

BIOLOGY

1. The word _____ refers to the gradual development of something.
A. Ecology B. Evolution C. Cytology D. None of them
2. _____ are the resources that can be replenished by physical and biological means.
A. Renewable B. Non renewable C. Both D. None
3. The highest level of biological organization is:
A. Species B. Population C. Community D. Ecosystem
4. In an ecosystem, the _____ play important role in recycling of the materials.
A. Green plants B. Decomposers C. Herbivores D. Carnivores
5. Deficiency of iron causes _____.
A. Anemia B. Prolong bleeding C. Tooth decay D. Goiter
6. The mechanism in which internal conditions of the body are properly maintained and regulated is called:
A. Homeostasis B. Osmoregulation C. Excretion D. Thermo regulation
7. A pair of kidneys consists of millions of functional units:
A. Nephrons B. Neurons C. Dendrons D. Fiatrons
8. Which of the following is the centre of metabolism:
A. Kidneys B. Liver C. Heart D. All of these
9. Which of the following organs receive change in the internal environment?
A. Sensory organ B. Receptors C. Effectors D. Both A & C
10. From control system the message is transferred to a particular organ by:
A. Effectors B. Motor nerve C. Sensory nerve D. Receptor
11. When a plant cell is placed in pure water then _____ takes place.
A. Endosmosis B. Exosmosis C. Diffusion D. Plasmolysis
12. Urine is collected in a central cavity of the kidney:
A. Cortex B. Medulla C. Ureter D. Pelvis
13. Tuberculosis, typhoid, pneumonia and cholera are the examples of _____ diseases.
A. Bacterial B. Fungal C. Protozoal D. Nutritional
14. Urine leaves the body, during urination, from the bladder through a tube called the:
A. Urethra B. Ureter C. Urinal D. both A & B
15. Moderate water availability is the demand of:
A. Hydrophytes B. Xerophytes C. Mesophytes D. Halophytes
16. One of the following refers to the water and solute contents of cells:
A. Osmoregulation B. Homeostasis C. Feedback D. None
17. Xerophytes have the adaptations for reduced rate of:
A. Transduction B. Transformation C. Transmutation D. Transpiration
18. Which hormone is produced at the time of dehydration?
A. ADH B. AH C. PTH D. ACTH

19. The vertebral column consists of: _____ vertebrae:
A. 22 B. 33 C. 26 D. 8 & C
20. Each myosin filament is surrounded by _____ actin filaments:
A. Twelve B. Six C. Three
21. Humerus forms ball and socket joint with:
A. Coracoid B. Scapula C. Hip bone D. Clavicle
22. The myofibrils consist of smaller contractile units called:
A. Myomere B. Sarcomere C. Blastomere D. Gastromere
23. _____ % water is present in fresh water lakes, rivers and atmosphere.
A. 0.2 B. 0.059 C. 0.052 D. 0.025
24. Fossil fuels like coal, oil, natural gas and metals are the examples of _____ resources.
A. Renewable B. Non-renewable C. Both D. None
25. Which Statement justifies the given diagram?
(A) Organisms multicellular, Contain Cell wall, heterotroph
(B) Multicellular eukaryotic cell, no cell wall, heterotrophy
(C) Eukaryotic cell with cell wall, absorptive heterotroph
(D) Multicellular eukaryotic cell with cell wall, Chlorophyllus
26. Fever or high temperature helps in stimulating the protective mechanisms against the:
A. Cold B. Wind C. Pathogens D. Shivering
27. The botanical name of touch-me-not is:
A. Acasia Nilotica B. Mimosa Pudica C. Acacia Catechu D. Prosopis Glandulosa
28. Deficiency of Iodine causes:
A. Anemia B. Prolong bleeding C. Tooth decay D. Goiter
29. The gas atom responsible for depletion of ozone layer is:
A. Oxygen B. Nitrogen C. Carbon dioxide D. Chlorine
30. Cholera is caused by:
A. Tinea corporis B. Vibrio cholera C. Linea versicolor D. None
31. The process of contamination of water is called:
A. Air pollution B. Green house C. Water pollution D. None
32. Which of the following is responsible for acid rain?
A. CO_2 B. SO_2 C. NO_2 D. All of these
33. Malaria and African sleeping sickness are the example of _____ diseases.
A. Bacterial B. Fungal C. Protozoal D. Nutritional
34. Scurvy is caused by deficiency of vitamin:
A. A B. B C. C D. D



