D.  $\text{C}_4\text{H}_{12}$
24. Which one of the following is the hydrocarbon used as a fuel for cooking, heating and generating electricity?
- A. Propane  
B. Methane  
C. Butane  
D. Pentane

25. Which one of the following is the hydrocarbon used in cutting and welding of steel and iron?
- A. Ethane  
B. Ethyne  
C. Butane  
D. Ethanol
26. A general science teacher used a chemical in preserving biological specimens like snake, lizard, spider and frog in order to place them in a laboratory for a long times. Which chemical has the teacher used to preserve the specimens?
- A. Acetic acid  
B. Ethanoic acid  
C. Vinegar  
D. Formalin
27. Which one of the following is a binary compound containing oxygen and other elements?
- A. Acids  
B. Bases  
C. Salts  
D. Oxides
28. Which one of the following is **NOT** an example of metallic oxide?
- A. CaO  
B. MgO  
C. CO<sub>2</sub>  
D. Al<sub>2</sub>O<sub>3</sub>
29. Which one of the following inorganic compound has a sour taste?
- A. Oxides.  
B. Acids.  
C. Bases.  
D. Salts.
30. Which of the following is **NOT TRUE** about the properties of bases?
- A. Bases have bitter taste.  
B. Bases change the litmus paper from red to blue.  
C. Bases neutralize acids.  
D. Bases change methyl orange indicator from yellow to red.
31. Which of the following safety precaution measure you should not take when a base is spilled on your skin?
- A. Wash the affected part with plenty of water.  
B. Wash the affected part with weak base.  
C. Treat the affected part with a weak acid.  
D. Treat the affected part with medical treatment.
32. When a person accidentally drinks corrosive acid, his families have taken him to the nearest clinic. The doctor in the clinic carefully diagnoses his condition and prescribed a medicine that neutralize the acid in his body. What is the appropriate medicine the doctors has been prescribed so as to treat the patient?
- A. Milk of magnesia Mg(OH)<sub>2</sub>  
B. Dilute HCl  
C. Dilute NaOH  
D. Dilute KOH

33. Which of the following is **NOT** a precaution that you should take when you are working with acids and bases in a laboratory?
- Wearing eye protection goggles.
  - Wearing protective clothes.
  - Never taste any chemicals but smell some chemicals.**
  - Never add water on a concentrated acid solution.
34. Which one of the following neutralization reaction can be done in our everyday life?
- Using tooth paste to protect our teeth from bacteria.**
  - Using antacids like to neutralize excess acids in the stomach.
  - Using baking powder which is use to cure bee stings and ant bites.
  - Using acidic soil to treat powered lime.
35. The neutralization reaction of a base & an acids is given by the equation.  $\text{HCl} + \text{NaOH} \rightarrow \text{X} + \text{H}_2\text{O}$   
What is the salt represented by X?
- NaCl**
  - NaOH
  - HCl
  - $\text{Na}(\text{OH})_2$
36. Which of the following formula represent sulphuric acid?
- $\text{H}_2\text{NO}_4$
  - $\text{H}_2\text{SO}_4$**
  - $\text{H}_2\text{PO}_4$
  - HCl
37. Which one of the following is a component of an integumentary system that keeps your skull warm and gives beauty for women?
- Skin
  - Glands
  - Nail
  - Hair**
38. Which part of your nail that is responsible for the growth of your fingers nail?
- The matrix**
  - The lunular
  - The nail folds
  - The cuticle
39. Which one of the following skin disease that has symptoms such as itchy, red rash that breaks out on the face, scalp, chest, back and to a lesser extent arms and legs?
- Latex allergy
  - Chicken pox**
  - Blister
  - Warts
40. Which one of the following components of a muscular system that can be consciously or voluntarily controlled muscles and they are contracting for the causes of movement of bones for chewing, talking and drinking?
- Smooth muscles
  - Cardiac muscles
  - Heart muscles
  - Skeletal muscles**

