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MCAT Sample Test 01

PHYSICS

Directions: For each question below you are given four choices. SELECT ANY ONE THAT IS MOST APPROPRIATE ANSWER

ALL ANSWER MUST BE GIVEN ON THE ANSWER SHEET.

YOUR ANSWERS MUST BE INDICATED BY LETTERS (A, B, C, D) AND NOT BY THE WORDS THEMSELVES.

- In Newton's rings experiment, the plano-convex lens used should be of,
(a) Large focal length (b) Normal focal length (c) Small focal length (d) None of the above
- The converging lenses each of focal length f are placed in contact. The focal length of the combination is
(a) $3f$ (b) F (c) $2f$ (d) $F/2$
- The ratio of fundamental frequency of an open end pipe to that of a closed end pipe is,
(a) $1 : 1$ (b) $2 : 1$ (c) $1 : 2$ (d) $3 : 2$

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- Which of the following have smaller wave-length.
(a) Cosmic rays (b) x-rays (c) Ultra-violet (d) v-rays
- The magnitude of e.m.f. across the secondary of a transformer does not depend upon,
(a) The number of turns in the primary (b) The resistance of the primary and secondary
(c) The magnitude of the e.m.f. applied across the primary (d) The number of turns in the secondary

6. Electron in hydrogen atom jumps from higher orbit into fourth orbit. The set of line emitted is called,
 - (a) Paschen series
 - (b) Lyman series
 - (c) Balmer series
 - (d) Bracket series
7. Waves used for radio transmission have wave-length.
 - (a) Smaller than that of v-ray
 - (b) Smaller than that of ultraviolet ray
 - (c) Greater than that of infra-red ray
 - (d) Smaller than that of infra-red ray
8. Maximum details of object can be seen by microscope when light used is of,
 - (a) White light
 - (b) Short wavelength
 - (c) Large wavelength
 - (d) Any light

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9. If the object and its image are located at the distance of 5 cm from the focus of a convex lens, the focal length of the lens will be,
 - (a) 10 cm
 - (b) 5 cm
 - (c) 2.5 cm
 - (d) 20 cm
10. If an electron jumps from lower to higher orbit, then energy will be,
 - (a) Absorbed
 - (b) Emitted
 - (c) Absorbed as well as emitted
 - (d) Neither of above will apply
11. A photon, an electron, and an automobile all have the same wave-length. The one with most energy.
 - (a) Depends upon the value of wavelength and properties of various bodies
 - (b) Is the automobile
 - (c) Is the photon
 - (d) Is the electron
12. Coefficient of self induction of coil depends upon its area of cross-section 'a' as follows,
 - (a) It is independent of 'a'
 - (b) It decreases with an increase in 'a'
 - (c) It increases with an increase in 'a'
 - (d) None of the above
13. When electron in hydrogen atom jumps from higher orbit into fifth orbit, the set of line emitted is called
 - (a) Lyman series
 - (b) Bracket series
 - (c) P fund series
 - (d) Paschen series

14. When two tuning forks of nearly the same frequencies are sounded beats produced
- (a) Do not travel at all (c) Travel with a velocity less than that of sound
(b) Travel with a velocity greater than that of sound (d) Travel with the velocity of sound
15. The natural direction of the heat flow between two reservoirs depends upon
- (a) Whether they are in solid, liquid state (b) Their pressures
(c) Their temperatures (d) Their heat contents
16. What will be the number of images formed if the mirrors are parallel in front of and arranged at right angles to each other.
- (a) Infinite (b) Zero (c) None of the two (d) None of the above

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17. The frequency of a wave along a stretched string is 200 Hz. If the tension is made four times the frequency becomes,
- (a) 100 Hz (b) 400 Hz (c) 50 Hz (d) 800 Hz
18. The velocity sound in air is 350 m/s. The frequency of fundamental mode emitted by an open and organ pipe o length 50 cm is,
- (a) 700 Hz (b) 175 Hz (c) 50 Hz (d) 350 Hz
19. It is possible to distinguish between transverse and longitudinal waves from the property of
- (a) Refraction (b) Polarisation (c) Diffraction (d) Interference
20. A regiment of soldiers is crossing a suspension bride. They are ordered to,
- (a) Breat the steps (b) Lie flat and crawl (c) March in steps (d) Twist heir bodies
21. If an object is placed in front of two plane mirrors arranged at right angles to each other, the number of images seen will be,