- Deficiency of vitamin K causes _____.
- A. Anemia B. Prolong bleeding C. Tooth decay D. Goiter
36. In earthworm bladder opens outside by a small pore on the skin called:
- A. Nephrostome B. Nephrediopore C. Funnel D. All of these
37. The axial skeleton includes the:
- A. Skull B. Vertebrae C. Ribs & Sternum D. All A, B, C
38. The movement in response to some chemicals is called:
- A. Hydrotropism B. Phototropism C. Chemotropism D. Thigmotropism
39. The skeleton is tough and rigid framework of the body of animals which provides:
- A. Protection B. Shape C. Support D. All A, B, C
40. Molds and Yeast are classified as:
- A. Bryophytes B. Fungi C. Ciliates D. Flagellates

CHEMISTRY

41. Isomers of a compound must have same:
- A. Molecular formula B. Structural formula C. Physical properties D. Chemical properties
42. Indicators are complex molecules that themselves are:
- A. Strong acids B. Strong bases C. Weak acids D. Weak bases
43. When the product of the ionic concentration is equal to the solubility product, the solution is said to exist in:
- A. Unsaturated B. Saturated C. Super saturated D. None of these
44. Total number of possible isomers for hexane (C_6H_{14}) is:
- A. 3 B. 4 C. 5 D. 6
45. Position Isomerism is not possible in:
- A. Alkyl halides B. Primary amines C. Alcohols D. Ethers
46. The two compounds CH_3-CH_2-OH & CH_3-O-CH_3 are.
- A. Position isomers B. Functional group isomers C. Chain isomers D. Metamers
47. Methane is commonly known as:
- A. Methylene B. Acetylene C. Marsh gas D. Ethylene
48. Reaction of alkyl halide ($R-X$) with Na-metal in anhydrous ether solvent, to produce alkane is known as:
- A. Williamson synthesis B. Wurtz reaction C. Wurtz-Fitting reaction D. Elimination reaction

49. The rate at which a substance reacts is proportional to its active mass and the rate of a chemical reaction is proportional to the product of the active masses of reactants is:
- A. Boyle's Law B. Law of Mass action C. Charle's Law D. Dalton's Law
50. Percentage of ethene in coal gas is:
- A. 2% B. 9% C. 10% D. 12%
51. Which of the following can be used as a test of unsaturation:
- A. Bayer's reagent B. Fehling's solution C. Liq. Bromine D. Both A & C
52. Raney nickel is an active form of nickel used as catalyst in:
- A. Halogenation B. Hydration C. Hydrogenation D. Hydrohalogenation
53. Which of the following compound can decolorize KMnO_4 solution?
- A. Ethane B. Benzene C. Cyclohexane D. Ethene
54. Structure of benzene was given by:
- A. Hoffman B. Faraday C. Kekule D. Armstrong
55. Which compound is used in processing of antipolio vaccine?
- A. Acetone B. Formaldehyde C. Formalin D. Methyl alcohol
56. Complete oxidation of ethyl alcohol using oxidizing mixture $\text{K}_2\text{Cr}_2\text{O}_7$ & conc. H_2SO_4 produce.
- A. Formaldehyde B. Acetaldehyde C. Acetic acid D. Formic acid
57. Cannizzaro's reaction is:
- A. Addition reaction B. Redox reaction C. Elimination reaction D. Self-Redox reaction
58. Tollen's test is also known as:
- A. Fehling's test B. Benedict's test C. Silver mirror test D. Iodoform test
59. Glacial acetic acid is:
- A. Vinegar B. Acetic anhydride C. Aqueous acetic D. Anhydrous acetic acid
60. Decarboxylation of sodium acetate produce:
- A. Methane B. Acetic acid C. Formic acid D. Ethane
61. Ethyl acetate can be used to produce flavour of.
- A. Strawberry B. Pine apple C. Raspberry D. Banana
62. Pyroligneous acid obtained by destructive distillation of wood contains:
- A. Methanol, acetone, Formaldehyde, acetic acid
B. Ethanol, acetic acid, phenol, formaldehyde
C. Acetone, ethyl acetate, methyl alcohol