41. Which of the following is the ability of a muscle to give response to stimuli which comes from motor neurons and hormones?
- A. Contractility
  - B. Extensibility
  - C. Excitability
  - D. Elasticity
42. Which one of the following is a group of inherited disease characterized by weakness and leads to eventually loss of strength, increasing disability and possible deformity?
- A. Muscular dystrophy
  - B. Muscle strain
  - C. Muscle breakage
  - D. Muscle fracture
43. Which one of the following are compact bones with chambers or partitions but without marrow?
- A. Long bones
  - B. Short bones
  - C. Flat bones
  - D. Irregular bones
44. Which one of the following is **NOT** the component of axial skeleton?
- A. Skull
  - B. Vertebral column
  - C. Shoulder bone
  - D. Hyoid
45. Which one of the following is the function of the skeleton system?
- A. Movements
  - B. Produce blood cells
  - C. Protection and supports
  - D. All of the above
46. Which one of the following is a disease of skeletal system that involves degradation of joints and its main symptoms are joint pain, tenderness, stiffness, locking and effusion?
- A. Leukemia
  - B. Osteopenia
  - C. Osteoporosis
  - D. Osteoarthritis
47. In which one of the following digestive systems the food digestion starts?
- A. Mouth
  - B. Stomach
  - C. Small intestine
  - D. Anus
48. Which type of teeth is long, sharp pointed edge and used to tearing and piercing?
- A. Incisors
  - B. Canines
  - C. Premolars
  - D. Molars
49. Which one of the following disease of digestive system that causes inflammation, irritation or erosion of the lining of the stomach?
- A. Diarrhea
  - B. Gastritis
  - C. Hemorrhoids
  - D. Constipations
50. Which part of the nose filter out dust particles and pathogens from inhaled air?
- A. The mucus
  - B. The good blood supply
  - C. The hair
  - D. The large surface area

51. Which one of the following respiratory system that has the hollow muscular organ forming an air passage to the lungs and holding the vocal cords in humans and other mammals?
- A. Pharynx
  - B. Bronchus
  - C. Alveoli
  - D. Larynx
52. One of the following is **NOT** disease of respiratory system?
- A. Asthma
  - B. Peptic ulcer
  - C. Sinusitis
  - D. Influenza
53. Which one of the following is **NOT** the component of blood circulatory system?
- A. The heart
  - B. The blood vessel
  - C. The blood
  - D. The lungs
54. Which part of the heart used to receive oxygenated blood from the lung?
- A. Right atrium
  - B. Left atrium
  - C. Left ventricle
  - D. Right ventricle
55. Which type of the blood vessel used to carry blood away from the heart into different part of our body?
- A. Artery
  - B. Vein
  - C. Capillaries
  - D. Pulmonary veins
56. Ato Melkamu is 65 years old man. Suddenly Ato Melkamu has felt an illness and his families take him to the nearest Hospital; the medical doctor carefully diagnosis his condition and the result of the diagnosis shows that his blood pressure is increased so that the doctor advised him to perform regular physical exercise, minimize the consumption of salts, sugars and fatty foods and frequently checking up to the nearest clinic. What is the type of disease or disorder was Ato Melkamu had caught?
- A. Heart attacks
  - B. Hypertensions
  - C. Strokes
  - D. Heart failure
57. In which one of the following the mature sperms are accumulated in the collected ducts?
- A. Testes
  - B. Urethra
  - C. Urinary tract
  - D. Gall bladder
58. Which one of the following is NOT a function of the female reproductive system?
- A. To produce eggs.
  - B. To give birth to a baby.
  - C. To excrete water.
  - D. To take care of the developing baby during pregnancy.

