



G S P PAST QUESTION

SCIENCE, TECHNOLOGY AND SOCIETY



Brought 2U By:
KATIBU

About the Contributor:

My name is Umar Katibu, I love living and I am happy. I'm a deep thinker and easily moved by a word of wisdom. I hardly get angry and I easily forgive. My greatest pleasure is in giving. I feel satisfied whenever I give. It is easy to like me because of my classical ways of treating people. I love to look good and well-respected.

I've many twists and twirls during the course of my adult life. I've experienced both massive success and bitter failures. But together all, they made me a better and strong person.

I attended 4 universities during the course of my life, and it took me long before I discovered my true calling in life.

Today, I thank God. I'm here in prestigious Bayero University Kano. And This past Q is a commitment from all of us at TEAM KATIBU to make a tiny difference in your life.

Numerous people contributed in bringing this Pas Q to you. I thank everyone. GodBless you.

Dedication:

To you my mum.

You turned a small child into a giant man. You're the kindest person I have ever met. May you continue to rest in Jannatul Firdausi. Allah kai haske kabarin ki. (4th June, 2015 – RIP)

I'm online. Contact me for any suggestion or something.

WhatsApp: <wa.me/2348033174228>

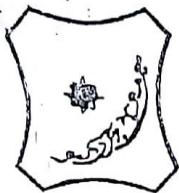
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SHARE IT TO YOUR CLASS WHATSAPP GROUP. YOU MAY HELP SOMEONE.



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

2016/2017 SECOND SEMESTER EXAMINATIONS
GSP2203: SCIENCE, TECHNOLOGY AND SOCIETY

Date: Thurs: 19th October, 2017

Time: 2:00 pm – 4:00pm

- INSTRUCTIONS:**
- (i) Answer **ALL** Questions.
 - (ii) Shade the Selected Option as Directed on the **OMR**.
 - (iii) Shading more than one option invalidates the answer.
 - (iv) Do not Write anything on the Question Paper.
 - (v) Handsets (GSM) are not allowed into the Examination Hall

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- 1) Two major branches of Biology are:(a) Botany and Zoology (b) Microbiology and Hydrobiology
(c) All of the above (d) None of the above.
- 2) Zoology is a branch of Biology dealing with the study of: (a) Plants only (b) Animals only (c) Plants and Animals (d) None of the above.
- 3) The study of both animals and plants is called: (a) Biology (b) Botany (c) Zoology (d) Applied Biology.
- 4) Which of the following best defines the term "growth" in Biology: (a) Decrease in number of organisms (b) Increase in number of organisms (c) Increase in size of an organism (d) Increase in plants and animal.
- 5) Spermatogenesis refers to the process by which:(a) Ova are produced in the female body of an animal (b) Sperms are produced in the male body of an animal (c) Animals give birth to the young ones (d) Plants grow.
- 6) The process by which female sex cells are produced is called:(a) Oogenesis (b) Gametogenesis (c) All of the above (d) None of the above.
- 7) Which of the following is a waste product of respiration? (a) Energy (b) Oxygen (c) Carbon dioxide (d) Glucose.
- 8) Which of the following is not a heterotrophic mode of nutrition? (a) Photosynthesis (b) Holozoic (c) Saprophytism (d) Parasitism.
- 9) Which of the following is not an organ of excretion? (a) Lungs (b) Nose (c) Bladder (d) Kidney.
- 10) Growth hormones in plants are collectively called: (a) Testosterones (b) Progesterones (c) Toxins (d) Auxins.
- 11) Which of the following is not a sense organ in animals? (a) Liver (b) Ear (c) Tongue (d) Skin.
- 12) Which of the following is NOT a microorganism?: (a) Bacteria (b) Viruses (c) Protozoa (d) Nematode.
- 13) Which of the following is an organ of reproduction in plants?(a) Stem (b) Flower (c) Branch (d) Leaves.
- 14) Which of the following is an example of asexual reproduction? (a) Conjugation (b) Budding (c) Fertilization (d) Zygote formation
- 15) The process of gametogenesis results in the production of: (a) Sperms and Ova (b) Animals (c) Zygote (d) Embryo.
- 16) The process by which green plants manufacture their food is called:(a) Respiration (b) Reproduction (c) Photosynthesis (d) All of the above.
- 17) Based on the possession of a backbone, animals are classified into: (a) Long and Short (b) Vertebrates and Invertebrates (c) Flowering and Non-flowering (d) None of the above.
- 18) Depending on the number of cells making up an individual, plants and animals are divided into: (a) Unicellular and multicellular. (b) Multicellular and unicellular. (c) All of the above. (d) None of the above.