- (a) 3 (b) 4 (c) 2 (d) 1
22. p-type semi-conductor is obtained by doping germanium crystal with,
 (a) Gold (b) Silver (c) Boron (d) Arsenic
23. When light is known on a metal surface, the energy of the omitted electrons.
 (a) Are random (b) Vary with speed of light
 (c) Vary with the frequency of light (d) Vary with the intensity of light
24. Two forces each of magnitude 10 N make angles of 60° and 120° with the axis. The magnitude of Y-component of their resultant is,
 (a) 5 ! 3 (b) 20 ! 3 N (c) 20 N (d) 10 ! 3 N

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25. Two waves of wavelength 1m and 1.01 m produce 10 beats in 3 second, the velocity of sound is
 (a) 1120 m/s (b) 337 m/s (c) 300 m/s (d) 33 m/s
26. The ratio of the velocity of sound hydrogen to the velocity of sound in oxygen is,
 (a) 8 : 1 (b) 16 : 1 (c) 4 : 1 (d) 2 : 1
27. The sensitiveness of a moving coil galvanometer can be increased by,
 (a) Increasing the magnetic flux (b) Decreasing the number of turns of coil
 (c) Decreasing the area of the coil (d) Increasing the couple per unit twist of the suspension
28. The electron emission of electrons take place at a relatively low temperature if the metal surface is
 (a) Having large area (b) Continuously heated (c) Oxide coated (d) Having a low work function
29. Which of the following media can transmit both transverse and longitudinal waves

- (a) Plasma (b) Solid (c) Liquid (d) Gas
30. Light emission stops when incident light is cut off. This phenomenon is called
 (a) Calorescence (b) Phosphorescence (c) Fluorescence (d) None of the above
31. Which one of the following property could not be studied for long in case of light waves,
 (a) Diffraction (b) Refraction (c) Reflection (d) Interference
32. In forward biasing of a P-N junction the barrier potential of the junction,
 (a) Decreases (b) Remains same (c) Increases (d) None of the above

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33. Which one of the following properties of sound is affected by change in air temperature,
 (a) Wavelength (b) Intensity (c) Amplitude (d) Frequency
34. The air between the lens and the plate in Newton's ring experiment is replaced by water. The ring pattern
 (a) Remains the same (b) Expands (c) Contracts (d) None of the above
35. Einstein explained the photo-electric effect making the following assumption as a basis that,
 (a) The mass of the electrons increases (b) Light consists the photons or quanta
 (c) The energy of light increases with speed (d) The photo-electrons are identical with atomic electrons
36. An elevator initially accerlerates upward from rest and ascends with uniform speed. Time period of a simple pendulum in the elevator will,
 (a) Increase and then decrease (b) Decrease and then increase (c) Increase (d) Decrease

37. A simple arrangement by means of which e.m.f.s. are compared is known
- (a) Voltmeter (b) Potentiometer (c) Ammeter (d) None of the above
38. The physics underlying the operation of a refrigerator most closely resembles the physics underlying,
- (a) The freezing of water (b) The melting of ice (c) The evaporation of water (d) A heat engine
39. Let a certain body of mass 'm' placed on a horizontal surface move down the inclined plane then downward component of weight is
- (a) $.mg\cos\theta$ (b) $.mg\sin\theta$ (c) $.mg\tan\theta$ (d) None

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40. The plane faces of two identical plano convex lens, each having focal length 40 cm are pressed against each other to form a usual convex lens. The distance from this lens at which an object must be placed to obtain a real, inverted image with magnification one is.
- (a) 40 cm (b) 80 cm (c) 20 cm (d) 60 cm
41. The law which gives definition of force is
- (a) Newton's law of gravitation (b) Third law of motion
(c) Second law of motion (d) First law of motion
42. Hygrometer is an instrument used for measuring
- (a) The compression of water vapour with temperature (b) The amount of water vapour in the atmosphere
(c) Specific gravity of air (d) The density of air
43. An inertial frame of reference is one whose:
- (a) Acceleration is zero (b) Velocity is changing with time
(c) Acceleration is uniform (d) Inertia is not zero

44. A moving car whose engine is switched off. comes to rest after some time due to:
(a) Inertia (b) Its mass (c) Friction (d) Earth's gravitation

CHEMISTRY

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45. The carbohydrate reserve of the body is
(a) Glycogen (b) Cellulose (c) Glucose (d) Starch
46. The sugar part of nucleic acid is
(a) Sorbose (b) Formose (c) Guucose (d) Ribose

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47. In the reaction $\text{NH}_3 + \text{H}_2\text{O} \longrightarrow \text{NH}_4^+ + \text{OH}^-$ which of the following constitute conjugate acid base pair
(a) NH_4^+ and OH^- (b) H_2O and OH^- (c) NH_3 and OH^- (d) NH_3 and H_2O
48. Neutron possesses
(a) Negative charge (b) Positive charge (c) All are correct (d) No charge
49. Total number of orbitals associated with orbit number 3 are
(a) 8 (b) 6 (c) 4 (d) 9
50. The units of first order rate constant are
(a) Per unit concentration (b) Per unit-concentration per unit time
(c) Per unit time (d) None of these
51. In electroplating the article to be electroplated is