59. When puberty place in boys, which one of the following does not happen?
- A. Penis enlarges.
  - B. Shoulders and chest broaden.
  - C. Voice becomes thinner.
  - D. Growth of pubic and facial hairs.
60. Which one of the following is the fusion of the male and female gamete to form a zygote?
- A. Menstruation
  - B. Pollination
  - C. Ejaculation
  - D. Fertilization
61. One of the following is a measure of the distance between two points?
- A. Measurement
  - B. Mass
  - C. Length
  - D. Time
62. Which one of the following is an indigenous method of measuring mass?
- A. Digit
  - B. Cubit
  - C. Jog
  - D. Weqet
63. Which one of the following is true about fundamental and derived physical quantities?
- A. Fundamental physical quantities depend on one or more derived quantities.
  - B. Fundamental quantities cannot be expressed in terms of any other quantities.
  - C. Length, mass, time, and temperature are derived quantities.
  - D. Density, speed, volume, and area are fundamental quantities.
64. What is the SI unit of speed?
- A. M/s
  - B. M/s<sub>2</sub>
  - C. Kg/m<sub>3</sub>
  - D. M<sub>3</sub>
65. What is the prefix that represents 1000?
- A. Centi
  - B. Kilo
  - C. Mega
  - D. Milli
66. Suppose you measure the actual mass of 5kg. Sugar five times and you get 1.5kg, 1.45kg, 1.40kg, 1.38kg, and 1.35kg. Which one is true about this measurement? It is
- A. Accurate but not precise
  - B. Accurate and precise
  - C. Neither precise nor accurate
  - D. Precise but not accurate
67. One of the following is the last step in scientific investigation?
- A. Analyse data
  - B. Test hypothesis
  - C. Communicating results
  - D. Draw conclusion
68. Who was proposed the idea that matter is discrete?
- A. Aristotle
  - B. Democritus
  - C. Dalton
  - D. Plato



69. Which one of the following is correct about continuous theory of matter?
- A. Rejected the idea of atoms  
B. Proposed by Democritus  
C. Limit matter is broken  
D. Believed the existence of atom
70. An atom is surrounded by
- A. Neutron  
B. Proton  
C. Shell  
D. Electron
71. Which of the following subatomic particle has zero charge?
- A. Electron  
B. Proton  
C. Neutron  
D. Nucleus
72. If a certain nucleus consists of 9 protons and 10 neutrons. What is mass number of a nucleus?
- A. 1  
B. 9  
C. 10  
D. 19
73. Which of the following is the term refers to all compounds that do not contain carbon generally found in non-living things. Which of the following is the term refers to all compounds that do not contain carbon generally found in non-living things.
- A. Organic compounds  
B. Inorganic compounds  
C. Ammonium cyanate  
D. Hydrocarbon
74. Which of the following compound is organic compound?
- A. NaCl  
B. CaO  
C. CO<sub>2</sub>  
D. C<sub>2</sub>H<sub>4</sub>
75. A compound that contains only carbon and hydrogen atom is:
- A. Inorganic  
B. Homologous  
C. Hydrocarbon  
D. Alkanes
76. The general formula of alkenes is :
- A. C<sub>n</sub>H<sub>2n</sub>  
B. C<sub>n</sub>H<sub>2n+2</sub>  
C. C<sub>n</sub>H<sub>2n-2</sub>  
D. C<sub>n</sub>H<sub>2n+1</sub>
77. Which of the following formula represents alkyne containing eight carbon atoms?
- A. C<sub>8</sub>H<sub>16</sub>  
B. C<sub>8</sub>H<sub>18</sub>  
C. C<sub>8</sub>H<sub>14</sub>  
D. C<sub>8</sub>H<sub>16</sub>
78. Which of the following is TRUE about homologous series?
- A. Differ by two carbon and one hydrogen atom  
B. Differ from the next by one methylene  
C. Differ from the next by two methylene  
D. Differ by only one carbon atom
79. The name of C<sub>6</sub>H<sub>12</sub> is
- A. Hexane  
B. Hexyne  
C. Heptane  
D. Hexene

