



**CHRIST HIGH SCHOOL PLOT 5, CHS  
STREET, KM 32, ABUJA-KEFFI ROAD  
UKE, NASARAWA STATE**

**END OF SECOND TERM  
EXAMINATION 2024/2025  
ACADEMIC SESSION**

**SUBJECT: BASIC SCIENCE  
AND TECHNOLOGY  
CLASS: JS 3  
TIME: 2 Hours 45 Minutes**

**NAME.....**

**CANDIDATE'S ADMISSION NO.**

### **INSTRUCTION**

**Write your name and number in the space  
provided on your answer booklet. Write  
your name on any extra sheet used.**

**Answer all questions in section A and  
answer only four questions in the theory,  
one (1) question from each subject.**

**At the end of the examination, staple all  
your work securely together.**

<b>FOR EXAMINER'S USE</b>	
Total Score:	+

## SECTION A: OBJECTIVE

### BST A: BASIC SCIENCE

1. \_\_\_\_\_ is the ability to do work.
  - A. Strength
  - B. Power
  - C. Energy
  - D. Force
  - E. Momentum
2. The following are sources of energy except \_\_\_\_\_
  - A. Books
  - B. Coal
  - C. Fuel
  - D. Natural gas
  - E. Wind
3. The energy that possess charges in the form current and is created from moving electrons is called
  - A. Current energy
  - B. Electric energy
  - C. mechanical energy
  - D. sound energy
  - E. light energy
4. What is the symbol for silver as an element?
  - A. Fe
  - B. Cu
  - C. Pb
  - D. Ar
  - E. Hg
5. The energy that enables us to hear and is generated as a result of vibration is referred to \_\_\_\_\_
  - A. Current energy
  - B. Electric energy
  - C. Mechanical energy
  - D. Light energy
  - E. Sound energy
6. The “M” in the acronym MR NIGER CAD, means \_\_\_\_\_
  - A. Mulching
  - B. Munching
  - C. Movement
  - D. Mounting
  - E. Melting
7. Which of the following is not a property of plants?
  - A. They have leaves
  - B. They have roots
  - C. They have stems
  - D. They produce their own food
  - E. They are mobile
8. There are \_\_\_\_\_ main classes of food nutrients
  - A. Five
  - B. Seven
  - C. Four
  - D. Six
  - E. Three
9. A farmer lifts a bundle of 35 kg firewood, unto a barn roof of 8m. What is the potential energy, if  $g = 10\text{m/s}^2$ 
  - A. 1800J
  - B. 2800J
  - C. 1350J
  - D. 2.8J
  - E. 3600J
10. Work is measured in \_\_\_\_\_
  - A. Joules
  - B. Newton
  - C. Meters
  - D. Celsius
  - E. Watts
11. Find the work done by a man who lifts a weight of 20N from the ground to a vertical height of 4m by means of a rope.
  - A. 40J
  - B. 50J
  - C. 80J
  - D. 70J
  - E. 80J