① Chirong BIZ

- 19) Microscopy revealed the previously unknown world of living things, thus laying the ground work for: (a) Cell theory. (b) Cell hypothesis. (c) Organization of living things. (d) Organization of life.
- 20) The term 'biology' in its modern sense appears to have been introduced independently by: (a) Thomas Beddoes in 1799. (b) Karl Friedrich in 1800. (c) Gottfried Reinhold Treviranus in 1802. (d) All of the above.
21. The following are fundamental forces except: A. Magnetic force B. Electromagnetic force C. Gravitational force D. Weak force E. Strong force
22. All the fundamental forces of nature are both attractive and repulsive except: A. Strong force B. Electromagnetic force C. Weak force D. Gravitational force E. Electric force.
23. Which of the fundamental forces is strongest? A. Electrostatic force B. Electromagnetic force C. Gravitational force D. Weak force E. Strong force
24. Which is the weakest of all the fundamental forces of nature: A. Nuclear force B. Electromagnetic force C. Gravitational force D. Weak force E. None of the above.
25. 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: A. universal gravitational constant B. magnetic constant C. electrical constant D. nuclear constant E. none of the above
26. Gravitational force is: A. Always attractive. B. Always repulsive. C. Both attractive and repulsive. D. Neither attractive nor repulsive. E. none of the above
27. The Earth and other planets are held in their orbits as they revolve round the Sun by: A. Strong force B. Electromagnetic force C. Weak force D. Molecular force E. Gravitational force
28. The Earth completes a revolution round the Sun in a period of: A. 24 hours B. 1 month C. 1 week D. 365 days 6 hours E. 27 days 8 hours
29. The Earth as well rotates or spins about an axis through its poles as it revolves round the Sun. The time taken by the Earth to complete a rotation about its axis is: A. 24 hours B. 1 month C. 1 week D. 365 days 6 hours E. 27 days 8 hours
30. The moon is held and kept in orbit as it revolves round the earth by the: A. Strong force B. Electromagnetic force C. Weak force D. Molecular force E. Gravitational force
31. The exact time taken by the moon to complete a revolution round the Earth equals A. 24 hours B. 1 month C. 1 week D. 29 days 13 hours E. 27 days 8 hours
32. The exact time taken by the moon to complete a revolution round the Earth is called A. Lunation B. Synodic period C. Orbital period D. Eclipse E. None of the above
33. The time taken by the moon to return to the same position or phase as seen by us is A. 24 hours B. 27 days 8 hours C. 1 week D. 29 days 13 hours E. none of the above
34. The time taken by the moon to return to the same position or phase as seen by us is called A. Lunation B. Orbital period C. Sidereal period D. Eclipse of the moon E. None of the above
35. Lunar eclipse occurs: 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. E. when the earth in its orbit stops moving.
36. Solar eclipse occurs: 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. E. when the earth in its orbit stops moving.
37. Quarks are held together in protons and neutrons by: A. Nuclear force B. Electromagnetic force C. Gravitational force D. Weak force E. Strong force.
38. 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 E. Strong force.
39. 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 acts within extremely short distance D. It is the strongest force E. None of the above.
40. Magnetic force of attraction or repulsion is one of manifestations of: A. Molecular force B. Electromagnetic force C. Magnetic force D. Nuclear force E. Strong force.

- 41: Understanding the role of Science and Technology in society is vital to everyone because:
(a) Technological advancement has direct impact on socio-economic 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
- 42: The concept of Scientific method can best be described as (a) A cycle of observations, production and reasoning (b) A top-down sequence of observations, hypotheses, experimentations and reasoning (c) A cycle of observations, hypotheses, experimentations and reasoning (d) All of the above
- 43: Stone and stick tools were the inventions of which of the following era of human civilization?
(a) Information Age (b) Industrial Age (c) First Millennium (d) All of the above
- 44: Which of the following best describes the relation between science and technology? (a) Technological and scientific methods are mirror images (b) Technology applies scientific principles for production but some technologies predates Science (c) The two approaches are parallel (d) All of the above
- 45: One of the major technologies that facilitate the shift from agrarian to industrial age was: (a) Aircraft technology... (b) Steam Power technology (c) Computer technology (d) Automobile technology
- 46: Which among the following technological inventions continuously evolve since the 1st millennium?
(a) Wheel (b) Textile (c) All of the above (d) None of the above
- 47: Peculiar features of the Agricultural age include: (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
- 48: The ancient tools used by the early men were mainly for the purpose of (a) Mass production of textiles (b) Hunting and farming (c) Mass production of artillery (d) Air and sea transports
- 49: After the 1st Millennium, indigenous technologies rapidly evolve in which of the following regions?
(a) Africa and Europe (b) Western world and Far-East (c) Arabs, Romans, Persians (d) All of the above
- 50: Which of the following is true about industrial revolution? (a) Rural urban migration (b) Mass production (c) Mega cities across Europe and the West (d) All of the above
- 51: Technological impact on societies led to which of the following? (a) Steering people values/culture to that of the inventor (b) Development of independent nations (c) Loss of jobs (d) None of the above
- 52: Which of the following is not true about technology and societal development? (a) Technology may influence medical, economic and defense sectors (b) Appropriate technologies promote societal development (c) None of the above (d) All of the above
- 53: The Developed, Developing and the Under-developed nation's dichotomy was mainly based upon:
(a) Nations focused on technological development in economic and defense sectors (b) Nations with the largest population size (c) Nations with largest deposit of mineral resources (d) Nations focused on Development and adoption of advanced technologies
- 54: Technology development processes involve (a) A cycle of defining product scope, specifications, design and prototyping, testing and deployment (b) A top-down steps of inspection, analysis, design and evaluation (c) A cycle of modeling, support, testing and deployment (d) None of the above
- 55: Globalization is mainly a product of which of the following technologies: (a) Advanced fossil fuel engines (b) Hybrid and electric automobiles (c) The Internet and mobile communication (d) All of the above
- 56: The information revolution is characterized by each of the following except (a) Production of mechanized farm tools (b) Creation of more service jobs at the expense of manufacturing ones
(c) Globalization for faster communication (d) Domination of culture/language
- 57: An appropriate technology is characterized by each of the following features except (a) Suitability to social and economic conditions (b) High complexity (c) Sustainability (d) Availability
- 58: A commonly used approach to national technological development is via (a) Importation of finished technological products (b) Building products from the scratch (c) Technology transfer (d) None of the above