80. Which of the following are the main constituents of biogas?

A. Methane

B. Propane

C. Ethane

D. Ethanol

81. Which of the following is an example of acid?

A. CaO

B. NaOH

C. HCl

D. NaCl

82. Which of the following is non-metallic oxide?

A. MgO

B. Na<sub>2</sub>O

C. SO<sub>2</sub>

D. CaO

This item is based on the following list of properties

1. React with water to form acid

2. React with water to form base

3. Mostly non-metallic oxide

4. Mostly metallic oxide

83. From the above lists which of them properties of base?

A. 1,3

B. 2,3

C. 1,4

D. 2,4

84. Which of the following is an example of basic oxide?

A. Carbon dioxide

B. Sulphur trioxide

C. Calcium oxide

D. Carbon monoxide

85. A group of substance that release hydrogen ion when they are in aqueous solution is:

A. Oxides

B. Acids

C. Bases

D. Hydrocarbon

86. Which of the following is **correct** about bases? Bases have

A. Bitter taste

B. Sour taste

C. Sweet taste

D. No taste

87. What is neutralization reaction? the reactions of

A. Acids with carbonate

B. Bases with oxide

C. Oxides with hydrocarbon

D. Acids with bases

88. What measures should you take if a concentrated acid spilled on your skin?

A. Drink a base such as Mg(OH)<sub>2</sub>

B. Wash thoroughly the affected part with water

C. Wash thoroughly the affected part with sanitizer

D. Warm the affected part with fire

89. Which of the following is salt?

A. H<sub>2</sub>CO<sub>3</sub>

B. HCl

C. NaCl

D. Ca(OH)<sub>2</sub>

90. Which part integumentary system correctly matches with its function?
- |  |                                       |
|--|---------------------------------------|
| A. Hair- covers the internal parts of the body | C. Nail- keeps your skull warm        |
| <b>B. Glands- secret important substances</b>  | D. Skin- protect inner part of finger |
91. Which of the following is the upper layer of the skin?
- |                     |               |
|---------------------|---------------|
| <b>A. Epidermis</b> | C. Hypodermis |
| B. Dermis           | D. medulla    |
92. Which of the following skin disease is caused by the pores of skin blocked with oil, dead skin or bacteria?
- |            |           |          |                |
|------------|-----------|----------|----------------|
| A. Rosacea | B. Eczema | C. Hives | <b>D. Acne</b> |
|------------|-----------|----------|----------------|
93. Which of the following systems play a role in moving, speaking and chewing?
- |                         |                           |
|-------------------------|---------------------------|
| A. Circulatory System   | <b>C. Muscular System</b> |
| B. Integumentary system | D. Respiratory system     |
94. Which of the following muscle located only in the heart?
- |                          |                    |
|--------------------------|--------------------|
| <b>A. Cardiac muscle</b> | C. Skeletal muscle |
| B. Smooth muscle         | D. Non striated    |
95. An injury to a muscle or a tendon the fibrous tissue that connects muscles to bones is:
- |                          |                         |
|--------------------------|-------------------------|
| A. Muscle dystrophy      | C. Muscle elasticity    |
| <b>B. Muscle strains</b> | D. Muscle contractility |
96. Components of skeletal system provides flexible and elasticity structures like nose is:
- |           |                     |
|-----------|---------------------|
| A. Bone   | C. Ligament         |
| B. Tendon | <b>D. Cartilage</b> |
97. Which of the following is **NOT** the function of skeletal system?
- |                            |                                 |
|----------------------------|---------------------------------|
| A. Produces blood cells    | <b>C. Absorption of mineral</b> |
| B. Protection and supports | D. Storage of substance         |
98. Which of skeletal system disease is a break in the continuity of the bone?
- |               |                    |
|---------------|--------------------|
| A. Osteopenia | <b>C. Fracture</b> |
| B. Leukaemia  | D. Osteoarthritis  |
99. Which of the following are **NOT** components of digestive system?
- |              |                   |
|--------------|-------------------|
| A. Anus      | C. Stomach        |
| B. Esophagus | <b>D. Pharynx</b> |
100. The main function of human digestive system is
- |   |
|---|
| <b>A. Break down of food molecules into smaller and useable forms</b> |
| B. Circulate digested foods throughout our body                       |
| C. Movement of body structure   |
| D. Protect and support the body of an organism                        |

