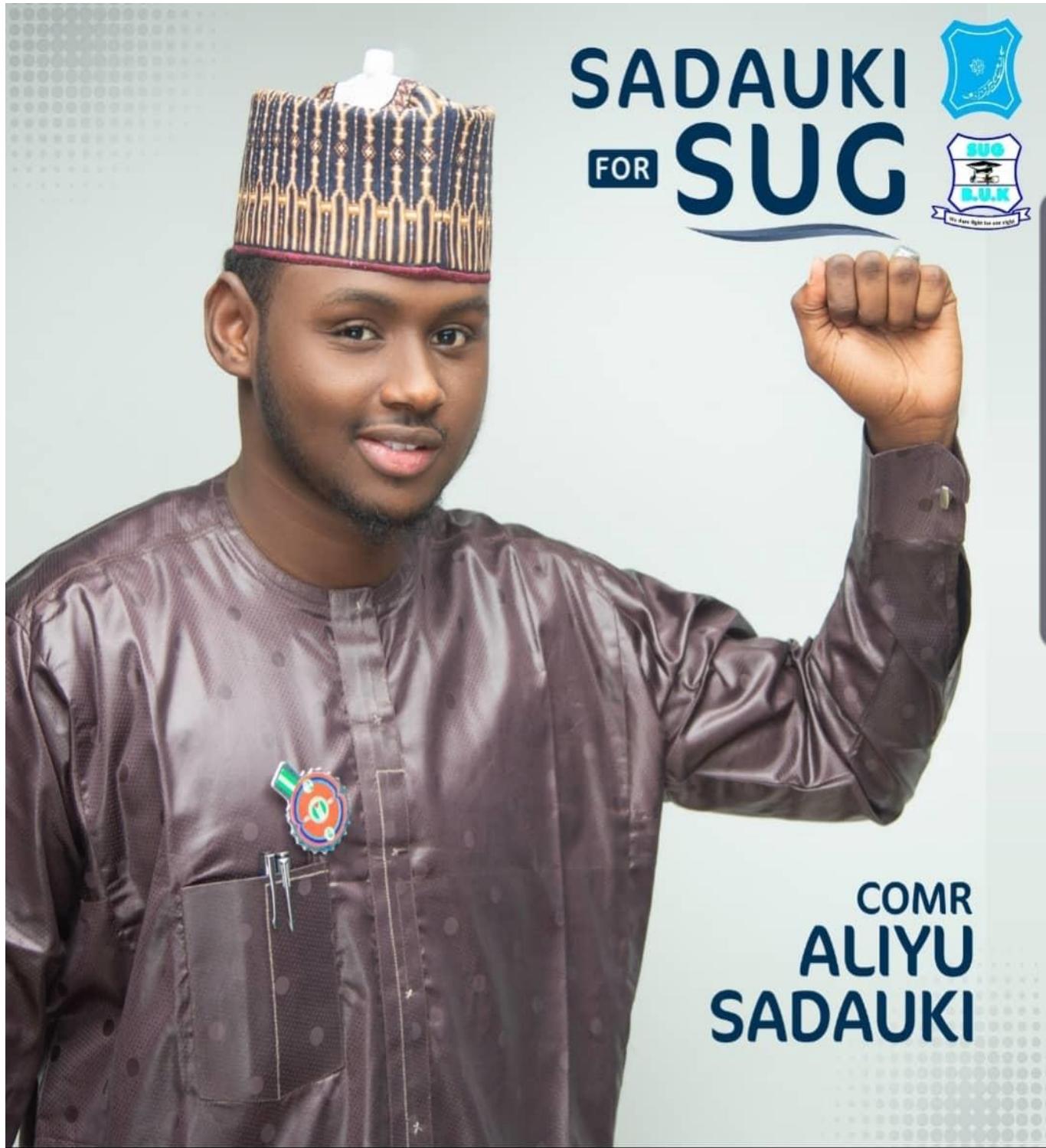


# TEAM SADAUKI STRONG



SADAUKI  
FOR SUG

BUK

COMR  
ALIYU  
SADAUKI

FOR CORRESPONDENCE

C/O Comr. Nuraddeen Gwadabe, Student's Secretariat, Bayero University, Kano  
Tel: +234-81-6600-0014 Email: aliymahmud13@gmail.com

# SADAUKI FOR SUG



BAYERO UNIVERSITY, KANO  
SCHOOL OF GENERAL AND ENTREPRENEURSHIP STUDIES  
2019/2020 SECOND SEMESTER EXAMINATION

Time Allowed: 2

hours

GSP 2203: SCIENCE, TECHNOLOGY AND SOCIETY (STS)

**Instructions:**

- i. Answer **ALL** questions by shading the appropriate boxes on the answer sheet provided.
- ii. Erase completely any answer you wish to change.
- iii. Shading more than one box invalidates your answer.
- iv. All forms of communication among candidates are strictly prohibited.
- v. **Do not write anything on the question paper.**
- vi. GSM phones and other unauthorized objects are not permitted into the examination hall.
- vii. Use **HB pencil only** to shade your OMR answer sheet.
- viii. Candidates using **blank OMR answersheets** MUST write their details using **Pen** and shade their registration number using the appropriate boxes using **HB pencil only**.

From the options provided, choose the correct answer to each of the following questions.

1. There are about ..... galaxies in the Universe.  
 a. hundred thousand million ( $10^{11}$ )      b. hundred million ( $10^8$ )  
c. thousand million ( $10^9$ )      d. million ( $10^6$ )
2. Astronomy is the study of the .....  
 a. universe      b. celestial bodies, gas, and dusts within it  
 c. universe and the celestial bodies, gas, and dusts within it      d. none of the above
3. Astronomers call the set of all matter and energy the .....  
 a. planet      b. Jupiter      c. Earth      d. Universe
4. The universe began as an explosive event resulting in a hot, dense, expanding sea of matter and energy for about .....  
 a. 14 million years ago      b. 14 billion years ago  
c. 14 hundred billion years ago      d. 14 thousand years ago.
5. Sun and bodies orbiting it: the Sun and all the planets, satellites, asteroids, meteors, and comets that are subject to its gravitational pull known as .....  
 a. Big-bang      b. Solar system      c. Universe      d. Astronomy
6. The planets' solar system order from the Sun are as follows:  
a. Mercury, Venus, Earth, Mars, Jupiter etc.      b. Mercury, Mars, Earth, Venus Jupiter etc  
Mars, Mercury, Venus, Earth, Jupiter etc.      c. Mercury, Jupiter, Earth, Mars, Venus etc
7. The solar system probably formed from a cloud of gas and dust that broke away from a larger .....  
 a. about 3.6 billion years ago      b. about 2.6 billion years ago  
c. about 1.6 billion years ago      d. about 4.6 billion years ago
8. Which planet is the hottest in the solar system?  
a. Mercury      b. Mars       c. Venus      d. Jupiter.
9. Which among the planet is second-smallest in the solar system?  
a. Mercury       b. Mars      c. Venus      d. Jupiter.
10. Which among the planet is largest in the solar system?

# SADAUKI FOR SUG

(2)

a. Mercury    b. Mars

c. Venus

d. Jupiter.

11.....is meant to create products that solve problems and improve human life.

- a. Mathematics    b. Sociology    c. Technology    d. Scientific methods

12. After simple tools, the next technological invention is a .....

- a. Shoe    b. wheel    c. car    d. bicycle

13. Tools were at first simply made and unmodified from.....

- a. stones, bones and sticks    b. Iron, steel and wood  
c. aluminium, steel and rubber    d. plastic, iron and steel

14. The time when art, literature and learning in Europe started surviving is called .....

- a. Mesolithic period    b. middle age    c. Renaissance    d. bronze age

15.....is the last phase of stone age when polished stone implements were used in farming.

- a. Prehistoric period    b. Advanced period    c. Middle period    d. Neolithic period

16. As a result of automation, new industrial processes require .....

- a. less manpower    b. no manpower    c. high manpower    d. none of the above

17. ....is the period when rudimentary chipped stone tools were used.

- a. Neolithic period    b. Eolithic period    c. Paleolithic period    d. humeolithic period

18. Individuals and societies are to be blamed for .....of technology.

- a. positive effects    b. direct effects    c. negative effects    d. none of the above

19. Information revolution is making the entire world into a .....village.

- a. golobal    b. global    c. golbal    d. globally

20. ....is presently used in producing genetically modified crops that are resistant to pests and diseases.