12. What is the force acting on a block with a mass of 20kg which lifted across a short distance, while acceleration due to gravity =  $10\text{m/s}^2$ 
  - A. 200N
  - B. 30N
  - C. 100N
  - D. 10N
  - E. 40N
13. The S.I unit of power is \_\_\_\_\_
  - A. Newton
  - B. Watt
  - C. Joules
  - D. Decibel
  - E. Meters
14. Another name for stored energy is \_\_\_\_\_
  - A. Waiting energy
  - B. Initial energy
  - C. Inertia
  - D. Potential energy
  - E. Slow energy
15. When the hands of a clock move, potential energy is transferred into \_\_\_\_\_ energy
  - A. Sound
  - B. Thermal
  - C. Ticking
  - D. Time
  - E. Kinetic
16. According to the kinetic theory of matter, matter comprises of tiny particles known as atoms and \_\_\_\_\_
  - A. Microbes
  - B. Pathogens
  - C. Molecules
  - D. Tiny mass
  - E. Dust
17. Energy released in motion is \_\_\_\_\_
  - A. Motion energy
  - B. Heat energy
  - C. Molecular energy
  - D. Atomic energy
  - E. Kinetic energy
18. The first scientific study on heredity was carried out by
  - A. Charles Darwin
  - B. Francis Galetton
  - C. Henri Becquerel
  - D. Gregor Mendel
  - E. Michael Faraday
19. Forest is conserved through the following except
  - A. Afforestation
  - B. Deforestation
  - C. Education
  - D. Legislation
  - E. Reforestation
20. the scientific study of heredity and variation in living things is known as
  - A. genetics
  - B. genes
  - C. emetology
  - D. natural selection
  - E. biology
21. The phenomenon of separating white light into its components by a prism is called
  - A. Deviation
  - B. Incidence
  - C. Dispersion
  - D. Reflection
  - E. Refraction
22. In which part of the eye is the pupil located?
  - A. Iris
  - B. Eye lashes
  - C. Cornea
  - D. Sclera
  - E. Upper eyelid
23. The outer part of the ear is called the
  - A. Auditory canal
  - B. Pinna
  - C. Ear drum
  - D. Malleus
  - E. Semi -circular canal

24. The potential energy of a ball having mass 20kg at a height of 8m is: ( $g = 10\text{m/s}^2$ )
- 1.6J
  - 0.6J
  - 16J
  - 1600J
  - 160J
25. A straight rod placed in a basin of water appears bent, this is due to what property of light
- Diffraction
  - Dispersion
  - Interference
  - Reflection
  - Refraction
26. Genetic traits that are present but do not manifest outwardly are
- Physical
  - Coloured
  - recessive
  - dominant
  - scarce
27. the following are ways of preventing erosion except
- Mulching
  - Crop rotation
  - Planting legumes
  - Irrigation
  - Over grazing
28. Which of these is not an example of family traits
- Height
  - Skin complexion
  - Colour of eyes
  - Dressing
  - Shape of nose
29. If the mass of a ball moving at a velocity of  $10\text{m/s}^2$  is 10kg, calculate the kinetic energy.
- 150J
  - 100J
  - 10J
  - 50J
  - 550J

30. cutting down of trees and clearing of forests indiscriminately is called
- deforestation
  - afforestation
  - erosion
  - regulation
  - conservation

### **BST B: BASIC TECHNOLOGY**

31. What is the primary purpose of a blueprint?
- to list the materials needed for a project
  - to provide a visual representation of a design
  - to estimate the cost of a project
  - to create a schedule for construction
  - none of the above
32. Who uses blue print
- architects
  - engineers
  - contractors
  - all of the above
  - none of the above
33. what is the purpose of the scale on a blueprint
- to show the size of the building
  - to indicate the materials used in construction
  - to provide a key for understanding the symbols used on the blueprint
  - to show the location of the building
  - all of the above
34. .... shows the views of the front, the side or the back of the buildings as seen from a distance
- a section
  - a building plan
  - a building symbols
  - a depression
  - an elevation
35. .... is use for cutting different sizes of wood piece
- saw

