

PHYSICS >> Dawn of Modern Physics

1. Beta particle is actually a:

- A. fast moving electron
- B. slow moving electron
- C. electron at rest
- D. none of these

PHYSICS >> Nuclear Physics

2. Which of the following is the same for isotopes?

- A. neutrons
- B. protons
- C. electrons
- D. all of them

PHYSICS >> Waves

3. The direction of the restoring force is always towards:

- A. right hand
- B. up ward
- C. rest or mean position
- D. extreme position

PHYSICS >> Rotational and Circular Motion

4. The angle subtended at the center of a circle by an arc equal to the radius of the circle is

- A. One degree
- B. One rotation
- C. One radian
- D. None of these

PHYSICS >> Electromagnetism

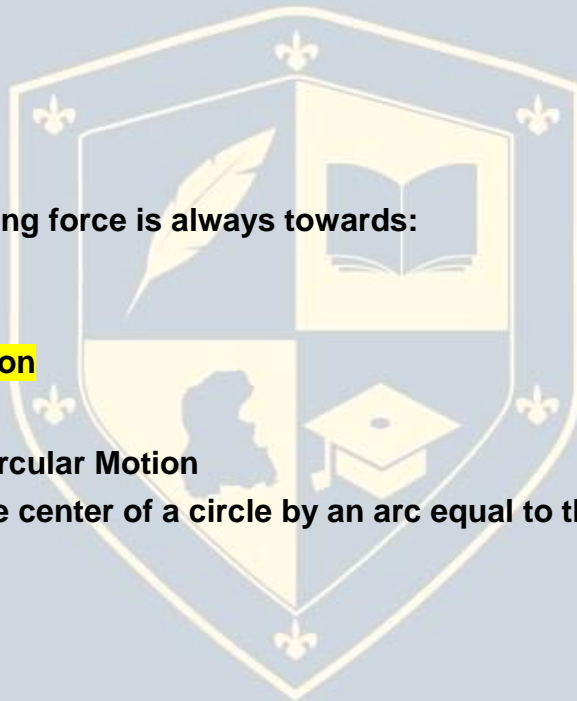
5. Magnetic flux is a:

- A. scalar quantity
- B. vector quantity
- C. sometimes scalar sometimes vector
- D. none of these

PHYSICS >> Current Electricity

6. In parallel voltage remains?

- A. Same
- B. Different
- C. Both of them
- D. None of them



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PHYSICS >> Thermodynamics

7. In Thermodynamics first law is related with:

- A. Pressure conservation
- B. Entropy conservation
- C. Temperature conservation
- D. Energy Conservation**

PHYSICS >> Electro-statistics

8. The electric potential at infinite distance is:

- A. infinity
- B. zero**
- C. positive
- D. negative

PHYSICS >> Electronics

9. Which of the following is not a type of rectifier?

- A. Phase wave rectifier**
- B. Full wave
- C. half wave
- D. none of them

PHYSICS >> Electromagnetic Induction

10. According to Faraday law induced voltage is produced by change in

- A. electric field
- B. magnetic field**
- C. both a or b
- D. position

PHYSICS >> Force and Motion

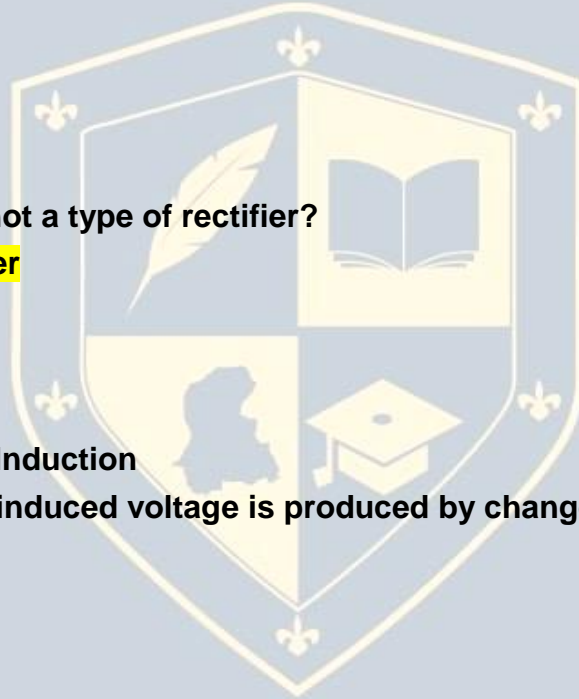
11. The unit of velocity is:

- A. m
- B. m s
- C. m / s**
- D. m / s<sup>2</sup>

PHYSICS >> Waves

12. In a stationary wave, the distance between adjacent antinodes is equal to:

- A.  $\lambda$
- B.  $2\lambda$
- C.  $\lambda/2$**
- D.  $\lambda/4$



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PHYSICS >> Force and Motion

13. What is the FPS unit of displacement:

- A. kilometer
- B. meter
- C. Foot**
- D. pound

PHYSICS >> Current Electricity

14. If the conductor resistance is 50 ohm and the current passing through it is 5 A. What is the value of potential difference?