- 59: Which of the following is false about technology transfer process? (a) Requires invention disclosure and license agreements (b) Generally requires no financial return (c) Facilitates quick catch up with the advanced world (d) Risks continuous dependence on the advanced world
- 60: A technology that is indigenous to Kano, and is said to predate the western civilization is:
(a) Tailoring (b) Band making (c) Blacksmithing (d) dyeing
61. Over the years, science has developed through a series of (A) Researches (B) Thoughts
(C) Discoveries (D) Views
62. Scientists are found to be (A) Alert (B) Inquisitive (C) Alert and inquisitive (D) None of the above
63. Scientists use one of the following to make observation on what is happening around them
(A) Senses (B) Eyes (C) Hands (D) Ears
64. When a hypothesis is tested and found to be correct within the limits of available evidence, it becomes a (A) Theory (B) Law (C) Observation (D) All of the above
65. Science can be broadly divided into classes. (A) Five (B) Four (C) Three (D) Two
66. is anything that has mass and can occupies a space. (A) Universe (B) Matter (C) Non living thing (D) Living thing
67. All the following are in liquid state except (A) Petrol (B) Fruit juice (C) Milk (D) Steam
68. One of the following is an example of matter in plasma state. (A) Cloud (B) Flame (C) Dust (D) Sun
69. The process by which ice changes to ice cold water is called (A) Melting (B) Freezing
(C) Evaporation (D) Condensation
70. When rain is falling, one of the following processes takes place. (A) Freezing (B) Evaporation (C) Condensation (D) Ionization
71. The process by which water changes to steam is called (A) Freezing (B) Melting (C) Condensation
(D) Evaporation
72. The tiny building block of matter is known as (A) Atom (B) Molecule (C) Element (D) All of the above
73. The word atom is derived from (A) Latin (B) Arabic (C) Greek (D) French
74. Atomic theory was postulated by (A) J. Dalton (B) J. J. Thomson (C) E. Rutherford (D) N. Bohr
75. One of the following scientists demonstrated the existence of electron in an atom. (A) J. Dalton
(B) J. J. Thomson (C) E. Rutherford (D) N. Bohr
76. Structurally, the earth is made up of parts. (A) Three (B) Four (C) Five (D) Six
77. The part of the earth which composed of water is called (A) The hydrosphere (B) The atmosphere (C) The lithosphere (D) All of the above
78. is said to have a fixed shape and volume (A) Atom (B) Solid (C) Liquid (D) Gas (E) Matter
79. has definite volume and no shape (A) Solid (B) Liquid (C) Gas (D) Plasma
80. Melting of candle is an example of change (A) Chemical (B) Physical (C) None of the above
81. An atom is in shape (A) Spherical (B) Square planar (C) Oval (D) Pyramidal
82. All the following scientists have contributed in describing the structure of an atom except
(A) J. J. Dalton (B) E. Rutherford (C) J. Thomson (D) M. Faraday
83. discovered the neutron (A) Dalton (B) Thomson (C) Chadwick (D) Democritus
84. has the same mass as proton but no charge (A) Electron (B) Nucleus (C) Neutron
(D) atom
85. The main difference between a neutron and a proton is (A) Charge (B) Mass (C) Origin (D) Behavior

86. One of the following happens during chemical change (A) No new substances are formed (B) New substances are formed (C) No change in mass is involved (D) External help may not be needed
87. Writing with a pencil on white paper may be considered as a change (A) Chemical (B) Physical (C) Both physical and chemical (D) None of the above
88. The main difference between a neutron and a proton is (A) Charge (B) Mass (C) Origin (D) Behavior
89. Air is a typical example of a mixture. This statement can be said to be (A) False (B) True (C) Likely false (D) Absolutely false
90. Decay of substances is an example of.....change (A) Physical (B) Chemical (C) Temporary (D) Reversible
91. The useful practical benefits brought by the application of knowledge other than science cannot be considered as
- (a) Technology products (b) products (c) technological products (d) produce
92. Technology is the application of..... principle for practical use.
- (a) Mathematical (b) technological (c) economical (d) scientific.
93.is the next technological invention after simple tools
- (a) Wheel (b) car (c) Motorcycle (d) Aeroplane
94. With the advent ofin the 6th century the Islamic empire became a beehive of scientific and technological innovation.
- (a) Asian civilization (b) American civilization (c) African civilization (d) Islamic civilization
95. Technological advances up to the end of theare not well documented
- (a) 5th century (b) 3rd century (c) 6th century (d) 7th century
96. Technology can be considered to be as old as
- (a) Universe (b) human race (c) earth (d) world
97. A lot of social changes were experienced during
- (a) Islamic revolution (b) industrial revolution (c) western revolution (d) technological revolution
98. The western world transfer technology from.....world
- (a) Muslim (b) Asia (c) America (d) Britain
99.is what the technology is expected to bring about
- (a) Impacted (b) Impactation (c) Intended impact (d) Unintended impact
100. The connection between science and technology started in
- (a) 19th century (b) 20th century (c) 17th century (d) 18th century



TOPICS

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

2016/2017 FIRST SEMESTER EXAMINATION

Date: 3rd May, 2017 Time: 1:00 – 4:00 pm

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.