- D. Acetone, acetic acid, methyl acetate, methanol
63. Viscosity of liquids depends upon
 A. Temperature B. Size of molecule C. Shape of molecule D. All of above
64. All of the following are electrophilic substitution reactions of benzene except:
 A. Halogenations B. Nitration C. Sulphonation D. hydrogenation
65. The crystals of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ are:
 A. Colorless B. Blue in color C. Yellow in color D. Green in color

PHYSICS

66. The term logarithm was introduced by.
 A. Abu-Rehan- Al Beruni B. Al-Razi C. Al-Khawarizmi D. Ibn-al-Sina
67. Cathode rays are made to pass between the plates of charged capacitor. It attracts.
 A. Towards +ve plate B. Towards -ve plate C. A and B are correct D. A and B are wrong
68. Minimum excitation potential of Bohr's first orbit in hydrogen atom is.
 A. 13.6 v B. 3.4 v C. 10.2 v D. 3.6 v
69. Which of the following cannot be emitted by radioactive substances during their decay?
 A. Protons B. Neutrons C. Helium nuclei D. Electron
70. Radioactivity can be affected by.
 A. Temperature B. Pressure C. Radiation D. All of these
71. A $60\mu\text{F}$ capacitor has charge on each plate $3 \times 10^{-6}\text{C}$, and then energy stored is.
 A. $1.2 \times 10^{-4}\text{J}$ B. $7.5 \times 10^{-8}\text{J}$ C. $15 \times 10^{-6}\text{J}$ D. $2.4 \times 10^{-4}\text{J}$
72. Coulomb's law applicable to.
 A. Point charge B. Spherical charge C. Like charge D. All of these
73. If the velocity of light is taken as the unit of velocity and the year as the unit of time, then the unit of length.
 A. $9.45 \times 10^{10}\text{m}$ B. $9.456 \times 10^{12}\text{m}$ C. $9.45 \times 10^{15}\text{m}$ D. $9.45 \times 10^{13}\text{m}$
74. In electro statics, the gauss law is true, when the charges enclosed in the Gaussian surface are.
 A. Moving only B. Stationary only C. ☒ Moving or stationary D. None of these

75. A galvanometer gives full scale deflection with 0.2 A in its coil the resistance of its coil is 10Ω . How much shunt resistance is required to convert it into an ammeter required to convert it into an Ammeter to read current up to 1.8A?
- A. 5.0Ω B. 2.5Ω C. 1.25Ω D. 10.0Ω
76. A circuit in which there is a current of 5amp is changed so that the current falls to zero in 0.1 sec. If an average EMF of 200 volt is induced, what is the self inductance of circuit?
- A. 1H B. 2H C. 4H D. 6H
77. Which of the following measurement is most accurate?
- A. 20.0 gm B. 0.0002 gm C. 2.0 gm D. 20 gm
78. A body goes 20Km north and then 10Km due to east. The displacement of body from its starting point is.
- A. 30Km B. 25.2Km C. 22.36Km D. 10Km
79. The angular arrangement of the space position of the atom in a crystal is called.
- A. Lattice array B. Lattice constant C. Unit cell D. All of these
80. Transistor is operated when.
- A. Emitter is heated B. Base is heated C. Collector is heated D. All of these
81. In treating a localized cancerous tumor a narrow beam of γ - rays used from.
- A. Strontium-90 B. Cobalt-60 C. U-235 D. Pu-239
82. Which of the following device used to measure ionization charge and mass of nuclear radiation?
- A. Wilson cloud chamber B. Geiger tube C. Solid state detector D. All of these
83. A thermodynamic system undergoes a process in which its internal energy decreases by 300J. If the same time 120 J of work is done on the system. Find the heat transferred to or from the system.
- A. 120 J B. 220 J C. -120 J D. -420 J
84. An electron acquires a speed of 10^8 m/s. Find its energy in electron volt.
- A. 1.84 eV B. 2.84 eV C. 6.5 eV D. 4.5 eV
85. The parallel plates of an air filled capacitor are the capacitance is 1 farad?
- A. $1.1 \times 10^8 \text{ m}^2$ B. $2.1 \times 10^7 \text{ m}^2$ C. $3.5 \times 10^8 \text{ m}^2$ D. $4.5 \times 10^8 \text{ m}^2$