- a. Agric    b. Science    c. Tech    d. Technology

21. Information communication technology entails which among the following areas:

- a. Data Processing    b. Information storage and retrieval

- c. Encoding and compression    d. All of the above

22. The information communication technology domain spans all of the following areas except:

- a. Vaccine generation    b. Programming Languages  
c. Smart farming    d. Surveillance systems

23. In ICT, information can be in which of the following formats:

- a. Textual and Numerical    b. Pictorial or graphical  
c. Audio or Video    d. All of the above

24. ICT domain spans all of the following key areas except;

- a. Information systems    b. Catering services  
c. Data management    d. Programming languages

25. The mid 19<sup>th</sup> century has seen extensive development of which types of computers?

- a. Digital Computers    b. Analog computers  
b. Embedded systems    d. Wearable systems

26. In 1613, the term computer was used to refer to:

- a. A person who resolves computations    b. A hand-held calculator  
c. An analog computational device    d. A machine that carries out computations

27. The following constitute computer system components except;

- a. Random access memory    b. Network interface card  
c. Circuit breaker    d. System Bus

# SADAUKI FOR SUG

(3)

8. A program refers to .....  
 a. A critical piece of component of the processor  
 c. Visual display unit  
 b. A set of logical instructions  
 d. None of the above
9. GPS is an acronym used in Navigation technologies and refers to:  
 a. Greater passage system  
 b. Global penetrative signaling  
 c. Global positioning system  
 d. None of the above
10. ICT influences socio-economic development of a nation in various ways including:  
 a. Improved access to services  
 b. Improved productivity for institutions  
 c. Enhanced skills and learning  
 d. All of the above
11. .... is said to have a definite volume but no shape.  
 a. Atom      b. Solid      c. Liquid      d. Gas
12. Anything that has no definite shape and volume may be .....  
 a. Solid      b. Liquid      c. Gas or Plasma      d. Plasma
13. Matter can be classified into ..... physical states  
 a. one      b. two      c. three      d. four
14. All the followings are examples of matter in plasma state except  
 a. Wind      b. Lightning      c. Flame      d. Stars
15. .... has definite volume and no shape.  
 a. Solid      b. Liquid      c. Gas      d. Plasma
16. Water usually escapes into the atmosphere by .....  
 a. Condensation      b. Sublimation      c. Evaporation      d. Melting
17. Ice cold water may change to ice block by.....  
 a. Evaporation      b. Melting      c. Freezing      d. Condensation
18. The tiny building block of matter known as .....  
 a. Proton      b. Nucleus      c. Electron      d. Atom
19. Gas can change to liquid by.....  
 a. Freezing      b. Melting      c. Sublimation      d. Condensation
40. One of the following happens during chemical change  
 a. No new substances are formed  
 b. No change in mass is involved  
 c. External may not be needed  
 d. New substances are formed
41. Scientists are found to be .....  
 a. Alert only      b. Inquisitive only      c. Alert and inquisitive      d. None of the above
42. The word atom is derived from .....  
 a. Latin      b. Arabic      c. Greek      d. French
43. Atomic theory was postulated by  
 a. J. Dalton      b. J. J. Thomson      c. E. Rutherford      d. N. Bohr
44. A disease can be defined as;  
 a. An abnormal condition affecting the body positively  
 b. A normal condition affecting the body negatively  
 c. An abnormal condition affecting the body negatively  
 d. A normal condition affecting the body positively
45. A disease process affects;  
 a. Structure or function of a body  
 b. None of the body's structure  
 c. None of the body's function  
 d. None of the host's anatomy
46. A disease process;  
 a. Is due to any external injury  
 b. Is not construed as medical condition  
 c. Does not have a sign  
 d. Is not due to any external injury
47. One of the following is not an example of internal dysfunction;  
 a. Immunodeficiency  
 b. Knife injury

# SADAUKI FOR SUG

(4)

- c. Hypersensitivity reaction                                  d. Autoimmune disorder  
 18. All but one can cause a disease in the body:  
 a. Viruses    b. Bacteria    c. A balanced diet    d. Parasites  
 19. Example of a non-communicable diseases is:  
 a. Malaria    b. Hypertension    c. Typhoid    d. Cholera

50. About the communicable disease, chose the odd one out;  
 a. It is contagious    b. Transmitted from person to person  
 c. It is non-infectious                                        d. Causative organism is disseminated  
 51. In the context of communicable diseases the following is not true;  
 a. Host-Parasite is very important                        b. Host-parasite population is important  
 c. Man can be the host                                        d. Man is always the parasite  
 52. Resistant of an Organism to infection does not depend on;  
 a. Time of the infection                                      b. Virulence of the organism  
 c. Temperature of the medium                              d. pH of the medium  
 53. Epidemiological triangle includes the following except;  
 a. Agent    b. Hospital    c. Host    d. Environment  
 54. Classification of diseases include all except;  
 a. Topographical    b. District    c. Systemic    d. Juristic  
 55. About immunity, all are true except;  
 a. It is of two types    b. Acquired is inborn in nature  
 c. Acquired is learned with a given time                d. Innate is inborn  
 56. Example of innate immunity include all except;  
 a. Skin    b. T-lymphocytes    c. Mucus    d. Hair cells  
 57. One of the following is true about Candidiasis;  
 a. It is viral infection                                        b. It is a fungal infection  
 c. It is not associated with itching                        d. It is commoner in males  
 58. About Gonorrhoea all are true except one;  
 a. It is commoner in females                                b. Presents with greenish discharge  
 c. Male harbours the disease                                d. Females are carriers  
 59. HIV infection has the following features except;  
 a. The virus attacks the B-lymphocytes                b. The virus attacks the T-lymphocytes  
 c. Opportunistic infections accompany the disease    d. Occurs in homosexual intercourse

60. Syphilis has the following characteristics except;  
 a. The organism is called Treponema Pallidum        b. The organism is called Molluscum contagiosum  
 c. Leads to penile ulceration                                d. Leads to memory loss
61. Science practices began in the year  
 .....  
 a. 3000 AD    b. 5000 BC    c. 3000 BC    d. 5000 AD
62. Thales was among the first true scientists and his research was based on  
 .....  
 a. Heavenly bodies    b. Human race    c. States of matter    d. Hydrodynamics
63. In the ancient times, Egyptians were the best  
 .....  
 a. Engineers    b. Mathematicians    c. Artists    d. Medical practitioners
64. A true science must have the following components except .....  
 a. Experimentation    b. Commercialization                                      c. Observation    d. Interpretation

# SADAUKI FOR SUG

(S)

65. The period in which the Roman empire interrupted the progress of science is called
- a. Civilization ages      b. Creative ages       c. Dark ages      d. modern ages
66. The golden age of Islamic civilization was between
- a. 1000 AD - 1500 AD      b. 1500 AD - 1900 AD
  - c. 100 BC - 150 AD      d. 1200 BC - 1500 AD
67. The Latin word "Scientia" simply means
- a. To hate knowledge       b. To have knowledge
  - c. To hide knowledge      d. To ignore knowledge
68. The idea that all things were made from air was proposed by
- a. Charles Darwin      b. Anaximander      c. Max Planck       d. Anaximenes
69. The scientist who figured out the value of  $2\pi$  to sixteen decimal digits was
- a. Ghiyath al-Din al-Kashani      b. Abu Abdullah al-Battani      c. Lucippus      d. Thales
70. Muhammad bin Musa al-khawarizmi was among the first Muslim
- a. Physicists      b. Physicians      c. Engineers       d. Mathematicians
71. Science practiced by Africans which have been adulterated by Western science is called:
- a. Traditional science       b. Modernized science      c. Standard science      d. Activated science
72. How many books on medical sciences were singly authored by Abu Ali ibn Sina?
- a. 150      b. 246      c. 126      d. 148
73. The "Book of Healing" served as the principal guide for medical science in the West from:
- a. 15<sup>th</sup> - 17<sup>th</sup> century      b. 12<sup>th</sup> - 19<sup>th</sup> century      c. 12<sup>th</sup> - 17<sup>th</sup> century      d. 15<sup>th</sup> - 19<sup>th</sup> century
74. All the followings were contributed by Muhammad bin Musa al-Khwarizmi except
- a. Development of Algebra      b. Development of trigonometrical tables
  - c. Development of the concept of zero      d. Development of Arabic numerals
75. The scientific concept that explains the gradual development of life is described as
- a. Revolution      b. Evolution      c. Revulsion      d. All of the above
76. Microscope was developed by;
- a. Antonie von Leeuwenhoek      b. Theodor Schwann
  - c. Karl Friedrich      d. Thomas Beddoes
77. The term 'Cell' was coined by;
- a. Hans Jensen      b. Gottfried Reinhold Treviranus      c. Robert Hooke      d. Karl Friedrich
78. The word protoplasm was coined by;
- a. Rudolf Virchow       b. Purkinje      c. Robert Hooke      d. Theodor Schwann
79. The following are unicellular organisms except:
- a. Euglena      b. Plasmodium       c. Salmonella      d. Hydra
80. The following are unicellular plants except:
- a. Chlamydomonas      b. Euglena      c. Paramecium       d. Volvox
81. Heterotrophic modes of nutrition do not include;
- a. Saprophytic nutrition      b. Symbiosis      c. Parasitic nutrition       d. Photosynthesis
82. Responding to an external stimulus is biologically referred to as;
- a. Excretion       b. Irritability      c. Locomotion      d. Respiration
83. The following are reptiles except;
- a. Frog       b. turtles      c. crocodile      d. tortoise
84. The following are monocotyledonous plants except;
- a. Cereals       b. Hibiscus      c. lilies      d. palms
85. Which of the following is a fungus?

