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ADDIS ABABA CITY ADMINISTRATION EDUCATIONAL BUREAU

MODEL EXAMINATION FOR GRADE EIGHT

GENERAL SCIENCE, TAHISAS 2015/ JANUARY 2023

NUMBER OF QUESTIONS: 60 **TIME ALLOWED: - 1 HOUR**

GENERAL DIRECTIONS

THIS BOOKLET CONTAINS **GENERAL SCIENCE** EXAMINATION. IN THIS EXAMINATION, THERE ARE A TOTAL OF **60 MULTIPLE CHOICE QUESTIONS**. CAREFULLY SELECT THE BEST ANSWER AND **BLACKEN** ONLY THE LETTER OF YOUR CHOICE ON THE SEPARATE ANSWER SHEET PROVIDED. FOLLOW THE INSTRUCTIONS ON THE ANSWER SHEET AND THE EXAMINATION PAPER CAREFULLY. USE ONLY **PENCIL** TO MARK YOUR ANSWERS. YOUR ANSWER MARK SHOULD BE **HEAVY** AND **DARK**, COVERING THE ANSWER SPACE COMPLETELY. PLEASE ERASE ALL UNNECESSARY MARKS COMPLETELY FROM YOUR ANSWER SHEET.

YOU ARE ALLOWED TO WORK ON THE EXAM FOR **1 HOUR**. WHEN TIME IS CALLED, YOU MUST IMMEDIATELY STOP WORKING, PUT YOUR PENCIL DOWN, AND WAIT FOR FURTHER INSTRUCTIONS.

ANY FORM OF CHEATING OR AN ATTEMPT TO CHEAT IN THE EXAMINATION WILL RESULT IN AN AUTOMATIC DISMISSAL FROM THE EXAMINATION HALL AND CANCELLATION OF YOUR SCORE (S).

PLEASE MAKE SURE THAT YOU HAVE WRITTEN ALL THE REQUIRED INFORMATION ON THE ANSWER SHEET BEFORE YOU START TO WORK ON THE EXAMINATION.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

CHOOSE THE CORRECT ANSWER FROM THE GIVEN OPTIONS AND BLACKEN THE LETTER OF YOUR CHOICE ON THE ANSWER SHEET PROVIDED.

1. Which one of the following **IS NO**T 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. 0.00015µm
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 and 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. Thermometer
    B. Stop watch
    C. Vernier Caliper
    D. Spring Balance
11. A Dart player hits the target after many trials as shown in the figure below.



Figure 1. The Target of a Dart player

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 ${}^{16}_{8}X$. 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. O_2
    B. H_2
    C. 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. H_2O
    B. HCl
    C. Ne
    D. 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. C_4H_8
    B. C_4H_{10}
    C. C_4H_6
    D. C_4H_{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_2
    D. Al_2O_3
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 $Mg(OH)_2$.
    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?
    A. Wearing eye protection goggle.
    B. Wearing protective clothes.
    C. Never taste any chemicals but smell some chemicals.
    D. Never add water on a concentrated acid solution.
34. Which one of the following neutralization reaction can be done in our everyday life?
    A. Using tooth paste to protect our teeth from bacteria.
    B. Using antiacids like $Mg(OH)_2$ to neutralize excess acids in the stomach.
    C. Using baking powder which is use to cure bee stings and ant bites.
    D. Using acidic soil to treat powered lime.
35. The neutralization reaction of a base and an acids is given by the equation

$$HCl + NaOH \rightarrow X + H_2O$$

    What is the salt represented by X?

    A. $NaCl$
    B. $NaOH$
    C. HCl
    D. $Na(OH)_2$

36. Which of the following formula represent sulphuric acid?
    A. H_2NO_4
    B. H_2SO_4
    C. H_2PO_4
    D. HCl
37. Which one of the following is a component of an integumentary system that keeps your skull warm and givesbeauty for women?
    A. Skin
    B. Glands
    C. Nail
    D. Hair

38. Which part of your nail that is responsible for the growth of your fingers nail?
    A. The matrix
    B. The lunular
    C. The nail folds
    D. 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?
    A. Latex allergy
    B. Chicken pox
    C. Blister
    D. 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?
    A. Smooth muscles
    B. Cardiac muscles
    C. Heart muscles
    D. 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. Incissors
    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