- A. 150V
- B. 250V
- C. 50V
- D. 15V

PHYSICS >> Nuclear Physics

15. Which one of the following statements is correct:

- A. the mass of the nucleus must be less than the sum of the masses of the constituent neutrons and protons.**
- B. the mass of the nucleus must be equal to the sum of the masses of the constituent neutrons and protons.
- C. the mass of the nucleus must be greater than the sum of the masses of the constituent neutrons and protons.
- D. the mass of the nucleus must be equal to only the masses of the constituent neutrons.

PHYSICS >> Waves

16. A transverse wave on a string has an amplitude A. A tiny spot on the string is colored red. As one cycle of the wave passes by, what is the total distance traveled by the red spot?

- A. A
- B. 2A
- C. A/2
- D. 4A**

PHYSICS >> Electromagnetic Induction

17. Principle of electric generator is based on:

- A. biot savart's law
- B. ampere's law
- C. newton's law
- D. faraday law**

PHYSICS >> Dawn of Modern Physics

18. Range of wavelength of visible light is :

- A.  $700^{\circ}\text{A} - 1000^{\circ}\text{A}$
- B. 1nm - 100nm
- C. 0.1nm - 1nm
- D.  $4000^{\circ}\text{A} - 7000^{\circ}\text{A}$**

PHYSICS >> Atomic spectra

19. Which of the constants is not related to radiation:

- A. boltzmann
- B. planck
- C. solar constant
- D. all of these

PHYSICS >> Atomic spectra

20. UV radiation is formed by bombarding gas molecules with:

- A. electron
- B. protons
- C. alpha rays
- D. any of these

PHYSICS >> Rotational and Circular Motion

21. The dimensions of angular velocity are:

- A.  $[LT^{-1}]$
- B.  $[LT]$
- C.  $[LT^{-2}]$
- D.  $[T^{-1}]$

PHYSICS >> Nuclear Physics

22. How many down quarks in Neutron:

- A. 1
- B. 2
- C. 3
- D. 4

PHYSICS >> Current Electricity

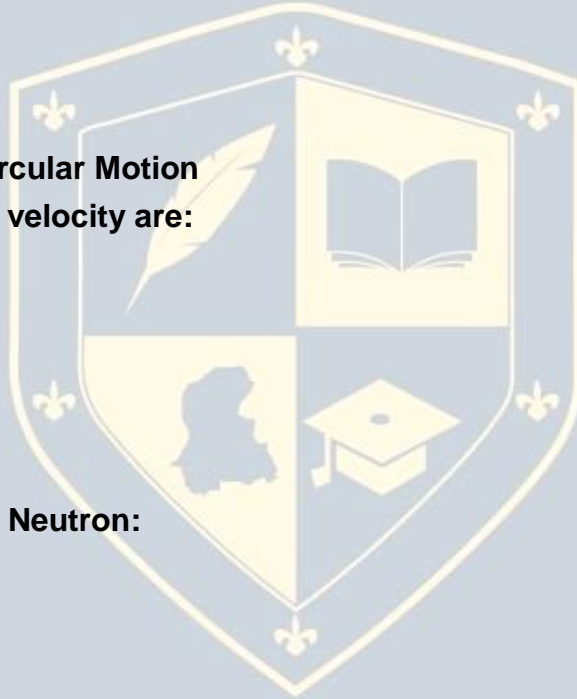
23. Which of the following has a negative temperature coefficient of resistance?

- A. Tungsten
- B. Carbon
- C. Nichrome
- D. Platinum

PHYSICS. >> Electronics

24. The bridge rectifier is preferred to an ordinary two diode full wave rectifier because:

- A. it needs much smaller transformer for the same output
- B. no center tap required
- C. less PIV rating per diode
- D. All of the above



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PHYSICS >> Force and Motion

25. Instantaneous velocity is defined as:

- A.  $dx/dt$
- B.  $\Delta x/\Delta t$
- C.  $\Delta x.\Delta t$
- D.  $\Delta v/\Delta t$

PHYSICS >> Dawn of Modern Physics

26. As a result of interference, energy:

- A. is transmitted and reflected
- B. is lost
- C. remains unchanged as a whole but is redistributed
- D. is gained