# SADAUKI FOR SUG

(6)

85.  a. Salmonella      b. Aspergillus      c. Euglena      d. Paramecium
86. The following are protozoans except:  
 a. Amoeba      b. Euglena      c. Plasmodium      d. Paramecium
87. Red blood cells are biologically called .....  
 a. Erythrocytes      b. Phagocytes      c. Lymphocytes      d. Monocytes
88. A group of organisms of the same species (kind) occupying a defined area is termed:  
a. Community      b. Ecosystem      c. Niche       d. Population
89. A group of organisms of the different kind that coexist in the same habitat is termed:  
a. Community       b. Ecosystem      c. Niche      d. Population
90. Symbiotic relationship in which both partners benefit is termed:  
a. Amensalism      b. Commensalism       c. Parasitism      d. Mutualism
91. Benefits of association between living things include the following except:  
 a. Destruction      b. Nutrition      c. Protection      d. Recognition
92. Protons and neutrons are bound together to form nucleus of an atom by:  
a. Molecular force      b. Electromagnetic force      c. Magnetic force       d. Nuclear force
93. Which of the following statements is true about atomic electrons?  
a. they are situated in the nucleus of atoms  
b. they are at fixed distances stationary from the nucleus  
 c. they revolve round the nucleus in fixed orbits  
d. they carry positive charge
94. All the fundamental forces of nature can be attractive and repulsive except:  
a. Strong force      b. Electromagnetic force      c. Weak force       d. Gravitational force
95. Which of the fundamental forces is strongest?  
 a. Strong force      b. Electromagnetic force      c. Gravitational force      d. Weak force
96. Magnetic force of attraction or repulsion is an example of:  
a. Molecular force       b. Electromagnetic force      c. Magnetic force      d. Nuclear force
97. The moon is held and kept in orbit as it revolves round the earth by the:  
a. strong force      b. electromagnetic force       c. gravitational force      d. molecular force
98. Solar eclipse occurred .....  
 a. when the moon in its orbit passes between the sun and the earth.  
b. when the earth in its orbit passes between the sun and the moon.  
c. when the sun in orbit passes between the moon and the earth.  
d. when the moon in its orbit stops moving.
99. The nucleus of an atom consists of:  
a. Protons      b. Neutrons      c. electrons       d. protons and neutrons
100. Communication satellites that send radio and television signals to points on the earth surface are carried by rockets and launched into orbits round the earth. Such satellites are held in space by:  
a. strong force       b. gravitational force      c. weak force      d. molecular force

# SADAUKI FOR SUG

STS 2203 GSP



BAYERO UNIVERSITY, KANO  
SCHOOL OF GENERAL AND ENTREPRENEURSHIP STUDIES  
2020/2021 FIRST SEMESTER EXAMINATION

Time: 2 hours

(7)

GSP 2203: SCIENCE, TECHNOLOGY AND SOCIETY (STS)

(150)

## Instructions:

- i. Answer ALL questions by shading the appropriate boxes on the answer sheet provided.
- ii. Erase completely any answer you wish to change.
- iii. Shading more than one box invalidates your answer.
- iv. All forms of communication among candidates are strictly prohibited.
- v. Do not write anything on the question paper.
- vi. GSM phones and other unauthorized objects are not permitted into the examination hall.
- vii. Use HB pencil only to shade your OMR answer sheet.
- viii. Candidates using blank OMR answer sheets MUST write their details using pen and shade their registration number using the appropriate boxes using HB pencil only.
- ix. Choose the correct answer to each of the following questions from the options provided.

1. A disease can be defined as;
  - a. An abnormal condition affecting the body positively
  - b. An abnormal condition affecting the body negatively
  - c. A normal condition affecting the body negatively
  - d. A normal condition affecting the body positively
2. A disease process affects;
  - a. None of the body's structure
  - b. Structure or function of a body
  - c. None of the body's function
  - d. None of the host's anatomy
3. About Gonorrhoea all are true except one;
  - a. Is common in females
  - b. Structure or function of a body
  - c. Male harbours the disease
  - d. Presents with greenish discharge
  - e. It is a Sexual disease
4. All but one can cause a disease in the body;
  - a. Viruses
  - b. Bacteria
  - c. A balanced diet
  - d. Parasites
5. About the communicable disease, chose the odd one out;
  - a. It is contagious
  - b. It is non-infectious
  - c. Transmitted from person to person
  - d. Causative organism is disseminated
6. Resistance of an Organism to infection does not depend on;
  - a. Weakness of the system
  - b. Virulence of the organism
  - c. Temperature of the medium
  - d. pH of the medium
7. Epidemiological triangle includes the following except;
  - a. Agent
  - b. Host
  - c. Environment
  - d. Hospital
8. Example of innate immunity include all except;
  - a. Skin
  - b. T-lymphocytes
  - c. Mucus
  - d. Hair cells
9. Cells of acquired immunity include all except;
  - a. Killer cells
  - b. Helper cells
  - c. Immunoglobulin
  - d. Cytotoxic cells
10. One of the following is true about Candidiasis;
  - a. It is a viral infection
  - b. It is a fungal infection
  - c. It is not associated with itching
  - d. It is commoner in males

# SADAUKI FOR SUG

(8)

11. Syphilis has the following characteristics except;  
a. The organism is called Treponema Pallidum  
 b. The organism is called Molluscum contagiosum  
c. Leads to penile ulceration  
d. Leads to memory loss
12. HIV infection has the following features except;  
 a. The virus attacks the B-lymphocytes  
b. The virus attacks the T-lymphocytes  
c. Opportunistic infections accompany the disease  
d. Occurs in homosexual intercourse
13. The Latin word 'scientia' means .....  
a. enterprise     b. knowledge    c. wisdom    d. creativity
14. Which of the following is not a branch of modern science?  
a. Natural science    b. social science     c. applied science    d. formal science
15. Progress in science involve all of the following except;  
a. making observations    b. considering evidence    c. testing ideas     d. God factor
16. Max Weber (1798 -1857) was a .....  
a. French philosopher  
c. Greek philosopher  
 b. German sociologist  
d. American marine biologist
17. The correct sequential steps in scientific method is:  
a. question-observation-hypothesis-experiment-evaluation  
b. observation-hypothesis-question-experiment-evaluation  
c. observation-evaluation-question-hypothesis-experiment  
 d. observation-question-hypothesis-experiment-evaluation
18. Scientific law or principle can only be obtained from .....  
 a. theory    b. hypothesis    c. experiment    d. evaluation
19. Which of the following is not limited of science?  
a. drawing conclusions about supernatural explanations  
 b. making aesthetic judgments  
c. dealing with testable facts  
d. making moral judgments
20. Natural science is characterized by the following except;  
a. control    b. exactness     c. uncontrollable variables    d. rationality
21. Which of the following is an example of formal science?  
 a. mathematics    b. biology    c. chemistry    d. physics
22. Similarities between natural and social sciences include the following except;  
a. Both use empirical and measured data that is observable by the senses.  
 b. both study human behavior  
c. both sciences have general laws  
d. theories in both sciences can be tested
23. Which of the following is an example of formal science?  
 a. mathematics    b. biology    c. chemistry    d. physics
24. The information communication technology domain spans all of the following areas except:  
a. Programming Languages    b. Smart farming  
 c. Vaccine generation    d. Surveillance systems
25. During the 17<sup>th</sup> Century, the term computer was used to refer to:  
 a. An analog computational device    b. A mathematically talented person  
c. A hand-held calculator    d. A machine that carries out computations
26. Some of the key limitations of the pre-digital era computer systems involve:  
a. Lack of 3G-type connectivity  
c. Memory lean software  
 b. Reprogrammability and accuracy  
 d. None of the above
27. The central processing unit principally comprise the following except:  
a. Arithmetic-logic unit  
c. Control unit  
 b. Storage unit  
 d. All of the above

# SADAUKI FOR SUG

79

28. The performance of a general-purpose computer could be rated based on its:  
 a. Storage capacity      b. Cooling requirement      c. Screen size      d. Power consumption
29. Computer software allow computers to operate and are generally classified as:  
a. Logical and procedural software      b. Game and learning software  
c. Operating systems and virus cleaner       d. System and application software
30. The computer networking skill encompasses design and development of which of the following?  
 a. Local and Wide area networks      b. Telecasting  
c. Social media network      d. All of the above
31. Radar and advanced telescopes are ICT gadgets with applications in:  
a. Manufacturing and production lines       b. Surveillance and space exploration  
c. Interactivity      d. Project management
32. Digital economy promotes ICT enabled economic activities which can be described as more  
.....  
a. Flexible      b. Agile      c. Smart       d. All of the above
33. The challenges facing the ICT sector in developing nations can generally be addressed via.....  
a. Government interventions and incentives      b. Creation of enabling environment  
c. Correct mix of regulatory initiatives       d. All of the above
34. The system that has taken over the traditional navigational systems in Aircrafts, Ships and road transports is called.....  
a. GSM       b. GPS      c. ATI      d. None of the above
35. The magnitude of the gravitational force between two objects of mass  $m_1$  and  $m_2$  separated by a distance  $r$  is given by  $F = G \frac{m_1 m_2}{r^2}$ .  $G$  is a constant called.....  
a. Electrical field      b. Magnetic constant  
 c. Universal gravitational constant      d. Gravitational acceleration
36. Quarks are held together to form protons or neutrons by.....  
 a. Strong force      b. Electromagnetic force      c. Gravitational force      d. Weak force
37. Protons and neutrons in the nucleus of an atom are bound together by.....  
a. Molecular force      b. Electromagnetic force      c. Magnetic force       d. Nuclear force
38. The electric force of attraction or repulsion is an example of.....  
a. Nuclear force       b. Electromagnetic force      c. Gravitational force
39. Electromagnetic force originates from.....  
~~a.~~ Accelerating electric charges       b. Magnetic objects.  
c. Electric objects.      d. Neutrons.
40. The strongest of all the fundamental forces is.....  
~~a.~~ Strong force      b. Electromagnetic force      ~~c.~~ Gravitational force      d. Weak force
41. The weakest of all the fundamental forces is.....  
a. Strong force      b. Electromagnetic force       c. Gravitational force      d. Weak force
42. Solar eclipse occurred when the.....  
 a. moon in its orbit passes between the sun and the earth.  
b. Earth in its orbit passes between the sun and the moon.  
c. Sun in orbit passes between the moon and the earth.  
d. Moon in its orbit stops moving.
43. The Earth and all other planets are held and kept in orbit round the sun by the.....  
a. Strong force      b. Electromagnetic force      c. Weak force       d. Gravitational force
44. Satellite of the Earth refers to.....  
a. All objects that revolve round the Sun      b. All objects that revolve round Earth  
c. All objects that revolve round the Mars       d. The moon only