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

1. Biology as a science is all about
a. Measurements of plants b. Measurement of animals
 c. Measurements of living things d. Communication with other scientists.
2. The term 'biology' in its modern sense appears to have been introduced independently by:
 a. Thomas Beddoes in 1799 b. Karl Friedrich in 1800
c. Jean-Baptise Lamarck in 1802 d. All of the above
3. During the European renaissance and early modern period, biological thought was revolutionized in Europe by a renewed interest in empiricism and the discovery of many:
a. Novel organisms b. Novel microorganisms c. Novel animals d. Novel plants
4. and classified the diversity of life and the fossil record as well as the development and behavior of organisms respectively:
a. Linnaeus and Buffon b. Buffon and Linnaeus c. Linnaeus and Lamarck d. All of the above
5. Before the advent of the compound microscope by in 1590 and its development and use by in the 17th century, no one made any comments on the nature of the substance to which the property of being alive is now attributed.
a. Hans Jensen and Linnaeus b. Buffon and Lamarck c. Linnaeus and Lamarck
 d. Hans Jensen and Anthony von Leeuwenhoek.
6. in 1665 was the first person to coin the term '.....' for the box-like structures he observed in thin sections of plant materials. a. Robert Koch, Protoplasm
 b. Robert Hook, Cells c. Dujardin, Life. d. Theodor Schwann, Cell theory.
7. in 1826 described cells as the fundamental units of life while in 1838 and enlarged the cell theory.
 a. Turpin, Robert Schleiden and Theodor Schwann b. Purkinje, Turpin and Dujardin
c. Robert Schleiden, Theodor Schwann and Turpin d. All of the above.
8. Which of the following best describes a cell theory?
 a. Cells are the fundamental units of life b. All cells originate from pre-existing cells
c. Cells are the structural units of life d. Cells are the functional units of life.
9. The term has been recognized as the physical basis of all life and the fundamental similarity between plants and animals. a. Cell b. Life c. Protoplasm d. None of the above
10. Depending on the number of cells making up an individual organism, plants and animals are divided into:
a. Vertebrates and Invertebrates b. Simple and Complex living things
 c. Unicellular and Multicellular organisms d. Any of the above.

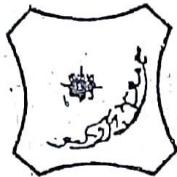
11. There is probably no factor other thanthat has had a greater impact on humanity than technology. a. science b. religion c. education **(d) technology**
12. New industrial processes requirethan older less efficient processes.
a. high manpower b. no manpower **(c) less manpower** d. all of the above
13. Individuals and societies are to be blamed forof technology.
a. positive effects b. direct effects **(c) negative effects** d. none of the above
14. The increasing gap between developed and developing countries is a result of
a. development b. money **(c) technology** d. science
15. As a result of technology more work is now being done.....
(a) automatically b. manually **(c) practically** d. systematically
16. The overall objectives of technology is the a. exploitation of natural resources b. development of society c. production of goods **(d) provision of essential services**
17. It is important for students in theand Social sciences to understand the relationship between science and technology.. a. Education b. science c. Arabic **(d) Humanities**
18. Before the industrial revolution science and technology were
a. related b. the same **(c) separated** d. common
19. The proponents for the value neutral of technology asserted that technology is apart of man's.....
(a) universal heritage b. world heritage c. universe heritage d. human's heritage
20. is the systematic application of scientific principles for practical use.
a. Scientific b. Mathematical **(c) Technology** d. all
21. The estimated galaxies in the Universe is about ..
a. hundred thousand million (10^{11}) **(b)** thousand million (10^9) c. million (10^6) d. two hundred thousand million (10^{12})
22. Astronomy is the.....
(a) study of the observations and theories about the solar system, the stars, the galaxies b. study of the universe and the celestial bodies, gas, and dust within it. c. study of the cosmology d. study of the solar system
23. Big Bang Theory is the concept that the universe began as an explosive event resulting in a hot, dense, expanding sea of matter and energy at
a. about 12 billion years ago. b. About 2 billion years ago **(c)** about 4 billion years ago. d. About 14 billion years ago.
24. The solar system consists of the Sun,
a. its orbiting planets, and their moons b. only its orbiting planets; **c. its orbiting planets, and their moons as well as dwarf planets, asteroids, comets, and meteoroids** d. the stars, the galaxies and the Universe
25. 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 .
26. Mercury's surface temperatures, can reach
a. 400°C at midday, falling to -184°C in the middle of the night b. 400°F at midday, falling to -184°F in the middle of the night **c. 427°C at midday, falling to -184°C in the middle of the night** d. 800°F at midday, falling to 300°F in the middle of the night
27. Which among all the planets is the hottest in the solar system
a) Mercury b. Venus c. Earth d. Mars
28. Which among all the planets is the largest in the solar system
a. Mercury b. Earth c. Mars **(d) Jupiter,**

29. The two kinds of planets in our solar system.
 a. Terrestrial planet and Jovian planet
 b. Terrestrial planet and asteroid planet
 c. Jovian planet and Dwarf planet
 d. Comet planet, and Meteoroid planet
30. Who among the following Scientists postulated a law of Universal Gravitation?
 a. Nicholas Copernicus b. Galileo Galilei c. Johannes Kepler d. Isaac Newton
- * 31. The interior of a star is at very high temperature of order of
 a. 10^7 K b. 10^8 K c. 10^4 K d. 10^{11} K
32. Galaxy consist of hundred billion planet each separated from other by average distance of about
 a. 1600Km b. 1200Km c. 1000Km d. 800Km
33. Light travels a distance of 9×10^{15} m in a year, a typical distance encountered in Astronomy and Cosmology
 a. Light year b. Distance year c. Speed year d. Star year
- * 34. 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
35. Light starting from a star 43 light year 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
36. 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
- * 37. 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
38. When all tar fuel has run out of the inner dense core, its settle as
 a. Red dwarf b. white dwarf c. alpha dwarf d. beta dwarf
- * 39. Chandrasekhar limit is
 a. 1.4 Solar mass b. 1.4 light year c. 2.4 Solar mass d. 2.4 light year
- * 40. The longest time interval is the age of the Universe, which is
 a. around 20 billion years b. around 30 billion years c. around 20 billion years
 d. around 5 billion years
41. Technology involves the design or products, systems, and processes that affect the using the knowledge of science when necessary.
 a. Happiness b. Quality of life c. Responsibilities d. Movement of human
42. Technology is an concerned with producing appliances, tools, machines, and techniques.
 a. behavior b. ability c. opportunity d. applied enterprise.
43. Better understanding of is essential to know the unique attributes of each enterprise then addressing their implications for society.
 a. men and women b. science and technology c. quality and quantity d. new and old
44. Understand natural phenomenon & to arrange these ideas into ordered knowledge.
 a. research b. science c. investigation d. observation
45. Science explores for the purpose of knowing, while technology explores for the purpose of making something useful from.....
 a. the Soil b. the moon c. the quantum d. the knowledge
46. Science drives technology by making new technology possible through.....
 a. technical knowhow b. scientific breakthroughs c. hardworking d. creativity
47. The very questions that scientists ask are shaped by the available.....
 a. technology b. computing c. element d. living things
- * 48. First vacuum tube-based computers developed, universities help in computer development effort, and technology used in war effort in the year.
 a. 1946 b. 1751 c. 1349 d. 1953