- B. planner
  - C. sand paper
  - D. glue
  - E. hammer
36. .... Types of joints are used in joining wood edge to edge
- A. angle joint
  - B. widening joint
  - C. box joint
  - D. framing joint
  - E. halving joint
37. All are common wood work joint except?
- A. Butt joint
  - B. Bridle joint
  - C. Halving joint
  - D. Mortise and Tenon joint
  - E. Angle joint
38. The strongest form of corner joints used in cabinet work and other box like constructions is
- A. Mortise joint
  - B. Tenon joint
  - C. Bridle joint
  - D. Dovetail joint
  - E. Butt joint
39. .... are substances capable of holding or bonding two other pieces of wood
- A. Cohesive
  - B. Abrasive
  - C. Adhesive
  - D. magnets
  - E. corrosive
40. Grades of abrasive include the following except
- A. beautiful
  - B. very fine
  - C. fine
  - D. coarse
  - E. very coarse
41. The following are examples of contact adhesives except:
- A. Evotic
  - B. superglue
  - C. araldite
  - D. Bostic
  - E. urea
42. .... Abrasive are used for polishing and finishing after staining or vanishes are applied?
- A. Medium
  - B. Fine
  - C. Very fine
  - D. Beautiful
  - E. Very beautiful
43. The first step used in metal work project production is?
- A. Cutting procedure
  - B. Filling procedure
  - C. Drilling procedure
  - D. Marking out procedure
  - E. Wielding procedure
44. All are step taken in metal work cutting process except?
- A. Choose hack saw blade depending on the type of work to be done.
  - B. Secure the metal work piece on the vice rigidly
  - C. Arrange the work piece in such a way that the cutting is done horizontally
  - D. Hold the hack saw frame firmly and spread your legs to give balance when cutting
  - E. Apply lubricant if necessary when cutting
45. Which of the following is used to mark the Centre of a hole before drilling?
- A. Spanner
  - B. Scriber
  - C. Punch
  - D. Screwdriver
  - E. Steel rule
46. The fuel used for brazing is a mixture of oxygen and \_\_\_\_\_
- A. Acetylene
  - B. Charcoal
  - C. Kerosene
  - D. Petrol
  - E. Water
47. A solder is an alloy of lead and

- A. Aluminum
  - B. copper
  - C. iron
  - D. tin
  - E. zinc
48. The following are steps involved in soldering except
- A. Cleaning
  - B. fluxing
  - C. heating
  - D. peeling
  - E. washing
49. All are example of protein adhesive except?
- A. Animal glue
  - B. Casein
  - C. Blood albumen
  - D. All of the above
  - E. None of the above
50. .... is a chemical compound usually made in the form of a liquid or paste which is applied to the joint surface prior to brazing to protect the joint surface during heating .
- A. Fluid
  - B. Water
  - C. Flux
  - D. Salt
  - E. sand
51. What step follows fluxing during brazing?
- A. Cleaning
  - B. Heating
  - C. Picking
  - D. Scaling
  - E. Washing
52. The term used to describe motion in a circular path is
- A. Linear
  - B. Oscillatory
  - C. Rectilinear
  - D. Rotary
  - E. Translational
53. Motion in a straight line can be obtained by the following
- A. Levers
  - B. Linkages
  - C. Slides
  - D. Slots
  - E. Turbines
54. The movement of piston in an engine is an example of ----- motion
- A. Circular
  - B. Linear
  - C. Oscillatory
  - D. rotational
  - E. Translational
55. All are types of brazing except?
- A. furnace brazing
  - B. torch brazing
  - C. induction brazing
  - D. resistance brazing
  - E. electrode brazing
56. Soldering is a ----- process
- A. Finishing
  - B. Fitting
  - C. Forging
  - D. Joining
  - E. Machining
57. Which method would you use on a circuit board?
- A. Soldering
  - B. Tempering
  - C. Brazing
  - D. Welding
  - E. Drilling
58. Which of these is not a soldering tools and materials?
- A. soldering bit
  - B. solder
  - C. file
  - D. source of heat
  - E. Snip
59. In sheet metal work, the final shape of the metal is obtained by\_\_\_\_
- A. hollowing
  - B. Forming

- C. plating
- D. raising
- E. Sinking

60. Which of the following is a flux used for brazing?

- A. ammonium
- B. Barium
- C. Borax
- D. Lithium
- E. Potassium

### **BST C: PHYSICAL AND HEALTH EDUCATION**

61. Benefits of physical exercise include all the following except

- A. Weight control
- B. Improved mental state
- C. Reduced risk of type 2 diabetes
- D. Strengthened bones
- E. Reduced height

62. Which body controls athletics at world level?

- A. IAF
- B. NFA
- C. IAAF
- D. IFA
- E. NIFA

63. The pole used in pole vault is made of \_\_\_\_

- A. Metal
- B. Wood
- C. Plastic
- D. Carbon fiber
- E. Glass

64. \_\_\_\_ and \_\_\_\_ are the categories of athletics.