# SADAUKI FOR SUG

16

45. The 21<sup>st</sup> Century is seeing an increasing number of ICT skills in which of the following sectors?  
a. Navigation b. Manufacturing c. Interactivity d. All of the above
46. Science is defined as a system of acquiring knowledge based on .....  
a. Intellectual method b. scientific method c. research method d. methodology
47. Since time immemorial, man has been making and using .....in an adhoc manner  
a. knives b. bows c. arrows d. tools
48. .....is the period when rudimentary chipped stone tools were used.  
a. Neolithic period b. Eolithic period c. Paleolithic period d. humeolithic period
49. Skins and hides from animals in Kano city are processed locally to produce .....hundred years back.  
a. Shoes b. bags c. cloth d. leather
50. .....technology is eliminating jobs as more work is done automatically  
a. Transport b. Computer c. Agricultural d. Internet
51. ....has helped in advancing road, air, water and space transportations.  
a. Aeroplane b. Car c. Technology d. wheel
52. Investments in .....are vital to economic growth and wealth creation for people.  
a. Technology b. mathematics c. social science d. science
53. Without technology, the only way of learning would be .....from the teacher.  
a. teaching b. writing c. listening d. copying
54. The foundation for the construction of the wall of Kano city was laid by Sarki Gijimasu from.....  
a. 105 - 1034 b. 105-1234 c. 105 – 1134 d. 1134 – 150
55. Without technology people would be living in .....rather than the types of building we are currently leaving in.  
a. Shelters b. caves c. houses d. hills
56. Internet technology has bred many .....practices like hacking.  
a. law b. rule c. ethical d. unethical
57. Scientists are always found to be .....  
a. Energetic b. inquisitive c. Lazy d. all of the above
58. .....has definite shape and volume  
a. Plasma b. gas c. liquid d. solid
59. An atom consists of equal number of electrons and .....  
a. Neutrons b. protons c. nucleus d. all of the above
60. Which of the following is not a mixture?  
a. Petroleum b. petrol c. air d. milk
61. Everything around us is matter. This statement is .....  
a. Not correct b. may or may not be correct c. absolutely correct d. absolutely false
62. In an atom, protons and neutrons can be located in the .....  
a. Nucleus b. shells c. orbits d. none of the above
63. If the composition of matter can be physically separated, it may be a .....  
a. Compound b. mixture c. element d. atomic
64. Melting of butter is an example of .....change.  
a. Chemical b. physical c. artificial d. all of the above
65. Science can be broadly classified into .....classes.  
a. Two b. three c. four d. five
66. The basic building block of matter is .....  
a. Molecule b. element c. Compound d. atom

# SADAUKI FOR SUG

11

67. A matter that has definite volume but no shape can be .....  
 a. semi solid      b. solid      c. Gas      d. liquid
68. Which of the following is NOT a group of microorganisms?  
 a. Algae      b. Bacteria      c. Protozoa      d. Monkeys
69. Microorganisms are important to both plants and animals because .....  
 a. They can be harmful and harmless to them.      b. They are only harmful to them.  
 c. They are only harmless to them.      d. They are neither harmful nor harmless to them.
70. What is the basis for the classification of animals into 'vertebrates' and 'invertebrates'?  
 a. Possession of a thin backbone.      b. Possession of a strong backbone.  
 c. Possession of a backbone.      d. All of the above.
71. Which of the following is NOT a flowering plant?  
 a. Bryophytes      b. Neem plant      c. Mahogany plant      d. Groundnut plant
72. Which of the following is a reproductive organ in animals?  
 a. Penis      b. Vagina      c. Testes      d. All of the above.
73. Blood from heart is carried to all other parts of the body via .....  
 a. Veins      b. Arteries      c. Venules      d. Arterioles.
74. The four blood groups in human beings are .....  
 a. A, BA, B and O      b. A, AB, B and O      c. A, BO, ABO and AB      d. All of the above.
75. The process of sperm formation in man is called .....  
 a. Gametogenesis      b. Spermatogenesis      c. Oogenesis      d. Asexual reproduction
76. All, but one, are non-flowering plants .....  
 a. Moss plant      b. Liverwort      c. Bryophytes      d. Leguminous plants
77. Mitosis is a type of cell division commonly occurring in:  
 a. Body cells      b. Somatic cells      c. All of the above      d. None of the above.
78. The reproductive organ of a plant is called .....  
 a. A flower      b. A petal      c. A pistil      d. All of the above.
79. All the contributions listed below were made by Muhammad bin Musa al-Khwarizmi except;  
 a. Development of the subject of Algebra      b. Development of trigonometrical tables  
 c. Development of the concept of zero      d. Development of Arabic numerals
80. Egyptian medical practices in the ancient times were purely based on .....  
 a. Research      b. Trial and error      c. Imitation      d. Superstition
81. The activities of science practiced by Africans which have been adulterated by Western science is termed as .....  
 a. Traditional African science      b. Modernized African science  
 c. Standard African science      d. Activated African science
82. Historically, true science began to emerge from .....  
 a. 500 A.D      b. 600 A.D      c. 500 B.C      d. 600 B.C
83. The first two scientists to develop the theory of evolution were .....  
 a. Anaximander and Charles Darwin      b. Charles Darwin and Max Plank  
 c. Niels Bohr and Anaximander      d. Anaximenes and Albert Einstein
84. The method of African science is .....  
 a. More theoretical than practical      b. Equally theoretical as practical  
 c. More practical than theoretical      d. Purely theoretical
85. The book of healing in the field of medicine was written by .....  
 a. Al-Idrisi      b. Abul Qasim al-Zahrawi  
 c. Abu al-Rihan Al-Beruni      d. Abu Ali ibn Sina

# SADAUKI FOR SUG

(12)

86. Establishment of which of the following agencies does not signify national interest on ICT based economic growth?  
 (a) Digital Economy      b. NIMC       c. NAFDAC      d. NITDA
87. The idea that all things were made from air as proposed by Anaximenes led to the concept of .....  
 (a) Atoms      b. Elements      c. Compounds      d. Mixtures
88. What was the first scientific inkling practiced by the Mesopotamians?  
 a. Using compasses to aid their travels      b. Use of mouldy bread to cover open wound  
 c. Making pottery using the first potter's wheel      d. Production of morphine and codeine
89. Quantum mechanics and relativity theory have today become the guiding principles of science in the field of .....  
 a. Medicine      b. Industry      c. Technology       d. All of the above
90. The ultimate goal of astronomers is to understand .....  
 a. the behavior, and evolution of some of the matter and energy that exists  
 b. the structure, and behavior of all of the matter and energy that exists  
 c. the structure, behavior, and evolution of all of the matter and energy that exists  
 d. the structure, behavior, and evolution of all of the matter
91. Earth belongs to one galaxy nicknamed .....  
 a. the celestial      b. the big bang      c. the asteroids       d. the Milky Way
92. Sunspots, which appear as dark spots on the Sun's surface, are .....  
 a. hotter regions on the Sun      b. lighter regions on the Sun  
 c. cooler regions on the Sun      d. thinner regions on the Sun.
93. Which among the planet is nearest to the Sun?  
 a. Venus      b. Earth       c. Mercury      d. Mars
94. The Galaxy, which the Earth belong to, is about .....  
 a. 3000 parsec from end to end       b. 30,000 parsec from end to end  
 c. 300 parsec from end to end      d. 30 parsec from end to end
95. The two kinds of planets in our solar system are .....  
 a. Terrestrial planet and Jovian planet      b. Terrestrial planet and asteroid planet  
 c. Jovian planet and Dwarf planet      d. Comet planet, and Meteoroid planet
96. When all fuel runs out of the inner dense core of a Star, its settle as .....  
 a. red dwarf       b. white dwarf      c. alpha dwarf      d. beta dwarf
97. Life cycle of Star is when 10% of Hydrogen in the star is converted into Helium, it changes appearance dramatically then .....  
 a. Proton fuel ends       b. Nuclear fuel ends      c. Neutron fuel ends      d. Electron fuel ends
98. The distance of Moon from the Earth is .....  
 a. 1.2 light minutes       b. 1.2 light year      c. 1.2 light seconds      d. 1.2 light hours
99. Light starting from a Star 43 years away from the Earth would take .....  
 a. 43 years to reach the Earth      b. 43 hours to reach the Earth  
 c. 43 minutes to reach the Earth      d. 43 seconds to reach the Earth
100. Mercury's surface temperatures, can reach .....  
 a.  $400^{\circ}\text{C}$  at midday, falling to  $-184^{\circ}\text{C}$  in the middle of the night  
 b.  $400^{\circ}\text{F}$  at midday, falling to  $-184^{\circ}\text{F}$  in the middle of the night  
 c.  $427^{\circ}\text{C}$  at midday, falling to  $-184^{\circ}\text{C}$  in the middle of the night  
~~X~~ d.  $800^{\circ}\text{F}$  at midday, falling to  $300^{\circ}\text{F}$  in the middle of the night