PHYSICS >> Current Electricity

27. Emf becomes equal to terminal potential difference when:

- A. circuit is closed
- B. current is max
- C. circuit is open
- D. all of these

PHYSICS >> Force and Motion

28. Which of the given motion is a type of 2D motion:

- A. Circular
- B. Pendulum motion
- C. Projectile motion
- D. All of these

PHYSICS >> Current Electricity

29. When the length of the conductor is doubled and the area of cross-section remains the same then is resistance:

- A. Remains the same
- B. Will be doubled
- C. Will become half
- D. Will increase by four times

PHYSICS >> Electronics

30. Peak voltage in the output of full wave rectifier is 10V so dc component of output voltage is:

- A.  $10\sqrt{2}$
- B.  $20/\sqrt{2}$
- C.  $20/\pi$
- D.  $20\pi$

PHYSICS >> Rotational and Circular Motion

31. One radian means:

- A. arc length of unit radius is half
- B. arc length of unit radius is unity**
- C. one degree
- D. all of these

PHYSICS >> Electromagnetic Induction

32. In step down transformer \_\_\_\_\_ is decreased in secondary coils.

- A. electric field
- B. magnetic field
- C. number of turns**
- D. none of these

PHYSICS >> Work and Energy

33. A cubic vessel of height 1 m is full of water, the minimum work done in taking water out.

- A. 500 J
- B. 1000 J
- C. 5 J
- D. 10 J**

PHYSICS >> Thermodynamics

34. In the VT diagram slope of curve is:

- A. R
- B.  $nR/P$**
- C. P
- D.  $R/P$

PHYSICS >> Nuclear Physics

35. Which isotope has highest momentum when moving with same velocity:

- A. Protium
- B. deuterium
- C. tritium**
- D. all of these have same momentum

PHYSICS >> Rotational and Circular Motion

36. An arc of length equal to the circumference of a circle subtends an angle?

- A.  $\pi$  radian
- B.  $2\pi$  radian**
- C.  $\pi/2$  radian
- D.  $4\pi$  radian

PHYSICS >> Waves

37. Whenever a transverse wave, travelling in a rarer medium, encounters a denser medium.

- A. An incident crest on reflection disappears
- B. An incident trough on reflection remains trough
- C. An incident crest on reflection becomes a trough**
- D. An incident crest on reflection remains crest

PHYSICS >> Dawn of Modern Physics

38. The frequency of the incident photon after Compton effect will :

- A. remain constant
- B. Increases
- C. Decreases**
- D. None of these

PHYSICS >> Nuclear Physics

39. What will be the decay constant of substance whose half life is 1 hour. Give your answer in ( $\text{sec}^{-1}$ ).

- A. 0.693
- B. 2494.8**
- C. 2294.8
- D. 41.58

PHYSICS >> Thermodynamics

40. "The amount of heat transfer required to raise the temperature of one mole of the gas through 1K at constant pressure" is called:

- A. The molar specific heat at constant pressure**
- B. molar heat capacity
- C. specific latent heat
- D. specific heat capacity

PHYSICS >> Electromagnetism

41. Force experienced by charge particles in magnetic field is:

- A. perpendicular to velocity
- B. perpendicular to field
- C. parallel to field
- D. perpendicular to velocity and field**

PHYSICS >> Electromagnetism

42. 1 tesla is equal to

- A. 100 N/Am
- B. 1 N/Am**
- C. 0.1 Nm/A
- D. 1 Nm/A

PHYSICS >> Current Electricity

43. Resistivity of a wire is \_\_\_\_\_ ohm-m if 0.75 A current flows through it by applying 1.5 V potential difference, take length and cross section as 5m and  $2.5 \times 10^{-7} \text{ m}^2$ .

- A.  $1 \times 10^{-7}$**
- B.  $2.63 \times 10^{-8}$
- C.  $19 \times 10^{-8}$
- D.  $7.85 \times 10^{-8}$

PHYSICS >> Atomic spectra

44. The frame of reference could be:

- A. fixed always
- B. not fixed always**
- C. at rest
- D. none of these

PHYSICS >> Waves

45. A steel wire hangs vertically from a fixed point, supporting a weight of 80 N at its lower end. The diameter of the wire is 0.50 mm and its length from the fixed point to the weight is 1.5 m. If density of steel wire =  $7.8 \times 10^3 \text{ kg/m}^3$ , then what is the fundamental frequency emitted from the wire.

