

## 2021 POSITIVENAIJA SCIENCE QUIZ

### June 2021 - Biology

1. Damage to the hippocampus is most likely to impair:
  - a. Memory
  - b. Balance
  - c. Sleep
  - d. Breathing
2. Which of the following disease results in Paralysis due to viral attack on Central Nervous System (CNS)?
  - a. Measles
  - b. Herpes simplex
  - c. Hepatitis
  - d. Polio
3. Of the following, which one is largely missing in herbivores?
  - a. Premolars
  - b. Canines
  - c. Incisors
  - d. Molars
4. The one which causes contraction of wall of the uterus during and after birth?
  - a. ADH
  - b. MSH
  - c. Oxytocin
  - d. Progesterone
5. Which of the following has no central nervous system?
  - a. Sea sponges
  - b. Man
  - c. Cockroach
  - d. None of the above
6. The process of breakdown of food in the cell with the release of energy is called?
  - a. Respiration
  - b. Inhalation
  - c. Exhalation
  - d. Breathing
7. During blood donation, the removal of blood components is called?
  - a. Cytophresis
  - b. Plasmaphresis
  - c. Apheresis
  - d. Leakophresis
8. The disease that cannot be transmitted through transfusion of blood is?
  - a. Hepatitis B

- b. AIDS
  - c. Cancer**
  - d. Malaria
9. Which lobe is primarily responsible for hearing and language?
- a. Temporal**
  - b. Parietal
  - c. Frontal
  - d. Occipital
10. What part of a neuron is responsible for receiving information?
- a. Axon
  - b. Terminal fibre
  - c. Dendrite**
  - d. Myelin sheath
11. What is hypotension?
- a. Low blood pressure**
  - b. Low cholesterol
  - c. High blood pressure
  - d. High cholesterol
12. The axial skeleton consists of:
- a. The vertebral column and skull
  - b. Upper limbs, lower limbs, and pelvic girdle
  - c. The skull, vertebral column, and bony thorax (ribs and sternum)**
  - d. The bony thorax, upper limbs, and pelvic girdle
13. Deficiency of which of these vitamins is a major cause of blindness?
- a. Vitamin A**
  - b. Vitamin B<sub>12</sub>
  - c. Vitamin B<sub>6</sub>
  - d. Vitamin D
14. Spermology is the study of
- a. Seed**
  - b. Leaf
  - c. Fruit
  - d. Sperm
15. The stage when all the body parts can be identified is known as?
- a. Zygote
  - b. Foetus**
  - c. Embryo
  - d. Infant

## 2021 POSITIVENAIJA SCIENCE QUIZ

### July 2021 - Chemistry

1. A carbon atom with 6 protons, 6 electrons and 6 neutrons would have a mass number of
  - a. 6
  - b. 18
  - c. 12
  - d. 15
2. A substance which can act both as an antiseptic and disinfectant is
  - a. Enzyme
  - b. Analgin
  - c. Phenol
  - d. Sodium pentothal
3. Which is an explosive?
  - a. NaOH
  - b. Ca(OH)<sub>2</sub>
  - c. Mg(OH)<sub>2</sub>
  - d. KOH
4. What is the main component of natural gas?
  - a. Propane
  - b. Ethene
  - c. Methane
  - d. Ethane
5. Which of the following is not an acid?
  - a. H<sub>2</sub>SO<sub>4</sub>
  - b. HNO<sub>3</sub>
  - c. NaOH
  - d. HCl
6. The 'fizz' in soft drinks is caused by?
  - a. Hydrogen
  - b. Carbon dioxide
  - c. Nitrogen
  - d. Helium
7. Rusting of iron is a chemical change.
  - a. True
  - b. False
8. Viscosity index can be defined as?
  - a.  $(L-U / L-H) \times 100$
  - b.  $(L+U / L-H) \times 100$
  - c.  $(L-H / L-U) \times 100$