49. ARPANET, the forerunner of the Internet, goes online. Engelbart invents the mouse, hypertext and groupware. He also creates hypermedia, multiple - window screens, in line publishing and electronic mail systems, all of great importance in modern education in year.
a. 2000 b. 1986 c. 1970 d. 1925.
50. Intel's first micro-processor developed; the first micro-computers (PCs) are developed; mainframes and minicomputers are in wide use in business; a few software companies begin to develop mainframe and mini computer-based instructional programs in the year:
a. 1411 b. 1966 **(C) 1971** d. 1544
51. The first affordable personal computer is featured on the cover of the magazine Popular Electronics with 1KB of memory and an Intel 8080 processor in the year:
a. 1999 **(B) 1974** c. 1994 d. 1983
52. was the year we had an introduction of multimedia PCs; also simulations, educational databases and other types of CAI programs were being delivered on CD-ROM disks.
(A) 1990 b. 2014 c. 1839 d. 2001
53. Digital video, virtual reality, and 3-D systems capture the attention of many in the year..... where object-oriented authoring systems such as HyperCard, and Hyperstudio become popular in schools and teaching activities.
(A) 1994 b. 1991 c. 1990 d. 1995
54. The Internet and the world wide web began to catch on as businesses, schools, and individuals create web pages around the year.....
a. 1780 b. 1986 c. 1844 **(D) 1995.**
55. Search engines such as and constantly develop new ways to find information within the ever-growing number of web pages.
a. machine and electronic b. mobile phone and computer **(C) google and Yahoo!**
d. email and website.
56. Energy and Power Technology develops more efficient ways to use renewable and nonrenewable energy sources, all are examples of renewable energy except.
a. solar energy b. natural gas energy **(C) wind energy** d. hydroelectric energy
57. All can be considered as major advantages of Technology except.
(A) reduce learning capability b. Makes life easier c. leads fewer mistakes, d. save time
58. Making people lazy, reducing face to face communication, and causing lost jobs are termed as of technology. a. advantages b. features **(C) disadvantages** d. factors
59. With technology, we create programs to automate private as well as non private Government sectors operations easily and efficiently.
a. electronic b. nano-technology **(C) computer** d. Hybrid
60. It is good and efficient using computers in handling almost any kind of task, but care need to be taken due to and issues.
a. family and friends b. privacy and cyber crime c. industries and schools
(D) Knowledge and learning
61. Understanding the role of Science and Technology in society is vital to everyone. Why?
a. For a nation to be developed, everyone must be a scientist/technologist
b. Technology brings about changes in lifestyle
(C) Technological advancement has direct impact on socio-economic development
d. None of the above
62. The concept of scientific method is best defined by which of the following?
a. A cycle of observations, production and reasoning
(B) A cycle of observations, hypotheses, experimentations and reasoning
c. A top-down sequence of observations, hypotheses, experimentations and reasoning
d. All of the above

63. Which of the following best describes the relation between science and technology?
- a. Technological and scientific methods are mirror images
 - b. Technology applies scientific principles for production but some technologies predates science.
 - c. The two approaches are parallel
 - d. All of the above
64. During the first millennium, the early men invent tools mainly from
- a. Clay and bones
 - b. Plastics and copper
 - c. Stones and sticks
 - d. Aluminum and timber
65. After the 1st Millennium, indigenous technologies rapidly evolve in which of the following regions? a. Arabs, Romans, Persians b. Africa and Americas
c. Commonwealth nations d. All of the above
66. One of the major technologies that facilitate the shift from agrarian to industrial age was:
- a. Air-craft technology
 - b. Steam Power technology
 - c. Computer technology
 - d. Automobile technology
67. Which among the following technological inventions continuously evolve since the 1st millennium? a. Wheel b. Textile c. All of the above d. None of the above
- * 68. 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
- * 69. One of the key impacts of indigenous technology is:
- a. Steering people's values/culture to that of the inventor
 - b. Development of independent nations
 - c. Loss of jobs
 - d. None of the above
- * 70. Industrial revolution was characterized by:
- a. Urban-Rural migration
 - b. Mass production
 - c. Construction of mega cities across the Africa continent
 - d. All of the above
71. Which of the following is NOT one of fundamental forces?
- a. Electrostatic force
 - b. Electromagnetic force
 - c. Gravitational force
 - d. Weak force
72. All the fundamental forces of nature are both attractive and repulsive except:
- a. Strong force
 - b. Electromagnetic force
 - c. Weak force
 - d. Gravitational force
73. Which of the fundamental forces is strongest?
- a. Strong force
 - b. Electromagnetic force
 - c. Gravitational force
 - d. Weak force
74. Which is the weakest of all the fundamental forces of nature?
- a. Strong force
 - b. Electromagnetic force
 - c. Gravitational force
 - d. Weak force
75. Quarks are held together to form the nucleons by:
- a. Strong force
 - b. Electromagnetic force
 - c. Gravitational force
 - d. Weak force
76. Protons and neutrons in the nucleus of an atom are bound together by:
- a. Molecular force
 - b. Electromagnetic force
 - c. Magnetic force
 - d. Strong force
77. Which of the following is NOT true of the strong force?
- a. It is always attractive.
 - b. It can be attractive or repulsive.
 - c. It is the strongest force
 - d. It holds quarks together to form neutrons
78. The force of attraction between two bar magnets is a manifestation of:
- a. Nuclear force
 - b. Electromagnetic force
 - c. Gravitational force
 - d. Weak force
79. Weight of an object is an example of:
- a. Electrostatic
 - b. Electromagnetic
 - c. Magnetic force
 - d. Gravitational force
80. Which of the following is NOT true of electromagnetic force?
- a. It can be attractive or repulsive.
 - b. It is stronger than gravitational force
 - c. It acts within long distance
 - d. It is always attractive.
81. Scientists are always found to be
- a. Energetic
 - b. Inquisitive
 - c. Lazy
 - d. all of the above