- (a) In the middle (b) Just dipped (c) Made as cathode (d) Made as anode
52. Hydrogen bomb is based upon the phenomenon of
(a) Chemical reaction (b) Nuclear fission (c) Nuclear explosion (d) Nuclear fusion
53. Which of the following is an example of covalent network solid?
(a) Silicon (b) Sodium chloride (c) Sodium (d) Sodium carbon dioxide
54. What types of forces are present in molecular solids?
(a) Vander wall's forces (b) Matallic bonds (c) Hydrogen bonds (d) Electrovalent bonds

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55. A devised used for the determination of radioactivity is
(a) G.M. Counter (b) Nuclear reactor (c) Cyltron (d) Mass spectrometer
56. Gamma Rays are
(a) Low energy electron (b) High energy proton
(c) High energy election (d) High energy electromagnetic waves
57. Calorific value of lipids is (app)
(a) 20 kcal/g (b) 9 kcal/g (c) 6 kcal/g (d) 4 kcal/g
58. Digestion of starch in a test cube can be demonstrated by adding
(a) Albmin (b) Diatase (c) Zymase (d) Saliva
59. In reaction between zinc and iodine in which zinc iodide is formed what is being oxidised.
(a) Zinc atom (b) Iodine (c) Zinc ions (d) Iodide ions
60. Spodumene is the mineral of

- (a) Lithium (b) Sodium (c) Potassium (d) None
61. Indicate the most viscous liquids the following.
(a) H_2O (b) CH_3OH (c) $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$ (d) CH_3OCH_3
62. In which of the following processes nitrogen is reduced?
(a) $\text{NO}_2^- \rightarrow \text{NO}_3^-$ (b) $\text{NO}_2^- \rightarrow \text{NO}_2^-$ (c) $\text{NO}_2^- \rightarrow \text{NO}_3^-$ (d) $\text{NH}_4^+ \rightarrow \text{N}_2$
63. Which is not the mineral of Silicon
(a) Analcite (b) Asbestos
(c) Dolomite (d) Zircon
64. Substance that affects the rate of reaction but remains unaltered at the end of the reaction is called
(a) Catalyst (b) Acid (c) Base (d) None of the above

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65. If one mole of solute is dissolved in one liter of solution, the solution is called
(a) None of the following (b) One molal (c) One molar (d) One normal
66. If one gram equivalent of a solute is dissolved in one liter of solution, the solution is called
(a) One normal (b) One molal (c) One molar (d) None of the above
67. At constant temperature, volume of a given mass of a gas is inversely proportional to pressure exerted on it is called
(a) Coulomb's Law (b) Boyle's Law (c) General Gas Law (d) Charles Law
68. Very small and very large quantities are expressed in terms of
(a) Significant figures (b) Logarithm (c) None of these (d) Exponential notation
69. The number of atoms or molecules whose concentration determine the rate of reaction is called

- (a) Molecularity (b) Rate of reaction (c) Order of reaction (d) None of the above
70. Electrolytes which ionize to a very small extent in a solution are called
(a) Neutral (b) Weak electrolytes (c) Strong electrolytes (d) None of the above
71. The change of concentration of reactants or products is called,
(a) Order of reaction (b) Rate of reaction (c) Molecularity (d) None of the above
72. Reactions which proceed in the forward direction and go to completion are called
(a) Irreversible reaction (b) Equilibrium reaction (c) Reversible reaction (d) None of the above
73. The substance through which electricity cannot flow in molten state or solution form is called,
(a) Molecularity (b) Conductor (c) Electrolyte (d) Non electrolyte

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74. The law which states, "The amount of heat evolved or absorbed in a process in the same whether the process takes place in one or several steps is called
(a) Newton's law (b) First law of thermodynamics
(c) Hess's law (d) Law of conservation of energy
75. The amount of solute dissolved in 100g of solvent to form saturated solution at a given temperature is called,
(a) Dissolution (b) Solubility (c) Solution (d) None of the above
76. The theory which states that a molecule is a collection of positive nuclei surrounded by electrons distributed in bonding and antibonding molecular orbital of different energies is called,
(a) None of the following (b) V.B theory (c) VSEPR theory (d) M.O. theory
77. When a weak electrolyte is dissolved in water only a small amount of molecules is
(a) Remains constant (b) Ionized (c) Deionized (d) Increases