- d.  $(L-H / L+U) \times 100$
9. As the volume is inversely proportional to pressure, we can conclude that
- $p_1V_2 = p_2V_1$
  - $p_2V_2 = p_1V_1$
  - $p_1V_1 = p_2V_2$
  - $p_1V_1 = p_2V_2$
10. Which among the following is the heaviest?
- One mole of oxygen
  - One molecule of sulphur trioxide
  - 100 amu of uranium
  - 44 g of carbon dioxide
11. Which of the following is classified as a metal?
- Ne
  - Br
  - F
  - K
12. Which element has the largest atomic radius?
- Li
  - Na
  - Rb
  - F
13. Which type of radiation is the least penetrating?
- alpha
  - beta
  - gamma
  - x-ray
14. In an electrolytic cell, the electrode at which the electrons enter the solution is called the [.....]; the chemical change that occurs at this electrode is called [.....].
- anode, oxidation
  - anode, reduction
  - cathode, oxidation
  - cathode, reduction
15. Which of the following is used in hospital to purify air?
- Sodium peroxide
  - Sodium sulphate
  - Sodium nitrate
  - Cuprous oxide

## 2021 POSITIVENAIJA SCIENCE QUIZ

### August 2021 - Geography

1. Which continent has the most countries?
  - a. Africa
  - b. Asia
  - c. South America
  - d. Europe
2. Imaginary lines joining places having equal amount of rainfall are:
  - a. Isopleth
  - b. Isohyet
  - c. Isohaline
  - d. Isotherm
3. Which term do geographers use to classify an area with unifying physical characteristics?
  - a. Location
  - b. Orientation
  - c. Region
  - d. Perception
4. What is the lowest layer of the atmosphere?
  - a. The mesosphere
  - b. The troposphere
  - c. The thermosphere
  - d. The stratosphere
  - e. The exosphere
5. As you go up in altitude in the atmosphere, what generally happens to the air pressure?
  - a. Increases
  - b. Decreases
6. The amount of sunlight striking a given location on the Earth primarily depends on the location's latitude.
  - a. True
  - b. False
7. An mT (maritime tropical) air mass is:
  - a. Moist and hot
  - b. Moist and warm
  - c. Dry and warm
  - d. Moist and cold
8. A solar eclipse takes place
  - a. When the moon comes between the Sun and the Earth
  - b. When the Earth comes between the Sun and the moon

- c. When the moon is full
  - d. None of the above
9. On planet Earth, there is no centrifugal force at the
- a. Equator
  - b. Tropic of Cancer
  - c. Tropic of Capricorn
  - d. Poles
10. According to the United Nations, 21<sup>st</sup> March is observed as
- a. World Food Day
  - b. World Environment Day
  - c. World Forest Day
  - d. World Population Day
11. Eutrophication means water extraction from rocks.
- a. True
  - b. False
12. Noise is measured using sound meter and the unit is:
- a. Bar
  - b. Decibel
  - c. Mommies
  - d. Diopter
13. In which region does rainfall occur throughout the year?
- a. Polar region
  - b. Sub-polar region
  - c. Middle-Latitude region
  - d. Equatorial region
14. The speed at which Earth is revolving around the Sun is:
- a. 5 kilometers per second
  - b. 100 kilometers per second
  - c. 50 kilometers per second
  - d. 30 kilometers per second
15. The most important process of cloud formation in the atmosphere is:
- a. Cooling by compression of air
  - b. Cooling by release of latent heat of vaporization
  - c. Cooling by expansion
  - d. Radiation cooling

## 2021 POSITIVENAIJA SCIENCE QUIZ

### September 2021 - Mathematics

- In algebra, the use of alphabets such as  $a$ ,  $b$ ,  $c$  denotes
  - Operational signs
  - Constants
  - Any numerical value
  - Polynomial
- The process of expressing an algebraic expression in terms of its factors is called:
  - Decimals
  - Polynomial
  - Factorization
  - None of the above
- $(a + b)^2 - (a - b)^2$  is equal to
  - $2ab$
  - $a^2 - b^2$
  - $4ab$
  - $a^2 + b^2$
- The arithmetic mean between -4 and 12 is
  - 4
  - 4
  - 5
  - 3
- The most frequent occurring observation in the data is called:
  - Mean
  - Median
  - Mode
  - Standard deviation
- A matrix with only one (1) column is called:
  - Square matrix
  - Soft matrix
  - Identical matrix
  - None of the above
- The unit of ratio is:
  - cm
  - No unit
  - Inches
  - Radians
- The value of mile in terms of kilometers is
  - 1 mile = 2 km
  - 1 mile = 1.6 km