# SADAUKI FOR SUG

GSP 2203 STS

(13)



BAYERO UNIVERSITY, KANO  
SCHOOL OF GENERAL AND ENTREPRENEURSHIP STUDIES  
(OFFICE OF THE DEAN)

(160)

2018/2019 FIRST SEMESTER EXAMINATION

Date: Tuesday, 11<sup>th</sup> June, 2019

Time Allowed: 2 Hours

## GSP 2203: SCIENCE, TECHNOLOGY AND SOCIETY (STS)

### Instructions:

- i. Answer ALL questions by shading the appropriate boxes on the answer sheet provided.
- ii. Erase completely any answer you wish to change.
- iii. Shading more than one box invalidates your answer.
- iv. All forms of communication between candidates is strictly prohibited.
- v. Do not write anything on the question paper!
- vi. GSM phones and other electronic gadgets are not permitted into the examination hall.
- vii. Use HB pencil only to shade your OMR answer sheet.
- viii. Candidates using blank OMR answer sheets MUST write their details using pen and shade their registration number using the appropriate boxes using HB pencil only.

1. Which of the following is NOT one of the three major branches of science?  
a. formal science    b. computer science    c. natural science    d. social science
2. All the following are examples of fields in natural sciences except:  
a. mathematics    b. chemistry    c. biology    d. physics
3. Which of the following is not a feature of science?  
a. Science is useful    b. science is exciting  
c. science is ongoing    d. science is not a global human endeavour
4. Which of the following is not a characteristic of science?  
a. Science relies on evidence    b. science works with testable facts  
c. science does not make moral judgements    d. science ideas lead to ongoing research
5. Which of the following is not a scientific code of conduct?  
a. expose ideas to testing    b. make aesthetic judgements  
c. assimilate the evidence    d. openly communicate ideas and test to others
6. The following are all limits of science, except:  
a. play fair    b. it does not draw conclusions about supernatural explanations  
c. it does not tell you how to use scientific knowledge    d. it does not make moral judgements
7. Which of the following is a natural scientist?  
a. Max Weber    b. Auguste Comte    c. Albert Einstein    d. Karl Marx
8. What was the contribution of Enrico Fermi to the world of science?  
a. founder of experimental biology    b. explained atomic structure and quantum theory  
c. coined the general theory of relativity  
d. produced world first atomic bomb and nuclear reactor
9. Marie Curie was a Polish and naturalized French physicist and chemist, she reigned between the years:  
a. 1867 – 1934    b. 1798 – 1857    c. 1907-1964    d. 1885 – 1962
10. Which of the following is the correct sequence of steps involved in a scientific method?  
a. Observation-question-hypothesis-evaluation-experiment  
b. Observation-evaluation-question-hypothesis-experiment  
c. Observation-experiment-evaluation-question-hypothesis  
d. Observation-question-hypothesis-experiment-evaluation

MAROK

# SADAUKI FOR SUG

(14)

11. Which of the following is more appropriate?
  - a. Law or principle is formulated from a theory
  - b. Law or principle is formulated directly from experiments
  - c. Law or principle is formulated directly from positive results
  - d. Law or principle is formulated directly from hypothesis
12. A scientific paper/reporting must include all the following except:
  - a. Data analysis
  - b. methods used
  - c. introduction  d. moral decisions
13. The following are strength of a scientific method except, it must \_\_\_\_\_
  - a. be universal and generally applicable
  - b. be well defined and relatively free from contradictions
  - c. it must incorporate moral decisions
  - d. it must attempt to minimize the influence of bias or prejudice in the experiment
14. All the following are criticism of the scientific method except:
  - a. scientific reports
  - b. science delusion
  - c. science taboos
  - d. false assumptions
15. The similarities between science and social sciences include:
  - a. both do not have general laws
  - b. both do not have numerous applications
  - c. both employ the same scientific model to obtain information
  - d. both do not use empirical and measurable data
16. A substance that has no definite shape but definite volume can best be described as \_\_\_\_\_
  - a. Solid
  - b. Liquid
  - c. Gas
  - d. Plasma
17. Scientists normally use their \_\_\_\_\_ to make observation.
  - a. Senses
  - b. Thinking
  - c. Theory
  - d. Hypothesis
18. When a hypothesis has been tested and found to be correct within the limits of available evidence, it becomes a \_\_\_\_\_
  - a. Fact
  - b. Theory
  - c. Decree
  - d. Law
19. If experiments give a negative result, the scientist should \_\_\_\_\_ to his hypothesis.
  - a. Conclude h.s. findings
  - b. Go back
  - c. Develop a theory
  - d. Develop a law
20. Based on composition, matter may exist in \_\_\_\_\_ physical states.
  - a. Two
  - b. Three
  - c. Four
  - d. Five
21. The smallest building blocks of matter is \_\_\_\_\_
  - a. Nucleus
  - b. Molecule
  - c. Proton
  - d. Atom
22. In an atom, \_\_\_\_\_ is found at the center
  - a. Nucleus
  - b. Proton, neutron and electron
  - c. Proton and neutron
  - d. Electron
23. An atom is believed to be \_\_\_\_\_ in shape.
  - a. Circular
  - b. Square
  - c. Spherical
  - d. Shapeless
24. Which of the following is found in the nucleus?
  - a. Electron and Proton
  - b. Proton and Neutron
  - c. Electron and Neutron
  - d. All of the above
25. An atom is believed to be electrically \_\_\_\_\_
  - a. Positive
  - b. Negative
  - c. Neutral
  - d. Positive and Negative
26. Each of the following may be an example of matter in gaseous state except \_\_\_\_\_
  - a. Steam
  - b. Air
  - c. Cooking gas
  - d. Smoke
27. Conversion of matter from liquid state to solid state is called \_\_\_\_\_
  - a. Sublimation
  - b. Freezing
  - c. Condensation
  - d. Solidification
28. As far as history can tell, the first true scientists were the ancient \_\_\_\_\_
  - a. Asians
  - b. Romans
  - c. Africans
  - d. Greeks
29. Egyptian medical practices in the ancient times were purely based on \_\_\_\_\_
  - a. Research
  - b. Trial and error
  - c. Imitation
  - D) Superstition

# SADAUKI FOR SUG

(15)

30. True science began to emerge between \_\_\_\_\_  
 a. 600 B.C to 500 A.D    b. 100 A.D to 500 A.D    c. 300 B.C to 600 B.C    d. 300 B.C to 100 A.D
31. Short term disappearance of the sun as predicted by Thales is now what is known as \_\_\_\_\_  
 a. Cloud    b. Rain     c. Solar eclipse    d. Fog
32. The first two scientists to develop the theory of evolution were \_\_\_\_\_  
 a. Anaximander and Charles Darwin    b. Charles Darwin and Max Plank  
 c. Niels Bohr and Anaximander    d. Anaximenes and Albert Einstein
33. Progress of science between 500 to 1000 A.D was stalled and this period is called \_\_\_\_\_  
 a. Civilization ages    b. Creative ages     c. Dark ages    d. modern ages
34. Scientific development depends on the efforts of \_\_\_\_\_  
 a. Scientists/Researchers    b. Government    c. Society     d. All of the above
35. All the listed contributions were associated with Muhammad bin Musa al-Khwarizmi except:  
 a. Development of the subject of Algebra    b. Development of trigonometrical tables  
 c. Development of the concept of zero    d. Development of Arabic numerals
36. The activities of science practiced by African people which have not been adulterated by Western science is termed as \_\_\_\_\_  
 a. Traditional African science     b. Modernized African science  
 c. Standard African science    d. Activated African science
37. Quantum mechanics and relativity theory have today become the guiding principles of science in the fields of \_\_\_\_\_  
 a. Medicine only    b. Industry only    c. Technology only     d. All of the above
38. The book of healing in the field of medicine was written by \_\_\_\_\_  
 a. Al-Idrisi    b. Abul Qasim-al-Zahrawi    c. Abual-Rihan Al-Beruni     d. Abu Ali ibn Sina
39. The Latin word "Scientia" simply means \_\_\_\_\_  
 a. To hate knowledge     b. To have knowledge    c. To hide knowledge    d. None of the above
40. What was the first scientific inkling practiced by the Mesopotamians?  
 a. Using compasses to aid their travels    b. Use of moldy bread to cover open wound  
 c. Making pottery using the first potter's wheel    d. Production of morphine and codeine
41. The middle ages physicians who succeeded in treating pains with poppy seeds were the \_\_\_\_\_  
 a. Greek physicians    b. Roman Physicians    c. British physicians     d. Egyptian physicians
42. The idea that all things were made from air as proposed by Anaximenes led to the concept of:  
 a. Atoms    b. Elements    c. Compounds     d. Mixtures
43. A typical plant cell is mainly distinguished from an animal cell by the possession of \_\_\_\_\_  
 a. chloroplast and nucleus.    b. cell wall and cytoplasm  
 c. chloroplast and cell wall    d. cell wall and mitochondria.
44. The sense organs in animals consist of the following except:  
 a. Skin.     b. Hair.    c. Tongue.    d. Ear.
45. Which of the following statements about heredity is not true? In heredity the traits are \_\_\_\_\_  
 a. carried by genes.    b. contained in the ovum and sperm.  
 c. always transmitted by one parent.    d. transmitted from parents to offspring.
46. The science of life is referred to as \_\_\_\_\_  
 a. anatomy.     b. biology.    c. ecology.    d. phylogeny.
47. Anaerobic respiration results in the production of \_\_\_\_\_  
 a. more energy than aerobic respiration.     b. less energy than aerobic respiration.  
 c. an equal amount of energy to aerobic respiration.    d. no energy.