78. The mixture whose constituents are 50% hydrogen, 35% methane and 8% carbon mono-oxide is
(a) Coal gas (b) Coulter (c) Coke (d) None of the above
79. In common ion effect the degree of ionization is suppressed by the addition of
(a) A compound (b) Another electrolyte (c) An element (d) None of the above
80. The reaction in which heat is absorbed from the surrounding to the system is called
(a) Endothermic reaction (b) Fast reaction (c) Slow reaction (d) Exothermic reaction
81. The process in which solvent particles surround solute particles is called,
(a) Hydration (b) Hydrolysis (c) Saturation (d) Solvation
82. If one mole of solute dissolved in one Kg of solvent, the solution is called
(a) One normal (b) One molal (c) One molar (d) None of the above

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83. Equilibrium involving reactants and products in more than one phase is called
(a) Heterogeneous (b) Homogeneous (c) Dynamic (d) None of the above
84. Two double bonds are present between the atoms of the molecule
(a) NH_3 (b) H_2O (c) CO_2 (d) H_2SO_4
85. A change in which chemical composition of a substance does not change is called
(a) Change in shape (b) Physical change (c) Chemical change (d) None of the above
86. The process in which the electrolytes and molecules are split up into positively and negatively charged ions is called,
(a) Electrolysis (b) Ionization (c) Deionization (d) None of the above

87. The average relative mass of one atom of an element compared with atomic mass of one atom of carbon taken as 12 is called
(a) Atomic mass (b) Molecular mass (c) Relative mass (d) Gram-molecular mass
88. Symbolic representation of a molecule of substance is called:
(a) Symbol (b) Formula (c) Equation (d) None of the above
89. A substance in which all atoms are chemically identical having same atomic number is called:
(a) Element (b) Compound (c) Matter (d) Mixture
90. Formula of phosphoric acid:
(a) H_3PO_3 (b) H_3PO_4 (c) H_2PO_4 (d) $\text{H}_3(\text{PO}_4)_5$

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91. Smoke is an example of
(a) Vapour (b) Solid (c) Homogeneous mixture (d) Heterogeneous mixture
92. With a very high value of K_c for a chemical reaction, the forward reaction is expected to be:
(a) Nearby to completion (b) Very slowly (c) Very fastly (d) Smooth
93. When HCl is passed through a saturated solution of NaCl the solubility of NaCl
(a) Increases (b) Decreases (c) Remains constant (d) None of the above
94. $3\text{Fe}_{(s)} + 4\text{H}_2\text{O}_{(l)} \rightarrow \text{Fe}_3\text{O}_{4(s)} + 4\text{H}_2_{(g)}$ is an example of
(a) Homogeneous system (b) Heterogeneous system (c) Dynamic system (d) Static system
95. Phenol when treated with _____, yields both ortho and para sulphonic acids.
(a) H_2SO_4 (b) HNO_3 (c) HCl (d) NaOH
96. Grignard's reagent is
A) Alkyl halide B) Magnesium halide C) Alkyl magnesium halide D) Ethereal solution of an alkyl halide

97. Grignard's reagent reacts with water to form,
A) Alkane B) Alkene C) Alkyne D) Ether
98. The value of charge of an electron determined by Milliken was
A. $1.76 \times 10^{11} \text{C/Kg}$ B. $1.6 \times 10^{-19} \text{C}$ C. 0.529A° D. $6.625 \times 10^{-19} \text{C}$
99. The electrons are placed in sublevels in order of increasing energies. This is called
A. Pauli- Exclusion Principle B. Auf-bau Principle C. Heisenberg's Uncertainty D. Hunds Rule
100. The emission of absorption of energy by an atom is represented by
A. $\Delta E = hv$ B. $\Delta E = 1/2mv^2$ C. $\Delta E = mgh$ D. $\Delta E = mc^2$
101. The instrument that measures the intensity and frequency of emitted or absorbed radiation is called
A. Spectrograph B. Nanometer C. Spectrometer D. monometer
102. An ionic bond will be formed if the electro negativity difference between the combining atoms is,
A. 0.1 B. 0.5 C. 1.0 D. 2.0

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ENGLISH:

Directions: The following sentences contain problems in grammar, usage, diction (choice of words), and idiom.

Some sentences are correct.

No sentence contains more than one error. You will find that the error, if there is one, is underlined and lettered. Assume that all other elements of the sentence are correct and cannot be charged. In choosing answers, follow the requirements of standard written English. If there is an error, select the one underlined part that must be changed in order to make the sentence correct, and blacken the corresponding space on the answer sheet.

If there is no error, mark answer space E.