- c. 1 mile = 2.8 km  
d. 1 mile = 3.6 km
9. The value of Acres 'A' in terms of Hectares 'H' is  
a.  $A = 0.5 H$  approx.  
b.  $A = 1.4 H$  approx.  
c.  $A = 2 H$  approx.  
d.  $A = 0.4 H$  approx.
10. The range of  $R = \{(0, 2), (2, 4), (3,4), (4,5)\}$  is:  
a.  $\{0, 2, 4, 5\}$   
b.  $\{0, 2, 3, 4\}$   
c.  $\{2, 4, 5\}$   
d.  $\{3, 4, 5\}$
11. The scientific form of 79.69 is:  
a.  $796.9 \times 10$   
b.  $7.969 \times 10$   
c.  $79.69 \times 10$   
d. None of the above
12. The decimal form of  $453.5 \times 10^{-6}$  is:  
a. 0.04535  
b. 4535  
c. 0.0004535  
d. 45.35
13. An airplane carries 500 passengers; 45% are men, 20% are children. The number of women in the airplane is:  
a. 175  
b. 150  
c. 166  
d. 180
14. There are 480 students in a school; 210 out of them are boys. The ratio of girls to the boys is:  
a. 5 : 11  
b. 7 : 3  
c. 7 : 9  
d. 9 : 7
15. The decimal form of 5% up to 3 decimals is:  
a. 0.5  
b. 0.05  
c. 0.005  
d. 5



## 2021 POSITIVENAIJA SCIENCE QUIZ

### October 2021 - Physics

1. Light-year is a unit of:
  - a. Time
  - b. Distance**
  - c. Light
  - d. None of the above
2. What is the scale used for measuring the intensity of the earthquake?
  - a. Epicenter Scale
  - b. Quake Scale
  - c. Richter Scale**
  - d. None of the above
3. What type of lens is used in a magnifying glass?
  - a. Concave
  - b. Plano-concave
  - c. Convex**
  - d. None of the above
4. The electric filament of bulbs is made up of:
  - a. Copper
  - b. Iron
  - c. Aluminum
  - d. Tungsten**
5. Which instrument is used to measure depth of water?
  - a. Fluxmeter
  - b. Fathometer**
  - c. Hygrometer
  - d. None of the above
6. Which one of the following is used for sun glasses?
  - a. Crooks glass**
  - b. Pyrex glass
  - c. Crystal glass
  - d. None of the above
7. Spectacles used for viewing 3D films have:
  - a. Polaroids**
  - b. Concave lens
  - c. Convex lens
  - d. Bifocal lens
8. A pond water appears less deep due to:
  - a. Polarisation
  - b. Refraction**

- c. Diffraction
  - d. None of the above
9. What are audible sound waves (for humans)?
- a. Having frequency less than 20 Hz
  - b. Having frequency between 20 Hz to 20000 Hz
  - c. Having frequency more than 20000 Hz
  - d. None of the above
10. Oil, water and gas can be present in a well in the ascending order of:
- a. Water, oil, gas
  - b. Gas, water, oil
  - c. Water, gas, oil
  - d. None of the above
11. In a freezer, ice cubes will be formed more quickly in trays made of:
- a. Rubber
  - b. Plastic
  - c. Aluminum
  - d. Wood
12. What is the normal temperature of human being on Kelvin scale?
- a. 290
  - b. 300
  - c. 320
  - d. None of the above
13. Arrange the following electromagnetic waves according to their decreasing energy and select the correct answer:
- a. IR, UV-rays, X-rays, y-rays
  - b. y-rays, X-rays, UV-rays, IR
  - c. y-rays, UV-rays, X-rays, IR
  - d. IR, y-rays, UV-rays, X-rays
14. Light Emitting Diode (LED) converts:
- a. Light energy into electrical energy
  - b. Electrical energy into light energy
  - c. Thermal energy into light energy
  - d. Mechanical energy into electrical energy
15. Which of the following is a renowned Nigerian Physicist?
- a. Lazarus Ekueme
  - b. Joseph Irukwo
  - c. Sikiru Sanni
  - d. Muyiwa Awe

## 2021 POSITIVENAIJA SCIENCE QUIZ

### November 2021 - Psychology

1. Psychology is said to be the scientific study of ..... and .....
  - a. Behavior, mental processes
  - b. Mental illness, mental health
  - c. Physical states, mental states
  - d. None of the above
2. Psychology is a
  - a. Biological science
  - b. Physical science
  - c. Social science
  - d. Natural science
3. Which of the following part of the brain is responsible for transferring short-term memory to long-term memory?
  - a. Cerebellum
  - b. Hippocampus
  - c. Amygdala
  - d. None of the above
4. Different people often react differently to the same situations. In psychology, it is referred to as:
  - a. Nativism
  - b. Individual differences
  - c. Multiple determinants
  - d. None of the above
5. Which of the following is a belief that the mind is fundamentally different from the body?
  - a. Mind-body Dualism
  - b. Specialism
  - c. Centralism
  - d. Mindism
6. Which of the following is the idea by which we can access the personality of someone by studying their face?
  - a. Physiognomy
  - b. Phrenology
  - c. Physiology
  - d. None of the above
7. The term used to refer to the first two weeks of life is:
  - a. The period of infancy
  - b. The neonatal stage
  - c. Early childhood
  - d. Preoperational stage
8. Which of the following controls the reflexes?