- A. Track and pitch
- B. Track and field

- C. Field and pitch
- D. Field and hall
- E. Track and class

65. These are skills in hockey **except**

- A. Digging
- B. Tackle
- C. Blocking
- D. Scooping
- E. Dribbling

66. The pentathlon is a contest in \_\_\_\_ events

- A. 5
- B. 6
- C. 4
- D. 3
- E. 2

67. Careers in Physical and Sports include the following except

- A. Physical education or gymnastics instructor
- B. Sports administrator
- C. Ball boy
- D. Professional sportsman
- E. Game official

68. Richard Ihetu (Dick Tiger) was a \_\_\_\_

- A. Wrestler
- B. Boxer
- C. Sprinter
- D. Swimmer
- E. Footballer

69. Taekwondo focuses on the following tenets **except**

- A. Justice
- B. Respect
- C. Etiquette

- D. Revenge  
E. Self-confidence
70. The taekwondo contest area measures \_\_\_\_m by \_\_\_\_m
- A. 8, 8  
B. 12, 12  
C. 9, 9  
D. 11, 11  
E. 10, 10
71. A boxing round lasts for \_\_\_\_ minute(s)
- A. 1  
B. 5  
C. 2  
D. 4  
E. 3
72. All these changes occur in boys during puberty except
- A. The voice deepens  
B. The body gets larger and becomes more muscular  
C. Fatty tissue is deposited in the hips and thighs  
D. The sex organs increase in size  
E. Sperm is produced
73. Communicable diseases are spread through the following **except**
- A. Water  
B. Air  
C. Blood transfusion  
D. Sound  
E. Sexual intercourse
74. These are non-communicable diseases **except**
- A. Obesity  
B. Cholera  
C. Diabetes  
D. Stroke  
E. Kwashiorkor
75. Protective safety gear worn in taekwondo are the following **except**
- A. Helmet  
B. Forearm guard  
C. Groin guard  
D. Shin guard  
E. Trunk protector
76. Gymnastics require all these **except**
- A. Justice  
B. Flexibility  
C. Balance  
D. Control  
E. Skill
77. The following are true of drug addiction **except**
- A. Drug abuse leads to drug addiction  
B. Drug addiction can occur when drugs are misused  
C. Drug addiction improves performance at school  
D. Drug addiction has serious negative effects on health  
E. A drug addict cannot control how much of a drug he or she takes
78. The prevention and management of communicable diseases include the following **except**
- A. Quarantine



- B. Less health care facilities
  - C. Public hygiene
  - D. Increased awareness
  - E. Immunization
79. The prevention and management of non-communicable diseases include the following **except**
- A. Increased level of education
  - B. Healthy lifestyle
  - C. Genetic screening
  - D. Late detection of diseases
  - E. Awareness of non-communicable diseases
80. Competitive swimming is done in a standard \_\_\_\_\_
- A. River
  - B. Dam
  - C. Lake
  - D. Ocean
  - E. Pool
81. One of these is not a swimming equipment
- A. Swimming cap
  - B. Swim suit
  - C. Swimming goggles
  - D. Lane rope
  - E. Swimming pool
82. Which of these diseases does a mosquito transmit?
- A. Cholera
  - B. Small pox
  - C. Malaria
  - D. Tuberculosis
  - E. Influenza
83. How many lanes are no a standard athletics track?
- A. 5
  - B. 6
  - C. 7
  - D. 8
  - E. 9
84. How many lanes are in a standard swimming pool?
- A. 9
  - B. 8
  - C. 7
  - D. 6
  - E. 5
85. In gymnastics, activities performed on the floor are referred to as
- A. Stunts
  - B. Rings
  - C. Rolling
  - D. Vaulting
  - E. Ropes
86. Which of the following is not a gymnastic term?
- A. Flicking
  - B. Balancing
  - C. Vaulting
  - D. Agility
  - E. Flexibility
87. A game of football lasts for \_\_\_\_ minutes
- A. 70
  - B. 80
  - C. 90
  - D. 45
  - E. 60