103. To me, the exercise of my right to vote has always been a responsibility and necessary. No error
 A B C D E

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104. The set of twelve books that were written in Erase were almost lost during the moving. No error
 A B C D E

105. The male willingness to avoid foods with high-fat content is a healthful sign in the
 A B B C
national welfare picture. No error
 D E

106. Suzie, the tallest of the three speakers, was the one who hadn't ought to be the
 A B C D
 first one called upon to address the group. No error
 E

107. Whenever he comes into the room, his older sister finds any excuse to leave immediatly. No error

108. This group, among whom are Jean and Eadie, certainly were the life of the party. No error

A B C D E

109. It's an occurrence most unique in the annals of our club's long existence. No error

A B C D E

110. One must be very careful to do his work step by step lest you attempt more that can be done within the given time limits. No error

A B C D E

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111. "I have never before in my life," she shouted "seen such a disregard of the tights of others!". No error

A B C D E

112 Neither Alan nor his classmates enjoy the kind of a display that you have been planning. No error

A B C D E

113. The officer told the private that he would have to lie where he had fallen until the arrival of an ambulance. No error

A B C D E

114. There is hardly any reason for you to feel badly and blame yourself for this mishap. No error

A B C D E

115. Being that he is sensible, you're going to find that it is he who will assume most of the responsibility. No error

A B C D E

116. Put the book that is now lying on the shelf in the closet before Edna returns. No Error

A B C D

117. Of course, we shall have to agree with you when you say that he is taller than any boy in his class. No error

A B C D E

DIRECTIONS: Each of the following sentences is to be rephrased according to the directions that follow it. You should make only those changes that the directions require. Keep the meaning of the revised sentence as close to the meaning of the original sentence as the directions for that sentence permit.

118. To do good is merely to feed one's ego. Begin with He insists that doing.

- A) To feed merely
- B) Merely to have fed
- C) Merely to have been feeding
- D) Feeding my ego merely
- E) Merely feeding

119. Giant turtles move so slowly on land that we often come to the conclusion that they are ill-adapted to their environment. Begin with That they move so slowly.

- A) Is the reason why
- B) Reason for our coming
- C) Conclusion; giant turtles
- D) Conclusion giant
- E) Environment, is

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120. The performance scheduled for tonight may have to be postponed; the star performer was taken ill suddenly. Begin with Because.

- A) Had to be
- B) Postponing the performance
- C) Suddenly, the
- D) Would have been
- E) Ill, and the

121. If I am called in as a witness, I shall testify that no one of my friends has even seen a copy of the letter. Substitute some for no one

- A) Friends, has even
- B) Friends have even
- C) Friends had even
- D) Friends even has
- E) Friends has even

122. With the approach of autumn, the nights have become cold and crisp, and the leaves of the surrounding forest are beginning to turn. Begin with When the nights became.
- A) Autumn, and the
B) Turn with the approach
C) Leaves began
D) Crisp; with
E) Autumn, the
123. We did not need an expensive survey team to tell us that Mr. Pollett is the most efficient diagnostician in our division. Substitute more efficient for the most efficient.
- A) Than any one
B) Than some of
C) Any diagnostician
D) Any other diagnostician
E) Diagnostician
124. I just do not know what he was referring to when he asked who can measure the worth of the dollars that are squandered in the name of vanity. Change dollars to money
- A) That have been squandered
B) squandering
C) Which has been squandered
D) That is squandered
E) Money, which

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125. It was evidenced in his disregard of our comfort that he was willing to be impatient with us. Begin with when.
- A) Us. It was
B) Us, and this was
C) Us and it was
D) Us; and it was
E) Us, it
126. These songs are the ones that we remember longest since they are the ones which were taught us in our childhood. Begin with these songs taught.
- A) Childhood are
B) Childhood; are
C) Ones. we
D) Ones, we
E) Longest are

- 127.** Known for the excellence of its products, this fine small company employs only people living in the surrounding community. Substitute which is known for known.
- A) Company is
B) Company, which
C) Products, Employs
D) Has been employing
E) Company. Which
- 128.** Harold insisted on continuing the journey even though he knew what my reaction would be. Omit even though, and use nevertheless.
- A) Journey, nevertheless,
B) Be; nevertheless,
C) Journey; nevertheless
D) Continuing nevertheless,
E) Nevertheless Harold

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- 129.** The Pulvers are the ones who will have to determine the lowest selling price since they are the owners of the property. Omit since they are.
- A) Price. The
B) Price, the
C) Property. the
D) Pulvers, the
E) Ones, owners
- 130.** Speaking before huge audiences of students, the Rhodes scholar tried to communicate to then his intense insights into world problems. Substitute The Rhodes scholar spoke for Speaking.
- A) After he tried
B) Having tried
C) And tried
D) While he was trying
E) Since he tried
- 131.** Mr. Arnold is my former college counselor, and I often turn to him for advice. Begin with Because.
- A) Advice, Mr. Arnold
B) Counselor, I
C) Mr. Arnold, counselor
D) Mr. Arnold, I
E) Advice. I
- 132.** Fashions are not brought about by changes in man's needs, but they come about as the result of whim and chance. Omit they.