# SADAUKI FOR SUG

(16)

43. The process by which plants manufacture food from carbon dioxide and water using energy from the sun is called  
 a. chemosynthesis.  b. photosynthesis. c. anabolism. d. catabolism.
44. Plants are divided into 2 groups:  
 a. Virus and Bacteria  b. Cryptogams and Bryophyte  
 c. Cryptogams and Phenarogams d. Bacteria and fungi
45. Genetics is a branch of biology that deals with the study of  
 a. Inheritance b. viruses c. anatomy d. tissues
46. The structure that controls cells activities is  
 a. ribosomes b. golgi apparatus c. vacuoles  d. nucleus.
47. Fungi are non-photosynthetic because of the absence of  
 a. Ribosomes b. Mitochondria  c. Chlorophyll d. Cytoplasm.
48. Microscope was first invented by:  
 a. Rudolf Virchow  b. Hans Jensen c. Robert Hooke d. William Bateson.
49. Plant perform \_\_\_\_\_ form of nutrition  
 a. heterotrophic b. holozoic  c. autotrophic d. parasitic.
50. Carnivores' animals feed on only  
 a. Flesh b. Plants c. Insects d. All of the above.
51. The two types of respiration are:  
 a. Aerobic and Holozoic b. Aerobic and Parasitic  
 c. Anaerobic and Holozoic  d. Aerobic and Anaerobic.
52. Growth in organism is controlled by:  
 a. Enzymes b. Minerals  c. Hormones d. None of the above.
53. Science is defined as a system of acquiring knowledge based on  
 a. Intellectual method  b. Scientific method c. research method d. methodology
54. Since time immemorial Man has been making and using ..... in an adhoc manner  
 a. knives b. bows c. arrows  d. tools
55. .... is the period when rudimentary chipped stone tools were used..  
 a. Neolithic period b. Eolithic period  c. Paleolithic period d. humeolithic period
56. Industrial revolution is the period which started from .....,  
 a. 18<sup>th</sup> to 19<sup>th</sup> century b. 18<sup>th</sup> to 20<sup>th</sup> century c. 19<sup>th</sup> to 21<sup>th</sup> century  d. 17<sup>th</sup> to 18<sup>th</sup> century
57. .... technology is eliminating jobs as more work is done automatically  
 a. Transport  b. Computer c. Agricultural d. Internet
58. Internet technology has bred many ..... practices like hacking.  
 a. law b. rule  c. ethical d. unethical
59. The use of modern agricultural implements gives ..... yield of food in a short time.  
 a. medium  b. high c. low d. moderate
60. .... has helped in advancing road, air, water and space transportations.  
 a. Aeroplane b. Car  c. Technology d. wheel
61. .... technology is making the entire world into a global village  
 a. internet b. transport  c. computer d. Information
62. Technological progress proceeded very much in an adhoc manner and was based on.....  
 a. computations  b. trial and error c. science d. engineering
63. .... affects the way we live, work and interact with our environment.  
 a. Computer b. Television  c. Radio d. Technology
64. The information communication technology domain spans which of the following areas:  
 a. Data management b. Programming Languages c. Smart farming  d. All of the above

# SADAUKI FOR SUG

(17)

70. ICT professionals perform variety of functions which include which of the following?
- a. Design and development of digital electronics systems
  - b. Design of computer networks
  - c. Construction of aircraft fuselage
  - d. None of the above
71. Which among the following can be used to describe the computer system in the ICT world?
- a. A primary channel through which information can be accessed around the globe
  - b. An electronic system that receives, processes and stores information
  - c. All of the above
  - d. None of the above
72. The term computer was coined in 1613 and was used to refer to:
- a. A person who carried out calculations
  - b. Hand-held calculator
  - c. Machine that carries out computations
  - d. Communication modem
73. In the early 19th Century, scientific computing needs were mostly met by the use of \_\_\_\_\_
- a. Analog computers
  - b. Supercomputers
  - c. Digital Computers
  - d. Servers
74. The ability of computer system to run more than one application at a time is called \_\_\_\_\_
- a. Multi-operation
  - b. Dual-processing
  - c. Paging
  - d. Multi-tasking
75. The performance of a general purpose computer system is rated based on which of the following indices?
- a. Processing speed and storage capacity
  - b. Power consumption and usability
  - c. Screen size and color map
  - d. None of the above
76. Which among the following is not a computer system component?
- a. Random access memory
  - b. Network interface card
  - c. Surge protector
  - d. None of the above
77. The central processing unit is responsible for which of the following operations?
- a. Arithmetic and logical operations
  - b. Control and decision making
  - c. All of the above
  - d. None of the above
78. A key distinguishing characteristic between the early analog and modern digital computers is:
- a. Ease of operation
  - b. Re-programmability
  - c. Operating system
  - d. Firmware
79. A computer program \_\_\_\_\_
- a. Is a critical physical component of a computer
  - b. Is a set of logical instructions
  - c. Powers the VDU for visualization
  - d. None of the above
80. Computer software can be generally classified as:
- a. Logical and procedural software
  - b. Game and learning software
  - c. Operating systems and virus cleaner
  - d. System and application software
81. Our Earth belongs to one galaxy with nicknamed \_\_\_\_\_
- a. the celestial
  - b. the big bang
  - c. the asteroids
  - d. the Milky Way
82. The Sun is a medium-sized self-luminous gaseous mass that contains \_\_\_\_\_
- a. about 99.9% of all the matter in the solar system
  - b. about 69% of all the matter in the solar system
  - c. about 59.9% of all the matter in the solar system
  - d. about 40% of all the matter in the solar system
83. The ultimate goal of astronomers is to understand \_\_\_\_\_
- a. the behavior, and evolution of some of the matter and energy that exists
  - b. the structure, and behavior of all of the matter and energy that exists
  - c. the structure, behavior, and evolution of all of the matter and energy that exists
  - d. the structure, behavior, and evolution of all of the matter

# SADAUKI FOR SUG

My very efficient mother just serve us  
nine potatoes

(B)

1. The famous Greek philosopher Aristotle gave two good arguments for believing that the Earth was a sphere rather than a flat plate in \_\_\_\_\_  
 a. 340AD       b. 340BC      c. 430BC      d. 430AD
2. In 1609AD, \_\_\_\_\_ observed the Moon's of Jupiter with a telescope thereby demonstrating that everything did not have to orbit directly around the Earth.  
 a. Nicholas      b. Aristotle      c. Ptolemy       d. Galileo
3. Parsec is another unit used by astronomers its value is \_\_\_\_\_  
 a. 3.26 Light year      b. 3.00 Light year       c. 2.36 Light year      d. 2.63 Light year
4. Chandrasekhar limit is \_\_\_\_\_  
 a. 1.4 Solar mass      b. 1.4 light year      c. 2.4 Solar mass       d. 2.4 light year
5. Which planet is the fifth in order from the Sun?  
 a. Jupiter      b. Saturn      c. Uranus      d. Neptune
6. Mercury's surface temperatures, can reach \_\_\_\_\_  
 a.  $400^{\circ}\text{C}$  at midday, falling to  $-184^{\circ}\text{C}$  in the middle of the night  
 b.  $400^{\circ}\text{F}$  at midday, falling to  $-184^{\circ}\text{F}$  in the middle of the night  
 c.  $427^{\circ}\text{C}$  at midday, falling to  $-184^{\circ}\text{C}$  in the middle of the night  
 d.  $800^{\circ}\text{F}$  at midday, falling to  $300^{\circ}\text{F}$  in the middle of the night
7. Which among all the planets is the hottest in the solar system?  
 a. Mercury       b. Venus      c. Earth      d. Mars
8. The two kinds of planets in our solar system are \_\_\_\_\_  
 a. Terrestrial planet and Jovian planet      b. Terrestrial planet and asteroid planet  
 c. Jovian planet and Dwarf planet      d. Comet planet, and Meteoroid planet
9. Protons and neutrons are bound together to form nucleus of an atom by:  
 a. Molecular force      b. Electromagnetic force      c. Magnetic force       d. Strong force
10. The following are fundamental forces except:  
 a. Electromagnetic force      b. Gravitational force      c. Weak force       d. Magnetic force
11. Which of the following statements is true about atomic electrons?  
 a. they are situated in the nucleus of atoms      b. they are at fixed positions from the nucleus  
 c. they carry negative charge      d. they carry positive charge
12. All the fundamental forces of nature are both attractive and repulsive except:  
 a. Strong force      b. Electromagnetic force      c. Weak force      d. Gravitational force
13. Which is the weakest of the all the fundamental forces of nature:  
 a. Nuclear force      b. Electromagnetic force       c. Gravitational force      d. Weak force
14. Quarks are held together to form protons or neutrons by:  
 a. Nuclear force      b. Electromagnetic force      c. Gravitational force       d. Strong force.
15. Which of the following is NOT true of the strong force?  
 a. It holds quarks together to form neutrons      b. It can be attractive or repulsive.  
 c. It is the weakest force      d. It is the strongest force
16. Which of the fundamental forces is strongest?  
 a. Strong force      b. Electromagnetic force      c. Gravitational force      d. Weak force
17. Magnetic force of attraction or repulsion is an example of:  
 a. Molecular force       b. Electromagnetic force      c. Magnetic force      d. Nuclear force