82. is water in solid state
a. Steam b. ice c. candle d. rain
83. The following are characteristics of science
a. Organization b. building knowledge c. creation d. explanation e. all of the above
84. Rainfall formation is an example of process
a. Freezing b. condensation c. melting d. all of the above e. none of the above
85. has definite shape and volume
a. Plasma b. gas c. liquid d. solid
86. Water can change to ice by.....
a. Condensation b. freezing c. evaporation d. melting
87. An atom consists of equal number of electrons and
a. Neutrons b. protons c. nucleus d. all of the above
88. Decomposition of organic matter by microorganisms is an example of change
a. Physical b. chemical c. none of the above d. all of the above
89. Scientists use one of the one of the following to solve what is happening around them
a. Eyes b. Senses c. Legs d. Nose e. Ears
90. Which of the following is not a mixture?
a. Petroleum b. petrol c. air d. milk e. salt water
91. Sickle cell disease and hypertension
a. Are both genetic disease b. Only sickle cell is a genetic disease c. None of them is a genetic disease
d. Only hypertension is a genetic disease
92. All of the following influence the perception of health and diseases except
a. Religion b. Culture c. Education d. Type of industries
93. The most important level in the organization of health care in a society is:
 a. Primary health care level b. Secondary health care level c. Tertiary health care level
d. Quarternary health care level
94. A healthy person is the one
a. Who is happy b. Free of any physical deformity c. Is well in all spheres of life
d. Can be seen running around
95. Disease is classified as chronic when it is
a. Very severe from the beginning b. Life threatening in all patients c. An emergency case d. The onset is insidious and gradual
96. The health care team includes the following except
 a. Nerves b. Physiotherapists c. Medical laboratory scientist d. Medical sociologist
97. Traditional medicine include
a. Treatment at home b. Acupuncture c. Treating old disease d. Treatment by the elderly
98. Non-curable disease include
a. Persistent malaria b. When it started in childhood c. Hypertension d. Pneumonia
99. Health care financing include
a. Pay as you go b. Foreign debt c. Health insurance d. Life insurance
100. Infectious diseases can be classified into
a. Bacterial and viral b. Fungi and parasitic c. All of the above d. None of the above



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

2015/2016 FIRST SEMESTER EXAMINATIONS
GSP2203: SCIENCE TECHNOLOGY AND SOCIETY

Date: Tues: 7th June, 2016

Time: 2:00 pm – 4:00pm

- INSTRUCTIONS:
- (i) Answer ALL Questions.
 - (ii) Shade the Selected Option as Directed on the OMR.
 - (iii) Shading more than one option invalidates the answer.
 - (iv) Do not Write anything on the Question Paper.
 - (v) Handsets (GSM) are not allowed into the Examination Hall

1. Which among the following best defines the concept of Scientific method?
(a). A cycle of observations, production and reasoning (b) A top-down sequence of observations, hypotheses, experimentations and reasoning (c) A cycle of observations, hypotheses, experimentations and reasoning (d) All of the above
- 2: Which of the following best describes the relation between science and technology?
(a) Technological and scientific methods are similar (b) Technology applies scientific principles for production but some technologies predates Science (c) None of the above (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. In the first millennium, the early men invent tools mainly from
(a) Plastics and copper (b) Stones and sticks (c) Alloys and bones (d) Aluminum and timber
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 ancient tools used by the early men were mainly for the purpose of (a) Mass production of textiles (b) Hunting and farming (c) Mass production of artillery (d) Air and sea transports
7. In which of the following regions indigenous technologies rapidly evolved after the 1st millennium? (a) Arabs, Romans, Persians (b) Western world and Far-East (c) Africa and Europe (d) All of the above
8. Which among the following technological inventions continuously evolve since the 1st millennium? (a) Wheel (b) Textile (c) All of the above (d) None of the above
9. 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
10. 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