- A) Needs. But
- B) But coming
- C) Needs, but
- D) Needs, but
- E) But come

BIOLOGY

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133. Roses may be red or white. This situation reflects

- (a) Same trait , different phenotype
- (b) Same trait , different genotype
- (c) Different Trait , same phenotype
- (d) Different trait , same genotype

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134. Size of ribosome in Prokaryotes is

- (a) 70 S
- (b) 80 S
- (c) 90 S
- (d) 60S

135. The blood is supplied to the liver tissue

- (a) Hepatic portal vein
- (b) Hepatic vein
- (c) Heptic artery
- (d) Both (a) & (c)

136. Membrane Potential (Approximately) is

- (a) .007 V
- (b) 0.7 V
- (c) 70 kV
- (d) 70mV

137. Irritability and conductivity is the basic property of

- (a) Gangila (b) Cranial (c) Spinal nerves (d) Nervous tissue

138. The separation of macromolecules from small molecules and ions can be accomplished by

- (a) Dialysis (b) Hemolysis (c) Cytolysis (d) Photolysis

139. Which of the following belong to different family than others

- (a) Avena sativa (b) Oryza sativa (c) Bamboo (d) Albizzia lebbek

140. Body of fungus is

- (a) Hyphae (b) Coenocyte (c) Mycelium (d) Septa

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141. Amoeba secretes digestive enzymes to hydrolyse.

- (a) Proteins (b) Starch (c) Sugar (d) All these including fat

142. Cells and tissues in mammals are bathed and nourished by

- (a) Water (b) Body fluids (c) Blood (d) Lymph

143. Histoplasmosis is caused by

- (a) Spores of fungus (b) Ringworm
Bacteria Body cavities (d) Virus

144. Low carbon dioxide concentration stimulates the active transport of _____ into the guard cells.

- (a) K^+ (b) Na^+ (c) None (d) Both

145. Which movement may involves Turgor

- A) Nyctinasty B) Haptonastic C) Both A and B D) None

146. From Head to Foot, the correct order is

- A) Coccyx ,Femur , Tarsals B) Mandible, femur, scapula C) Patella, Phalanges , Tibia D) All are wrong

147. Which is not a phase of repair process of a simple fracture
 A) Hematoma Formation B) Callus Formation C) Bony Callus D) Sciatica
148. Related to nerve impulse, if sodium gate opens
 A) Sodium ions rush into the neuron B) Potassium ions rush into the neuron C) Calcium ions rush into the nerve D) Calcium ions come out of the nerve
149. Human height is
 A) Gene linkage B) Epistasis C) Polygenic trait D) Pleiotropic
150. The cells that cling to an egg after ovulation occur
 A) Roslin B) Cumulus C) Clone D) Phenotype

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151. If cell of plants has full genetic potential of the organism – and therefore a single cell could become a complete plant, the plants are called
 A) Totipotent B) Transgenic C) Biofilters D) None
152. Recombinant DNA can be produced by
 A) Plasmid B) Cytoplasm C) Mitochondria D) None
153. Gall stones are formed by
 (a) Hemoglobin (b) Urea and uric acid (c) Cholesterol (d) Bile salts
154. A spherical bacterium is termed as
 a) Coccus (b) Bacillus (c) Spirillum (d) Vibrio
155. Conjugation in bacteria was discovered by
 (a) Lederberg and Tatum (b) Griffith (c) Zinder and Lederberg (d) Jacob and Wollman

156. The inheritance of a character in living organisms is controlled by the pair of elements called
(a) Sperms (b) Chromosomes (c) Genes (d) None of the above
157. Such animals which lay eggs and in which the whole development proceeds within the egg is called:
(a) Uniparous (b) Oviparous (c) Viviparous (d) None of the above
158. The concavity of Bowman capsule surrounds a thick cluster of capillaries called
(a) Henle's loop (b) Nephrons (c) Glomerulus (d) None of the above