- a. Hypothalamus
  - b. Spinal cord**
  - c. Frontal lobe
  - d. None of the above
9. Which of the following is the ability to sense the movement and position of our body parts?
- a. Proprioprediction
  - b. Proprioliction
  - c. Proprioception**
  - d. Proprioaction
10. The act in which people help someone without any reason, motive, or we can say personal interest is known as?
- a. Nurturance
  - b. Social obligation
  - c. Prosocial behavior**
  - d. None of the above
11. For how many seconds, short-term memory holds information?
- a. 30 seconds or less**
  - b. 50 seconds
  - c. More than 50 seconds
  - d. None of the above
12. Phrenologists tried to find out the personality of someone by:
- a. Feeling a person's skull**
  - b. Reading the horoscope of the person
  - c. Looking at the hands of the person
  - d. None of the above
13. Which of the following are the symptoms of schizophrenia?
- a. Dizziness
  - b. Deafness
  - c. Hallucination, delusion**
  - d. All of the above
14. Which of the following branch of psychology concerned with the study of animal behavior?
- a. Comparative psychology**
  - b. Differential psychology
  - c. Social psychology
  - d. Abnormal psychology
15. Which of the following is a renowned Nigerian Pyschologist?
- a. Professor Zacheus Opafunso
  - b. Professor Dennis Ugwuegbu**
  - c. Professor Eni Njoku
  - d. Professor Elfrida Adebo

## 2021 POSITIVENAIJA SCIENCE QUIZ

### December 2021 – Statistics

- When the Mean of a number is 18, what is the Mean of the sampling distribution?
  - 21
  - 18
  - 27
  - 23
- If the probability of hitting an object is 0.8, find the variance
  - 0.18
  - 0.16
  - 0.14
  - 0.12
- $E(X) = \lambda$  is used for which distribution?
  - Binomial distribution
  - Poisson's distribution
  - Bernoulli's distribution
  - Laplace distribution
- Find the arithmetic mean of the set of data: 6,1,5,8, and 10
  - 4
  - 5
  - 6
  - 7
- Calculate the geometric mean of 1,3,9,3
  - 1
  - 2
  - 3
  - 4
- Find the variance of the given data set: 3,9,5,6,7
  - 1
  - 2
  - 3
  - 4
- The Poisson distribution is applied for
  - Regular Random Variable
  - Constant time function
  - Discrete Random Variable
  - Irregular Random Variable
- If the Critical region is evenly distributed then the test is referred as?
  - Two tailed
  - One tailed
  - Three tailed

- d. Zero tailed
9. The probability that person A completes all the tasks assigned is 50% and that of person B is 20%. Find the probability that all the tasks are completed.
- a. 0.15
  - b. 0.25
  - c. 0.35
  - d. 0.45
10. In Nigeria, there are 55 members of the National Statistics Association. Every member posts a greeting card to all the members. How many greeting cards were posted by them?
- a. 990
  - b. 890
  - c. 1980
  - d. None of the above
11.  $E(X) = npq$  is for which distribution?
- a. Bernoulli's
  - b. Binomial
  - c. Poisson's
  - d. Normal
12. Which of these distributions is used for a testing hypothesis?
- a. Normal Distribution
  - b. Chi-Squared Distribution
  - c. Gamma Distribution
  - d. Poisson Distribution
13. Weibull distribution gives the failure rate proportional to the power of time.
- a. True
  - b. False
14. In Standard normal distribution, the value of mode is
- a. 2
  - b. 1
  - c. 0
  - d. None of the above
15. In a hypothesis test, what does the p value signify?
- a. smallest level of significance for rejection of Null Hypothesis
  - b. largest level of significance for rejection of Null Hypothesis
  - c. smallest level of significance for acceptance of Null Hypothesis
  - d. smallest level of significance for acceptance of Null Hypothesis