11. Which of the following is true about industrial revolution? (a) Rural urban migration
(b) Mass production (c) Mega cities across Europe and the West (d) All of the above
12. One of the major technologies that facilitate the shift from agrarian to industrial age was:
(a) Air-craft technology (b) Steam Power technology (c) Computer technology
(d) Automobile technology
13. Which of the following best describes the relation between technology and societal development?
(a) Technology may influence medical, economic and defense sectors
(b) Appropriate technologies promote societal development (c) Use of advanced technologies describes the Developed, Developing and the Under-developed world dichotomy (d) All of the above
14. Which of the following best describes the technology development process?
(a) A cycle of defining product scope, specifications, design and prototyping, testing and deployment (b) A top-down steps of inspection, analysis, design and evaluation (c) A cycle of modeling, support, testing and deployment (d) None of the above
15. A commonly used approach to national technological development is via
(a) Importation of finished technological products (b) Building products from the scratch
(c) Technology transfer (d) None of the above
16. Which of the following is false about technology transfer process?
(a) Requires invention disclosure and license agreements (b) Generally requires no financial return
(c) Facilitates quick catch up with the advanced world (d) Risks continuous dependence on the advanced world
17. The information revolution is characterized by each of the following except
(a) Production of mechanized farm tools (b) Creation of more service jobs at the expense of manufacturing ones (c) Globalization for faster communication (d) Domination of culture/language
18. Which of the following indigenous technology of Kano that is older than the western civilization and still exists? (a) Tailoring (b) Band making (c) Blacksmithing (d) Dyeing
19. An appropriate technology is characterized by each of the following features except
(a) Suitability to social and economic conditions (b) High complexity (c) Sustainability
(d) Availability
20. Which of the following is true with regard to appropriate technology? (a) Increased risk of job
(b) Increased energy supply (c) altered political/religious values (d) rapid climatic changes
21. The useful practical benefits brought by the application of knowledge other than science cannot be considered as (a) Technology products (b) products
(c) technological products (d) produce
22. Technology is the application of principle for practical use.
(a) Mathematical (b) technological (c) economical (d) scientific.
23.is the next technological invention after simple tools (a) Wheel (b) car
(c) Motorcycle (d) Aeroplane
24. With the advent ofin the 6th century the Islamic empire became a beehive of scientific and technological innovation. (a) Asian civilization (b) American civilization
(c) African civilization (d) Islamic civilization
25. Technological advances up to the end of theare not well documented
(a) 5th century (b) 3rd century (c) 6th century (d) 7th century
26. Technology can be considered to be as old as
(a) Universe (b) human race (c) earth (d) world

27. A lot of social changes were experienced during(a) Islamic revolution
(b) industrial revolution (c) western revolution (d) technological revolution
28. The western world swindled technology fromworld (a) Muslim (b) Asia
(c) America (d) Britain
29.is what the technology is expected to bring about
(a) Impacted (b) Impact (c) Intended impact (d) Unintended impact
30. The connection between science and technology started in
(a) 9th century (b) 20th century (c) 17th century (d) 18th century
31.is the factor that has a greater impact on humanity than technology.
(a) Technology (b) Science (c) Education (d) Religion
32. Technology and science were separated beforerevolution
(a) Technological (b) Scientific (c) Industrial (d) American
33. Science is a knowledge aimed at understanding the
(a) Practical world (b) Physical world (c) technological world (d) Non of the above
34.is the manipulation and control of the physical world
(a) Computer (b) Technology (c) Science (d) Mathematic
35. The proponents of the value neutrality of technology assert that technology is a part of man's (a) Human's heritage (b) universe heritage (c) world heritage
(d) universal heritage
36. Tools were at first simply made and unmodified from (a) Iron, steel and wood
(b) stones, bones and sticks (c) aluminium, steel and rubber (d) plastic, iron and steel
37. Without technology we would be living in (a) caves (b) buildings (c) hotels
(d) houses
38.affects the way we live, work and interact with our environment.
(a) Computer (b) Television (c) Radio (d) Technology
39. Wheels were originally made from
(a) Iron planks (b) aluminium planks (c) wooden planks (d) steel planks
40. Technological progress proceeded very much in an adhoc manner and was based on (a) computations (b) trial and error (c) science (d) engineering
41. Anything that has mass and can occupy a space is called (A) Universe (B) Solid
(C) Matter (D) Particle (E) Proton
42. is said to have a fixed shape and volume (A) Atom (B) Solid (C) Liquid (D) Gas
(E) Matter
43. Systematic enterprise that creates, builds and organizes knowledge in the form of testable explanations and predictions is known as (A) Experiment (B) Forecast
(C) Science (D) Analysis
44. Matter can be classified into states (A) 1 (B) 2 (C) 3 (D) 4 (E) 5
45. All the followings are examples of matter in gaseous state except (A) Air (B) Cooking gas
(C) Steam (D) Flame
46. has definite volume and no shape (A) Solid (B) Liquid (C) Gas (D) Plasma
47. The process of rain formation is an example of (A) Condensation (B) Sublimation
(C) Evaporation (D) Melting
48. A cube of ice changes to ice-cold water by (A) Evaporation (B) Melting
(C) Freezing (D) Condensation

49. Which of the following accounts for the accelerating rate of expansion of the universe?
(a) Dark matter (b) Dark energy (c) Gravity (d) Nuclear fusion (e) All of the above
50. Which of the following is not a correct description of the observable universe?
(a) It is spherical (b) It contains about 100 billion galaxies (c) It is not isotropic (d) It is much smaller than the entire universe (e) It has a radius of about 46 billion light years
51. Melting of candle is an example of change
(A) Chemical (B) Physical (C) None of the above
52. An atom is in shape (A) Spherical (B) Square planar (C) Oval (D) Pyramidal
53. proposed atomic theory (A) Thomson (B) Dalton (C) Chadwick (D) Democritus
54. Discovered the neutron (A) Dalton (B) Thomson (C) Chadwick (D) Democritus
55. has the same mass as proton but no charge (A) Electron (B) Nucleus (C) Neutron
(D) atom
56. Formal method of science was established by (A) Arabs (b) Greeks (c) Indians
(d) Africans
57. The word science comes from (a) English (b) Chinese (C) Latin (d) Arabic
58. Science evolve through (a) Olden and modern ages (b) Ancient, Middle and Modern ages (d) History, Science and Technology (d) Latin, Europe and Africa
59. Dark ages refer to (a) Ancient ages (b) Olden ages (c) Middle ages (d) Future ages
60. Arab Muslims sustained the knowledge of science after the fall of (a) England
(b) Roman (C) Greeks (d) German
61. Olden unit for length include
(a) Kilometre and meter (b) Foot and finger (c) Centimetre and Millimetre (d) Distance and time
62. ----- was the major contributor of science in the ancient ages
(a) England (b) Roman (c) German (D) Greeks
63. Paper was one of the scientific contribution of (a) Chinese (b) Indians (c) England
(d) Egypt
64. Scientific words like alkali and cipher originate from (a) Arabic (b) Hindu (c) India
(d) Latin
65. Greece fall give rise to the empire of (a) USA (b) Roman (c) England (d) India
66. Muslims Arab did the major work of science in
(A) Ancient ages (b) Middle ages (c) Olden ages (d) Pre-history
67. In the dark ages, Roman empire was more interested in
(a) Administration and Law (b) Information and Technology (c) Science and Mathematics (d) Biology and Chemistry
68. Science means (a) Study (b) Learn (c) Knowledge (d) All of the above
69. Arab Muslims introduced (a) Numerals (b) Alphabet (c) Technology (d) None of the above
70. Algorithm was invented by
(A) Alkawarizimi Aljabr (b) Isaac Newton (c) Albert Einstein (d) Olden Scientist
71. According to Dutch diseases, petroleum producing countries are the most
(a) Richest (b) Developéd (c) Dependent (d) Technical
72. When science begin to expand, it begin to split into
(a) Subjects (b) Specialisations (c) Researches (d) Sub-specialisation