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159. Mycorrhize are associated with the roots of higher plants and nitrogen they belong to kingdom
(a) Fungi (b) Protista (c) Monera (d) Algae
160. The phase of embryology leading to the formation of the rudiments of body organs is called.
(a) Organogenesis (b) Differentiation (c) Cleavage (d) None of the above
161. A nervous action which is brought about, by an external stimuli, in the body automatically without our awareness is called
(a) None of the following (b) Voluntary action (c) Reflex actions (d) Involuntary action
162. The branch of biology which deals with the study of inheritance is called
(a) Called (b) Tasconomy (c) Genetics (d) None of the above
163. An animal whose body can be divided up into two similar halves in only one plane is called
(a) None of the following (b) Radial symmetrical
(c) Bi-laterally symmetrical (d) Mono-lateally symmetrical
164. An organic connection between fetus and the maternal uterus through which an exchange of food and gaseous takes place is called
(a) Amnion (b) Chorion (c) Placenta (d) None of the above

165. The Ozone layer of the atmosphere serves to absorb most of the harmful _____ radiation from the sun rays which reach the earth's surface
 (a) Microwave (b) Ultraviolet (c) Infrared (d) None of the above
166. Hormone, which stimulates the development and secretion of milk in the mammary gland is called
 (a) None of the following (b) Luteinizing hormone (c) Graafian follicle (d) Luteotropic hormone
167. Some organelles are absent in cytoplasm of bacteria these are
 (a) Non-membranous (b) Ribosomes (c) Membrane bounded (d) None of the above

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168. The part of earth and its atmosphere which is inhabited by living organisms is called
 (a) Hydrosphere (b) Biosphere (c) A Biosphere (d) None of the above
169. There are about _____ kinds of living organisms present on earth today
 (a) Two billion (b) Four million (c) Three billion (d) Two million
170. The major and immediate nitrogenous product of protein and amino acids metabolism is (P11)
 (a) Urea (b) NH_3 (c) Uric acid (d) None
171. The relationship in which one partner is benefitted and other is neither benefitted nor harmed
 (a) Symbiosis (b) Predator prey (c) Parasitism (d) None of the above
172. A specific locality with particular set of environmental conditions where organism live is called
 (a) Habitat (b) Triome (c) Biome (d) None of the above
173. The definite functional role of an organism which is different from other organisms of the habitat is called

- (a) Ecological factor (b) Ecosystem (c) Ecological niche (d) None of the above

174. The muscles that are attached to the skeleton and are associated with the movements of bones are called is

- (a) Smooth muscles (b) Cardiac muscles (c) Striated muscles (d) Both A and B

175. The gradual process of change that occurs in populations of organisms over a long period of time leading to the formation of new species is called

- (a) Organic evolution (b) Inorganic evolution (c) Evolution (d) None of the above

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176. The light which retards the growth of plants and produces sunburns in human beings is

- (a) Visible (b) Ultraviolet (c) Invisible (d) Infrared

177. The branch of zoology which deals with the study of the development of the zygote is called

- (a) Taxonomy (b) Embryology (c) Histology (d) Zoology

178. Many tiny granules attached on the surface of rough endoplasmic reticulum are known as:

- (a) Chromosomes (b) Lysosomes (c) Ribosomes (d) Actosomes

179. Animals can be grouped into species because they have

- (a) Similar conditions for living (b) Same number of chromosome
(c) Similar kind of behaviour (d) All the above

180. The process in which the cell membrane helps to take in material by infolding in the form of vacuole is called:

- (a) Exocytosis (b) Endocytosis (c) Electrolysis (d) Photosynthesis

181. The organs of offence and defence of the coelenterates are the

- (a) Flame cells (b) Nematocysts (c) Parapodia (d) Tentacles

182. Jellyfish belongs to phylum
 (a) Protozoa (b) Chordata (c) Porifera (d) Coelenterata
183. The only arthropods with two pairs of antenna are the
 A) Crustaceans B) Insects C) Arachnids D) Myriapods
184. In mitochondria, where do the reactions of the electron transport chain occurs?
 A) In the inner membrane B) In the outer membrane C) In the matrix D) In the inter-membrane space

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185. A flap of tissue that functions as lid and covers entrance into trachea lid
 A) Glottis B) Valve C) Epiglottis D) None of these
186. The oxygen combines with haemoglobin when the
 A) Oxygen concentration is high at respiratory surface
 B) Carbon dioxide concentration is high at respiratory surface
 C) The respiratory surface is large and moist
 D) The respiratory surface is folded to increase surface area
187. A person with diabetes mellitus does not secrete enough
 A) Sugar B) Insulin C) Glucagon D) Steroids
188. Which of the following are the parts of hind brain
 (a) Cerebrum and hypothalamus (b) Cerebellum and hypothalamus
 (c) Pons, cerebellum and medulla oblogata] (d) Cerebrum, thalamus, hypothalamus
189. Control and integration of general metabolism, regulation of body temperature, water balance, appetite, are the control activities carried out by which of the following parts of the brain?