# SADAUKI FOR SUG



19

BAYERO UNIVERSITY, KANO  
SCHOOL OF GENERAL AND ENTREPRENEURSHIP STUDIES  
(OFFICE OF THE DEAN)  
2017/2018 SECOND SEMESTER EXAMINATION  
Date: 4<sup>th</sup> September, 2018 Time allowed: 2 hours  
GSP 2203: SCIENCE, TECHNOLOGY AND SOCIETY (STS)

**Instructions:**

- i. Answer ALL questions by shading the appropriate boxes on the answer sheet provided.
- ii. Erase completely any answer you wish to change.
- iii. Shading more than one box invalidates your answer.
- iv. All forms of communication between candidates is strictly prohibited.
- v. Do not write anything on the question paper!
- vi. GSM phones and other electronic gadgets are not permitted into the examination hall.
- vii. Use HB pencil only to shade your OMR answer sheet.
- viii. For candidates using blank OMR answer sheets, use pen to enter your personal information.

From the options provided, choose the correct answer to each of the following questions.

1. Technology can be defined as an application of science to produce useful goods.  
Consequently;
  - a. The technological and scientific methods are the same
  - b. All technologies apply science
  - c. Application of science generally increase the impact of technological goods
  - d. Science is the elder-brother
2. Scientists formulate hypotheses as part of the scientific method to:
  - a. Describe a theorem
  - b. Lay foundation for setting up experimentations
  - c. Transform theory into practice
  - d. All of the above
3. Understanding the role of Science and Technology in society is vital to everyone because:
  - a. Technological advancement has direct impact on societal development
  - b. For a nation to be developed, everyone must be a scientist/technologist
  - c. Technology brings about changes in lifestyle
  - d. None of the above
4. The various major- and sub-branches of Science exhibit a lot of similarities because:
  - a. All scientists run experiments
  - b. They all do research
  - c. Scientists share common scientific methodology
  - d. None of the above
5. One of the early technological innovations that stimulates mass production is the:
  - a. Wheel technology
  - b. Nuclear power
  - c. Mobile technology
  - d. Steam Engine
6. The agricultural revolution was characterized by which of the following?
  - a. Shifting the early men from a hunter to a farmer
  - b. Construction of settlements
  - c. All of the above
  - d. None of the above
7. Which of the following is true about industrial revolution?
  - a. Risk of unemployment
  - b. Creation of more service-oriented jobs
  - c. Urban-Rural migration
  - d. None of the above
8. One of the major technologies that facilitate the shift from industrial to information age was:
  - a. Aircraft technology
  - b. Steam Power technology
  - c. Computer and communication technology
  - d. Automobile technology
9. One of the key technologies that stimulates effective documentation is the:
  - a. Bicycle technology
  - b. Steam power technology
  - c. GPS technology
  - d. Paper technology

# SADAUKI FOR SUG

20

10. Which of the following best describes the relation between technology and societal development?
- Technology may influence medical, economic and defense sectors
  - Appropriate technologies promote societal development
  - Use of advanced technologies describes the Developed, Developing and the Under-developed world dichotomy
  - All of the above
11. A commonly used approach to national technological development is via:
- Importation of finished technological products
  - Building products from the scratch
  - Technology transfer
  - None of the above
12. Which of the following is false about technology transfer process?
- Requires invention disclosure and license agreements
  - Generally requires no financial return
  - Facilitates quick catch up with the advanced world
  - Risks continuous dependence on the advanced world
13. Which of the following best describes the technology development process?
- A cycle of defining product scope, specifications, design and prototyping, testing and deployment
  - A top-down steps of inspection, analysis, design and evaluation
  - A cycle of modeling, support, testing and deployment
  - None of the above
14. The information revolution is characterized by each of the following EXCEPT:
- Production of mechanized farm tools
  - Creation of more service jobs at the expense of manufacturing ones
  - Globalization for faster communication
  - Domination of culture/language
15. An appropriate technology is characterized by each of the following features EXCEPT:
- Suitability to social and economic conditions
  - Renewability
  - High complexity
  - Availability
16. Which of the following is NOT true of electromagnetic force?
- It is weaker than strong force
  - It can be attractive or repulsive.
  - It acts within long distance
  - It is the strongest force
17. The magnitude of the gravitational force between two objects of mass  $m_1$  and  $m_2$  separated by a distance  $r$  is given by  $F = G \frac{m_1 m_2}{r^2}$ . The constant  $G$  is called:
- universal gravitational constant
  - magnetic constant
  - electrical constant
  - nuclear constant
18. The gravitational force is:
- Always attractive.
  - Always repulsive.
  - Both attractive and repulsive.
  - Neither attractive nor repulsive.
19. The force that holds and keeps the earth in orbit as it revolves round the sun is:
- strong force
  - electromagnetic force
  - weak force
  - gravitational force
20. The moon is held and kept in orbit as it revolves round the earth by the:
- strong force
  - weak force
  - gravitational force
  - molecular force
21. Lunar eclipse occurs:
- when the moon in its orbit passes between the sun and the earth.
  - when the earth in its orbit passes between the sun and the moon.
  - when the sun in orbit passes between the moon and the earth.
  - when the moon in its orbit stops moving.

# SADAUKI FOR SUG

(21)

22. Solar eclipse occurs:
- when the moon in its orbit passes between the sun and the earth.
  - when the earth in its orbit passes between the sun and the moon.
  - when the sun in orbit passes between the moon and the earth.
  - when the moon in its orbit stops moving.
23. The nucleus of an atom consists of:
- Protons
  - Neutrons
  - electrons
  - protons and neutrons
24. The weak force is one of the fundamental forces of nature that is responsible for:
- radioactive decay processes
  - holding the moon in orbit round the earth
  - holding atoms together in matter
  - repulsion between unlike poles of bar magnets
25. Which of the following statements is TRUE about atomic electrons?
- they are situated in the nucleus of atoms
  - they are at fixed distances stationary from the nucleus
  - they revolve round the nucleus in fixed orbits
  - they carry positive charge
26. Communication satellites that receive and send radio and television signals to points on the Earth surface are kept in orbits round the Earth by:
- strong force
  - electromagnetic force
  - weak force
  - gravitational force
27. An atom is believed to be electrically.....
- Positive
  - Negative
  - Neutral
  - Positive and Negative
28. Lighting is an example of matter in ..... state.
- Solid
  - Plasma
  - Gaseous
  - Liquid
29. Ice is water in ..... State.
- Liquid
  - Gas
  - Plasma
  - Solid
30. Steam is water in ..... state.
- Solid
  - Liquid
  - Gas
  - Plasma
31. .... has definite shape and volume.
- Liquid
  - Solid
  - Gas
  - Plasma
32. Which of the following is a not mixture?
- "Zobo drink"
  - Air
  - Cooking gas
  - Steam
33. A change of state from solid to liquid is called.....
- Evaporation
  - Condensation
  - Freezing
  - Melting
34. During rainfall formation, which of the following process takes place?
- Evaporation
  - Condensation
  - Freezing
  - Melting
35. Which of the following is a physical change?
- Writing with a biro on white paper
  - Melting of candle
  - Decomposition by microorganisms
  - None of the above
36. As a result of ..... families can't have a friendly attitude towards each other as they used to in the past.
- Laptops
  - smartphones
  - video games
  - social media
37. .... provides little opportunity for meaningful interaction.
- Television
  - Video
  - Phones
  - smartphones
38. .... being an open platform which lacks regulation, causes an increase in crime.
- Video
  - Computer
  - Internet
  - Chatting
39. .... have replaced hand written letters which makes communication easily accessible.
- Internet
  - Email
  - Telephone
  - computer
40. Scientific and Engineering researches are conducted in an ..... setting.
- Places
  - established
  - organized
  - public
41. Modern ..... implements give high yield of food in a short period of time with less input.
- Tractors
  - Harrows
  - Planters
  - Agricultural