88. A game of volleyball is started with

a

- A. Digging
- B. Service
- C. Volley
- D. Through ball
- E. Pass

89. What is the term used to refer to “no point” in tennis?

- A. Zero
- B. 15
- C. Game
- D. Love
- E. Nil

90. In basketball, how many player(s) from a team are on the court during play?

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5

#### **BST D: INFORMATION AND COMMUNICATION TECHNOLOGY**

91. \_\_\_\_\_ is electronic device valuable in everyday life (home, work place, schools, churches etc.) to do many tasks.

- A. Radio
- B. Television
- C. Computer
- D. Telephone
- E. Wristwatch

92. These are qualities of good computer professionals except

- A. Keyboard skills
- B. Honesty and responsibility

- C. Ability to think quickly
- D. Ability to work under pressure
- E. A dislike for numbers

93. The professional who ensures that data is entered into the computer correctly is the \_\_\_\_\_.

- A. Computer operator
- B. Programmer
- C. Computer analyst
- D. Data capturer
- E. System analyst

94. Computer professionals engage in all but one of the following

- A. Till, sow, reap
- B. Operate, maintain
- C. Manage linked network system
- D. Prepare and process data
- E. Maintain and service computers

95. An unwanted programme that affects efficient functioning of the computer is known as \_\_\_\_.

- A. Vector
- B. Virus
- C. Victim
- D. Sector
- E. Ferro

96. Which of these viruses is a sleeper virus?

- A. Trojan horse
- B. Logic bomb
- C. Alabama virus
- D. Christmas virus
- E. Roman chicken virus

97. All are ways to intrude into system except

- A. Physical
- B. Spiritual
- C. System
- D. Remote
- E. Cyber-espionage

98. The C drive in a microcomputer represents

- A. CD-ROM
- B. Disk drive
- C. Hard disk
- D.  $5\frac{1}{4}$  Diskette
- E.  $3\frac{1}{2}$  Diskette

99. By default, document is printed in a/an \_\_\_\_\_ mode.
- Actual
  - Landscape
  - Page setup
  - Portrait
  - Print preview
100. The function of the recycle bin is to store
- Corrupted files
  - Deleted files
  - Documents
  - Permanent files
  - Temporary files
101. A printing device that uses light beam and electrostatic sensitive black powder is called \_\_\_\_\_ printer.
- Chain
  - Daisy wheel
  - Dot matrix
  - Impact
  - Laser
102. Which of these statement(s) is/are true about arithmetic logic unit?
- Communicate with input devices
  - Stores data
  - Performs arithmetic operations
  - Performs comparison
- I only
  - II only
  - I and II only
  - I and III only
  - IV only
103. The process of transferring files from the internet to the computer is called.
- Bootting
  - Downloading
  - Editing
  - Uploading
  - Writing
104. The super computers are mainly useful for
- Data retrieval operations
  - Input-output intensive processing
  - Manipulating records
  - Mathematical intensive scientific applications.
  - Running multiple processes simultaneously.
105. A volatile memory \_\_\_\_\_ information when power source fails
- Configures
  - Copies
  - Formats
  - Loses
  - Retains
106. The following are disadvantages of internet except
- Hacking
  - Internet addiction
  - Online chat
  - Spamming
  - Virus threat
107. Which of the following is not a type of computer network?
- LAN
  - MAN
  - SAN
  - TAN
  - WAN
108. What is the function of the windows key?
- Activates the start button
  - Initializes processes
  - Reboots the system
  - Restarts windows
  - Shuts down the system
109. A computer system cannot perform the booting process if it does not have the
- Assembler
  - Compiler
  - Loader
  - Operating system
  - Start/stop button
110. General purpose and special purpose computers are classification of computers base on?
- Generation