101. The dental formula of a man is what is the total number of canines?  
 A. 2                                      **B. 4**                                      C. 6                                      D. 8
102. Which of the following is disease of digestive system swollen veins in your lower rectum?  
 A. Gastritis                                      **C. Haemorrhoids**  
 B. Constipation                                      D. Diarrheal
103. Tiny air sacs in the lungs where the exchange of oxygen and carbon dioxide takes place  
 A. Pharynx                                      C. Bronchus  
 B. Larynx                                      **D. Alveoli**
104. One of the following is not a disease of respiratory system which one?  
 A. Bronchitis                                      **B. Strokes**                                      C. Sinusitis                                      D. Asthma
105. In systematic circulation the blood flows between only:-  
 A. Heart and lungs                                      C. Heart and liver  
 B. Heart and kidney                                      **D. Hearts and other body parts**
106. The chamber of the heart it pumps the blood at long distance of the body  
 A. Right atrium                                      **C. Left ventricle**  
 B. Left atrium                                      D. Right ventricle
107. Which of the following disease of circulatory system is called high blood pressure?  
**A. Hypertension**                                      C. Strokes  
 B. Heart                                      D. Heart failover
108. What is the function of epididymis? It is used to  
 A. Secret mucus to lubricate the ends of urethra  
**B. Store immature sperm cells for maturation process**  
 C. Produce alkaline fluids for sperm cells motility  
 D. Ventilate testicles to have a lower temperature
109. Which one of the following is part of the reproductive structures of human male?  
 A. Fallopian tube                                      C. Cervix  
 B. Uterus                                      **D. Urethra**
110. Which of the following is the secondary sexual characteristic of a human male?  
 A. Possession of testicles                                      **C. Ejaculator of sperm**  
 B. Born with scrotum                                      D. Possession of penis
111. Which of the following is a primary sexual characteristic of females?  
 A. Production of sex hormones  
**B. Presence of vagina ,ovaries and uterus**  
 C. Enlargement of genital organs  
 D. Development of derive to the opposite sex

112. Which of the following is the monthly discharge of blood through vagina?

A. Menstruation

C. Ejaculation

B. Ovulation

D. Excretion

113. Which of the following STD is caused by viruses

A. Gonorrhea

C. AIDS

B. Chancroid

D. Syphilis

114. What is ecosystem? It is

A. A group of populations of different species living together

B. A place where living organism live and produce

C. The surface of the earth which is occupied by living things

D. All organisms in the given habitat and their interactions

115. Which of the following is abiotic component of the ecosystem?

A. Sunlight

C. Plants

B. Animal

D. Bacteria

116. In which of biological interaction one organism is benefited and the other is harmed?

A. Completion

C. Mutualism

B. Parasitism

D. Commensalism

**QUESTION NUMBER 117 AND 118 ARE BASED ON THE FOLLOWING INFORMATION.**

117. Suppose the following organisms Eagle, Grass, Rat, and Snake are living together in a given habitat. Which of the following shows the correct food chain the habitat?

A. Grass → Rat → Eagle → snake

C. Grass → Eagle → Rat → Snake

B. Grass → Snake → Rat → Eagle

D. Grass → Rat → Snake → Eagle

118. Which one the following organisms belongs to the tertiary consumer?

A. Eagle

C. Snake

B. Grass

D. Rat

119. Food web different from food chain by

A. Energy flows in one direction

C. There are more than one food chains

B. Direct and simple feeding systems

D. There is only one food chain

120. Which of the following pyramid is more accurate representation of the energy contents at each trophic level?

A. Pyramid of number

C. Pyramid of biomass

B. Pyramid of Energy

D. Pyramid of graphic