Question 73

73. Major problem that prevent the development of science in Africa during the ancient ages include (a) Illiteracy (b) Abundant resources (c) Conducive condition (d) All of the above
74. Modern problems affecting the development of science in Africa include
 (a) Educational System (b) Lack of Indigenization (c) Lack of domestication (d) All of the above
75. Skills and knowledge of early African people was lost due to
 (a) Lack of records (b) Lack of research institute (c) Lack of scientific museum (d) Lack of interest from government
76. Which of the following best defines the term 'biology'? (a) Study of plants and animals.
 (b) Study of animals and plants. (c) Study of life. (d) All of the above.
77. The two major branches of biology are: (a) Botany and Zoology. (b) Microbiology and Biotechnology. (c) Plants and Animals (d) None of the above.
78. Which of the following is NOT a function of life?
 (a) Locomotion. (b) Irritability. (c) Feeding (d) Interaction.
79. What is the basis for the classification of animals into 'vertebrates' and 'invertebrates'?
 (a) Possession of a bone. (b) Possession of a strong backbone. (c) Possession of a cartilage. (d) All of the above.
80. Which of the following is NOT a flowering plant?
 (a) Bryophyte. (b) Neem tree. (c) Mahogany tree. (d) Groundnut plant.
81. At night, the most brightest planet is: (a) Jupiter (b) Mars (c) Venus (d) Uranus (e) Neptune
82. Which of the following is not correct about the universe? (a) It was formed about fourteen billion years ago (b) It consists of about 100 billion galaxies (c) Matter exists in four phases (d) It is infinite in size (e) It originated in the big bang
83. Which of the following is a correct description of the oscillating model of the universe? (a) The universe consists of strings vibrating in a multi-dimensional space (b) The galaxies are moving away from each other (c) There can be up to 10^{50} disconnected universes (d) The ultimate speed is that of light (e) The expanding universe would be followed by a big crunch and start all over again in a big bounce.
84. The solar system was formed about years ago. (a) 460 million (b) 4.6 billion (c) 4.6 million (d) 460 billion (e) 14 billion
85. One Astronomical Unit equals the distance between (a) Earth and sun (b) Earth and moon (c) Diameter of the earth (d) Radius of the earth (e) Two neighbouring planets.
86. The process of sperm formation in man is called:
 (a) Gametogenesis. (b) Spermatogenesis. (c) Oogenesis. (d) Asexual reproduction.
87. Reproduction in both plants and animals can either be:
 (a) Asexual or sexual reproduction. (b) Binary fission or conjugation. (c) Mitosis or meiosis. (d) All of the above.
88. 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.
89. Which of the following is example of an excretory organ in man?
 (a) Retina. (b) Kidney. (c) Heart. (d) Nose.
90. Response to stimulus in man is principally controlled by the:
 (a) Central nervous system. (b) Brain and heart. (c) Spinal cord. (d) Spinal nerves.
91. Which of the following is an example of a dicotyledonous plant?
 (a) Maize plant. (b) Rice plant. (c) Millet plant. (d) Cowpea plant.

92. All but one are non-flowering plants:
(a) Moss plant. (b) Liverwort. (b) Bryophytes. (d) Leguminous plants.
93. Which of the following is NOT a microorganism?
(a) Virus. (b) *Salmonella typhi*. (c) *Vibrio cholerae*. (d) Donkey.
94. Which of the following is NOT a group of microorganisms?
(a) Algae. (b) Bacteria. (c) Protozoa. (d) Monkeys.
95. Microorganisms are important to both plants and animals because: (d) They are involved in the transformation of matter. (b) They are only harmful to them. (c) They are only harmless to them. (d) They are neither harmful nor harmless to them.
96. The following are fundamental forces except: (a) Nuclear force (b) Electromagnetic force
(c) Gravitational force (d) Weak force (e) None of the above.
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 (e)
None of the above.
98. Which of the fundamental forces is strongest? (a) Nuclear force (b) Electromagnetic force
(c) Gravitational force (d) Weak force (e) Strong force
99. Which of the fundamental forces is weakest? (a) Nuclear force (b) Electromagnetic force
(c) Gravitational force (d) Weak force (e) None of the above.
100. Quarks are held together to form protons or neutrons by: (a) Nuclear force
(b) Electromagnetic force (c) Gravitational force (d) Weak force (e) Strong force.