- B. Speed
  - C. Size
  - D. Types
  - E. Versatility
111. A parallel port is most often used by a
- A. Camera
  - B. Monitor
  - C. Mouse
  - D. Printer
  - E. Scanner
112. What is the commonly used unit for measuring the speed of data transmission?
- A. Bits per second
  - B. Characters per second
  - C. Megahertz
  - D. Nano second
  - E. Words per second
113. Which of the following is most oriented to scientific programming?
- A. BASIC
  - B. COBOL
  - C. Fortran
  - D. Java
  - E. PL/I
114. Which of these is a proprietary source operating system
- A. Android
  - B. Linux
  - C. Sun-Solaris
  - D. Unix
  - E. Windows
115. The acronym that is used to denote MS Excel's order of operation is
- A. PEDDAS
  - B. PEMDAS
  - C. PEMMAS
  - D. PEDDMA
  - E. MASPED
116. Hardware or software designed to guard against unauthorized access to a computer network is known as a/an
- A. Encryption
  - B. Firewall
  - C. Password
  - D. Program
  - E. Spyware
117. The \_\_\_\_\_ is a piece of code which is capable of copying itself and typically has a detrimental effect on computer system.
- A. Coding
  - B. Encryption
  - C. Hacking
  - D. Virus
  - E. Zombie
118. Analyzing the system to establish its strengths and weakness is a role of a
- A. Computer operator
  - B. Project manager
  - C. Software programmer
  - D. System analyst
  - E. System engineer
119. The cell that is been currently worked upon is known as \_\_\_\_\_
- A. Active
  - B. Reference
  - C. Execution
  - D. Initial
  - E. Current
120. A cell can also reference another cell in the \_\_\_\_\_.
- A. Work cell
  - B. Cellular
  - C. Worksheet
  - D. Sheet
  - E. Excel

## **SECTION B: THEORY**

### **BST A: BASIC SCIENCE**

**INSTRUCTION: Answer only one (1) question from this part**

1a. Write short notes on the following: (3 marks)

- Reflection
- Refraction

1b. State the laws of magnetism. (2 marks)

2a. State and briefly explain the forms of heat transfer (3 marks)

2b. what is the major difference between insulators and conductors (2 marks)

### **BST B: BASIC TECHNOLOGY**

**INSTRUCTION: Answer only one (1) question from this part**

3. a. Define what is a building plan (2 marks)

3. b. Name any two types of wood work joint and draw any one. (3 marks)

4. a. Define non wood work materials and give any two types (3 marks)

4. b. Give one differences between soldering and brazing (2marks)

### **BST C: PHYSICAL AND HEALTH EDUCATION**

**INSTRUCTION: Answer only one (1) question from this part**

5. A) State four changes each, in boys and girls which occur during puberty  
(4marks)

B) State any two consequences of drug addiction (1 mark)

6. A) Outline any three rules used in the game of football (3 marks)

B) Identify any two skills in basketball (1 mark)

C) List any two facilities and equipment used in taekwondo (1mark)

### **BST D: INFORMATION AND COMMUNICATION TECHNOLOGY**

**INSTRUCTION: Answer only one question in this section.**

7 i. List six (6) examples of computer professionals. (3 marks)

ii. state the types of attacks in use. (2 marks)

8. a. Mention four (4) qualities of a good computer professional. (2 marks)

b. Solve this equation using PEMDAS

$$7(2b-4)^2 + 3(5-3b) \div 2 * 2b$$

(3marks)