ENGLISH

Read the following passage carefully. Select the right answer of the (A to D) given below.

Questions 86-87 are based on the following passage:

The vast multitudes of stars are wandering about in space. A few forms group which journey in company, but the majorities are solitary travelers. And they travel through a universe so spacious that it is an event of almost unimaginable rarity for a star to come anywhere near to another star. For the most part each voyages in splendid isolation, like a ship on an empty ocean. In a scale model in which the stars are ships the average ship will be well over million miles from its nearest neighbour, whence it is easy to understand why a ship seldom finds another within hailing distance.

86. Which of the following is incorrect according to the passage?

- A Most of the stars travel in isolation
- B The universe is very large
- C A star very rarely comes near to another one
- D Some stars travel in group

87. In the passage the "ship" symbolizes.

- | | | | |
|--------|------------|------------|---------|
| A Star | B Traveler | C Universe | D Ocean |
|--------|------------|------------|---------|

In the following questions NOs (88 to 90) a word is given in capital letters followed by (04) alternatives (a-d) select a word by filling the circle on answer sheet which is most nearly the same in meaning to the word given in the capital letters, each below.

88. **AMBITION:**

- | | | | |
|----------|---------|----------------|------------|
| A Desire | B Plant | C Proclamation | D Decision |
|----------|---------|----------------|------------|

89. **IMPASSIONED:**

- | | | | |
|--------------|----------|---------------|-----------------|
| A Impressive | B Ardent | C Sympathetic | D Irresponsible |
|--------------|----------|---------------|-----------------|

90. **ISOLENT:**

- | | | | |
|-----------|---------|--------|-------------|
| A Nervous | B Proud | C Rude | D Assertive |
|-----------|---------|--------|-------------|

In the following questions NOs (91 to 93) a word is given in capital letters followed by (04) alternatives (a-d) select a word by filling the circle on answer sheet which is most nearly opposite in meaning to the word given in the capital letters, each below.

91. **TRAGEDY:**

- | | | | |
|------------|----------|-----------|------------|
| A Humorous | B Comedy | C Romance | D Calamity |
|------------|----------|-----------|------------|

92. NERVOUS: A Doubtful B Shrewish C Bold D Timid
93. TRANQUIL: A Impatient B Vociferous C Noisy D Agitated

In the following questions NOs (94 to 97) followed by (04) alternatives (a-d) select the most appropriate alternative (option) by filling the circle on answer sheet each below, each below.

94. You must take those curtains _____ and have them washed.
A Away B Up C Aside D Down
95. Where have you been _____ I last saw you.
A Since B For C Then D What
96. Crystal vase breaks easily, _____ handle it with care.
A So that B So much C So D So well
97. We _____ to see you as soon as the holiday _____.
A Come, will start B Shall come, will start C Shall come, start D Come, start
98. We _____ on the platform since lunch time and the train _____.
A Are standing, not arrived B Have been standing, has not arrived
C Stand, does not arrive D Stood, did not arrived

In the following questions (99 to 100), detect an ERROR wherever it exists, by filling the circle on answer sheet, from the given lettered choices (A to D) below each.

99. Scientific universities are often more involved in theoretical research than in practical research.
A B C D
100. Stars in our universe vary in temperature, color, brightness, size and mass. No error.
A B C D

THE END