# SADAUKI FOR SUG

22

42. ....fertilizers are now used in farms which add value to the soil and boost the growth of the crops.  
 a. Manure       b. Artificial      c. Synthetic      d. compost
43. Modern .....provides mobility for people and goods.  
 a. Cars      b. Trailers       c. Transportation      d. Trains
44. ....technology is used to grow and improve the customers' services for businesses.  
 a. Communication      b. Telephone      c. Email      d. Internet
45. Technology has helped many scholars around the world through .....learning.  
 a. House      b. Open      c. informal       d. distance
46. Government must be able to adopt programs and initiatives that will address the economic disruption caused by .....  
 a. Politians      b. Governors       c. technology      d. scientists
47. Rapid advancement in modern .....all over the world has changed society in different ways.  
 a. Internet       b. technology      c. computer      d. communication
48. When there was no modern means of .....human life was highly restricted due to unavailability o' technological applications.  
 a. Transportation b. trains      c. airplane      d. lorries
49. .....is the period when there was a change from an agrarian and handcraft economy to industrial and manufacturing which started in Britain.  
 a. Neolithic Age      b. Middle Age      c. Renaissance       d. Industrial Revolution
50. .....is a period that is characterized by the shift from traditional industry to an economic based.  
 a. Internet Age       b. Information Age      c. Telephone Age      d. Video Age
51. Which of the following represent the two major branches of biology as a science?  
 a. Botany and Zoology      b. Microbiology and Hydrobiology  
 c. Plants and A iimals      d. Vertebrates and Invertebrates.
52. Vertebrates are a group of animals comprised of the following:  
 a. Group of flowering plants       b. Animals with a backbone  
 c. Group of non-flowering plants      d. Group of animals without a backbone.
53. Which of the following scientists contributed significantly to the development of biology as a science?  
 a. Hans Jensen      b. Mathias Jacob Schleiden  
 c. Antonie von Leeuwenhoek      d. All of the above.
54. Reproduction simply refers to:  
 a. Ability of living things to increase in number and propagate their own kind  
 b. Ability of living things to make new individuals so that life continues  
 c. All of the above  
 d. None of the above.
55. All but one are components of the cell theory:  
 a. All living things are made up of fundamental units called cells  
 b. All living things originate spontaneously  
 c. Cells are functional units of life  
 d. All cells originate from pre-existing cells.
56. Purkinje coined the word ..... in 1829 to name the 'living jelly', which was found to be frequently associated with animate objects:  
 a. Protoplasm      b. Cell      c. All of the above      d. None of the above.

# SADAUKI FOR SUG

(23)

57. Depending on the number of cells making up an individual living thing, plants and animals are grouped into:
- Living and non-living things
  - Vertebrates and invertebrates
  - Unicellular and multicellular
  - Organisms and living things.
58. The process by which energy is made available through chemical changes inside the body of a living thing is called:
- Photosynthesis  Holozoic
  - Saprophytism
  - Respiration.
59. There are two (2) basic types of nutrition (feeding) in living things. They are:
- Herbivores
  - Omnivores
  - Autotrophism  Autotrophism and heterotrophism.
60. Living things can be classified into three (3) groups according to their feeding habits as follows:
- Herbivores
  - Carnivores
  - Omnivores
  - All of the above.
61. Which of the following is not a sense organ in animals?
- Liver
  - Ear
  - Tongue
  - Skin.
62. The ability of a living thing to respond to changes in its surrounding is known as:
- Response to stimulus  Irritability
  - All of the above
  - Reflex action.
63. Which of the following is an organ of reproduction in plants?
- Stem
  - Flower
  - Branch
  - Leaves.
64. The basic difference between sexual and asexual reproduction is:
- the number of individuals involved in the process
  - the part (organ) of an individual involved in the process
  - The method of fertilization
  - All of the above.
65. Irritability in animals is basically controlled by the:
- Involuntary actions
  - Central nervous system
  - Brain and spinal cord
  - brain and spinal nerves.
66. Over secretion of a growth hormone in children results into a condition referred to as:
- Dwarfism
  - Acromegaly - ~~Adult~~
  - Cretinism
  - Gigantism - ~~children~~
67. Living things involve a vast number of chemical processes, which produce substances that are poisonous when moderately concentrated. The elimination of these waste products is called:
- Respiration
  - Reproduction
  - Excretion
  - None of the above.
68. The type of respiration in which energy is released from food material (glucose) by a chemical breakdown that does not require oxygen is called:
- Aerobic respiration
  - Cellular respiration
  - Anaerobic respiration
  - All of the above.
69. Microscopy revealed the previously unknown world of living things, thus laying the ground work for:
- Cell theory
  - Cell hypothesis
  - Levels of organization in living things.
  - Organization of life.
70. The term 'biology' in its modern sense appears to have been introduced independently by:
- Thomas Beddoes in 1799
  - Karl Friedrich in 1800.
  - Gottfried Reinhold Treviranus in 1802
  - All of the above.
71. Hypertension is:
- a condition when you are worried so much
  - a situation when blood pressure is more than 120/80
  - Blood pressure above normal measured at least three different times
  - When a person developed paralysis.

Anaerobic — Does not requires Oxygen  
 Page 5 of 7

Aerobic — requires Oxygen

# SADAUKI FOR SUG

12/0/80

(24)

72. Nutritional value of food is in:  
 a. The taste of foods  
 c. The good or bad smell of the food  
 b. The nutritional contents of the food  
 d. Digestibility of the food.
73. Adequate exercise according to W.H.O. should cause in the person:  
 a. Increased heart rate  
 b. Increased respiration rate  
 c. Sweating  
 d. All of the above.
74. The best protection from sexually transmitted diseases is:  
 a. Use of male condoms  
 b. Use of female condoms  
 c. Abstinence from promiscuity  
 d. Strict adherence to drugs before intercourse.
75. Essential drug list is:  
 a. Drugs needed in the rural areas  
 b. Drugs that are less expensive  
 c. List of drugs that should be available, affordable and accessible to all  
 d. Drugs that should be nearby in emergency units.
76. Disease is said to be chronic when:  
 a. It is so severe that the patient is unconscious  
 b. The disease has done a lot of damage  
 c. Disease of insidious onset which becomes protracted over long period  
 d. When it makes the person lose a lot of weight.
77. The goal of asthma treatment is:  
 a. Never use inhaler  
 b. Always use inhaler  
 c. No more attack of breathlessness  
 d. Get your injection kit ready.
78. In child health all of the following are essential EXCEPT:  
 a. Good dissolving milk powder for the infant  
 b. Vaccination  
 c. Growth monitoring  
 d. Exclusive breast feeding in the first six months.
79. Contagious diseases include:  
 a. Typhoid      b. Malaria      c. Tuberculosis      d. Gonorrhea.
80. Essential aspect in Antenatal care include:  
 a. Measuring height  
 b. Measuring weight  
 c. Measuring skin fold  
 d. The length of the baby.
81. Which among the planets in the solar system is the windiest?  
 a. Jupiter      b. Saturn      c. Uranus      d. Neptune
82. Most of Uranus is a dirty ocean of water laced with:  
 a. ammonia and methane      b. ammonia acid      c. methane gas      d. Carbon dioxide
83. The planet in the solar system that have cloudy atmosphere of carbon dioxide that traps the Sun's heat is:  
 a. Mercury      b. Venus      c. Saturn      d. Mars
84. The two kinds of planets in our solar system are:  
 a. Jupiter planet and Jovian planet      b. Terrestrial planet and Earth planet  
 c. Terrestrial planet and Jovian planet      d. Jupiter planet and Earth planet
85. An explanation was provided on Law of Universal Gravitation by Isaac Newton in:  
 a. 1687AD      b. 1887AD      c. 1287AD      d. 1587AD
86. The distance of Moon from the Earth is:  
 a. 1.8 Light year      b. 1.2 Light year      c. 2.4 Light minute      d. 1.2 Light second
87. Light starting from a star 43 light years away would take:  
 a. 43 seconds to reach us on the Earth      b. 43 minutes to reach us on the Earth  
 c. 43 hours to reach us on the Earth      d. 43 years to reach us on the Earth
88. Parsec is another unit used by astronomers. Its value is:  
 a. 3.26 Light year      b. 3.00 Light year      c. 2.36 Light year      d. 2.63 Light year

# SADAUKI FOR SUG

(25)

89. Life cycle of a Star is when 10% of Hydrogen in the star is converted into Helium, it changes appearance dramatically then:  
a. Proton fuel ends      b. Nuclear fuel ends    c. Neutron fuel ends    d. Electron fuel ends
90. Chandrasekhar limit is:  
a. 1.4 Solar mass      b. 1.4 light year      c. 2.4 Solar mass      d. 2.4 light year
91. After the 1<sup>st</sup> Millennium, indigenous technologies rapidly evolve in which of the following regions?  
 a. Arabs, Romans, Persians      b. Western world and Far-East  
c. Africa and Europe      d. All of the above
92. Which among the following technologies are known to have changed the human civilization?  
a. Defense technologies      b. Automobile Technology  
 c. Communication Technologies       d. All of the above
93. Which of the following is true about technological impact on society?  
 a. Some technologies may influence people's value in accordance to that of their inventors  
 b. Development of independent nations  
c. Loss of jobs  
d. None of the above
94. .....method uses experimentation and observation to describe and explain natural phenomena.  
a. Mathematical      b. Engineering      c. Research       d. Scientific
95. The ancient tools used during the first millennium were mainly for the purpose of:  
a. Mass production of textiles      b. Mass production of artillery  
 c. Hunting and Farming      d. Air and sea transports
96. The following are fundamental forces except:  
 a. Nuclear force      b. Electric force      c. Gravitational force       d. Weak force
97. All the fundamental forces of nature are both attractive and repulsive except:  
a. Strong force      b. Electromagnetic force       c. Weak force       d. Gravitational force
98. Which of the fundamental forces is strongest?  
 a. Strong force      b. Electromagnetic force      c. Gravitational force      d. Weak force
99. Which is the weakest of all the fundamental forces of nature:  
a. Nuclear force      b. Electromagnetic force       c. Gravitational force      d. Weak force
100. Quarks are held together to form protons or neutrons by:  
 a. Strong force      b. Electromagnetic force       c. Gravitational force      d. Weak force