- (a) Cerebrum (b) Hypothalamus (c) Pons (d) Medulla oblongata

190. The largest part of the human brain is

- (a) Cerebrum (b) Cerebellum (c) Medulla oblongata (d) Pons

191. One of the effective drugs for the treatment of Parkinson's disease is

- A) Paracetamole B) L-dopa C) benzylCo D) Nicotine

192. Which is not an hormone

- A) HCG B) FSH C) LTH D) None

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193. Reproduction is a means through which

- (a) Species tend to maintain themselves (b) Genetic variations are brought about in species
(c) Is essential for living organisms to survive (d) All the above

194. The type of reproduction that does not involve gamete formation is

- (a) Sexual reproduction (b) Asexual reproduction (c) Parthenogenesis (d) Regeneration

195. Amoeba reproduces by

- (a) Binary fission (b) Multiple fission (c) Budding (d) Parthenogenesis

196. Hydrostatic skeleton is not found in

- (a) Cockroach (b) Sea anemone (c) earthworm (d) None

197. The bones at joints are held together by a tissue, the

- (a) Tendons (b) Connective tissue (c) Joints (d) Ligament

198. The joints that allow movement in two directions only are

- (a) Hinge joints (b) Ball-and-socket joints (c) Flexion joints (d) Extension joints

199. Which one is basic in nature

- A) Pepsin B) Sucrase C) Enterokinase D) Chymotripsin

200. Which is not an inhibitor

- A) Pepsin B) cyanide C) antibodies D) Anti-metabolites

201. A specialized cellular capsule that contains tiny poisonous stings used to paralyze prey or predator is

- (a) Nematocyst (b) Barbs (c) Nematods (d) Stings sac

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202. Which is not a sponge

- (a) Sycon (b) Obelia (c) Leucoselenia (d) Euplectella

203. A higher level of organization than an organism is a

- A. Population B. Community C. Biome D. Biosphere

204. Energy consumed in the process of photosynthesis is provided by

- A. Radiation B. Ultraviolet C. Sunlight D. Carbohydrates

205. Which of the following is not a function of proteins?

- A. Hormones B. Antibodies C. Carries D. Transmission of characters

206. The non-protein part of an enzyme is

- A. Cofactor B. Prosthetic group C. Metal activator D. Coenzyme

207. Cellulose molecules in a primary wall are arranged in which of following manner

- A. Criss Cross B. Straight C. Parallel D. Zigzag

208. The mechanism which eliminates nitrogenous wastes is called _____
- A. Absorption
 - B. Osmo regulation
 - C. Secretion
 - D. All of above
 - E. none
209. Maintenance of internal temperature is
- A. Thermostat
 - B. Thermophilic
 - C. Eat tolerance
 - D.

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210. In _____ stomata are on lower surface of leaves
- A. Hydrophytes
 - B. Mesphytes
 - C. Desert plants
 - D. All of above
 - E. None of above
211. Malpighian tubules are present in
- A. Foregut
 - B. Diverticulum
 - C. Hind gut
 - D. Mid diverticulum
 - E. None

212. Green vegetables can cause
- A. Lithotripsy
 - B. Renal failure
 - C. Dialysis
 - D. All of above
 - E. None

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213. In sunflower may be
- A. Flowers are present
 - B. Vascular bundles are present
 - C. Binds are present
 - D. Additional sclerenchyma are present
 - E. **All of above**
214. Sclereides are
- A. Tubular structure
 - B. Long fibers
 - C. **Shorter than fibers**
 - D. None
215. Which one is true
- A. Vascular cambium first appear as cylendar of actively dividing cells b/w primary xylem and secondary xylem
 - B. Vascular cambium first appear as a cylinder of dormently dividing cells between xylem and phloem
 - C. Cork cambium first appear as a cylinder of actively dividing cells between primary xylem and primary phloem

- D. All of the above
E. **None**
216. Steep movement are
- A. Growth movements
B. Tactic movements
C. **Automatic movement**
D. Both b & d
217. Exoskeleton is
- A. Endodermal in nature
B. Mesodermal in nature
C. **Ectodermal in nature**
D. None

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218. Body cells are more
- A. Insensitive
B. **Sensitive**
C. Fragile
D. Hard
219. Chlorosis is due to
- A. More light
B. More chlorophyll
C. More fertilizers
D. **Less fertilization**

220. Circadian is _____ word
- A. Greek
 - B. Roman
 - C. **Latin**
 - D. English
 - E. None

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