- A. 76 Hz**
- B. 176 Hz
- C. 50 Hz
- D. 150 Hz

PHYSICS. >> Electro-statistics

46. If the potential difference across the two plates of a parallel plate capacitor is doubled, then energy stored in the capacitor would be:

- A. remains same
- B. two times
- C. four times**
- D. three times

PHYSICS >> Current Electricity

47. Steady current does not change with respect to \_\_\_\_\_.

- A. conductor
- B. source
- C. time**
- D. potential difference

PHYSICS >> Force and Motion

48. Displacement of object with respect a constant moving(v) frame in same direction is:

- A.  $x-vt$**
- B.  $x+vt$
- C.  $x$
- D.  $x+vt+at^2$

PHYSICS >> Waves

49. A sound wave has a wavelength  $\lambda$ . What is the minimum possible distance between two points with phase difference 90 deg?

- A.  $\lambda/2$
- B.  $3\lambda/2$
- C.  $5\lambda/2$
- D.  $5\lambda/4$**



PHYSICS >> Work and Energy

50. Kinetic energy of the body is increased by the 21 %. what is the percentage change in the linear momentum of the body:

- A. 0.21
- B. 0.22
- C. 0.11
- D. 0.1

PHYSICS >> Electromagnetism

51. When a charge passes through a region undeflected then with  $F_e = F_m$ , \_\_\_\_\_.

- A.  $B=0$
- B.  $B \perp E$
- C. both
- D. none

PHYSICS >> Electronics

52. In a rectifier, larger the value of shunt capacitor filter:

- A. larger the peak-to-peak value of ripple voltage
- B. larger the peak current in the rectifying diode
- C. longer the time that current pulse flows through the diode
- D. smaller the dc voltage across the load

PHYSICS >> Thermodynamics

53. The energy input to an engine is 4.00 times greater than the work it performs. What fraction of the energy input is expelled to the cold reservoir?

- A. 0.25
- B. 0.75
- C. 1
- D. impossible to determine

PHYSICS >> Nuclear Physics

54. Which set of elements have three isotopes:

- A. O,H
- B. O,Cl
- C. Cl,Hg
- D. All of them

PHYSICS >> Thermodynamics

55. 100 W heater is switched on for 5 minutes to melt ice. What is the mass of ice that melts at 0C. Specific latent heat of fusion of ice is 334 J/g.

- A. 90 g
- B. 90 kg
- C. 1.5 g
- D. 1.5 kg

PHYSICS >> Dawn of Modern Physics

56. The electron is purely a \_\_\_\_\_ when free.

- A. particle nature
- B. wave nature
- C. dual nature
- D. it transform to photon

CHEMISTRY >> Thermochemistry and Energetic of Chemical Reactions

57. If Water is present on a cup placed on a table, what will be the system in this case?

- A. Water
- B. Water in cup
- C. Whole table
- D. All of these

CHEMISTRY >> S and P Block elements

58. Which of the statement is incorrect for  $\text{XeO}_4$ ?

- A. four  $p\pi-d\pi$  bonds are present
- B. four  $sp^3 - p\sigma$  bonds are present
- C. It has a tetrahedral shape
- D. It has a square planar shape

CHEMISTRY >> Electrochemistry

59. Standard electrode Potential is denoted by:

- A. E
- B.  $E^{-1}$
- C.  $E^0$
- D.  $\partial$

CHEMISTRY >> Alcohol and Phenols

60. The organic compounds having close resemblance in structure as well properties are:

- A. Glycol and cyclohexanol
- B. Formaldehyde and benzol
- C. Diethyl ether and ethyl alcohol
- D. methanal and acetone

CHEMISTRY >> Atomic Structure

61. \_\_\_\_\_ cathode is used in discharge tube experiment for discovery of protons.

- A. flat
- B. round
- C. perforated
- D. oval

CHEMISTRY >> Macromolecules

62. The temperature at which enzyme activity is maximum is called as \_\_\_\_\_?

- A. Maximum temperature
- B. Absolute temperature
- C. Critical temperature
- D. Optimum temperature

CHEMISTRY >> Gases

63. The unit\_ is commonly used by meteorologist:

- A. Bar
- B. centibar
- C. millibar**
- D. kilobar

CHEMISTRY >> Introduction to Fundamental Concepts of Chemistry

64. The unit used to express the relative atomic mass is called:

- A. gram unit
- B. Avogadro's number
- C. atomic mass
- D. atomic mass unit**

CHEMISTRY >> Liquids

65. Which of the following forces have no relation with valence electrons?

- A. Ionic Bond
- B. Chemical bond
- C. Intermolecular forces**
- D. Intramolecular forces

CHEMISTRY >> Reaction Kinetics

66. The change in concentration of reactants or products per unit time is:

- A. rate constant
- B. reaction speed
- C. Rate of a reaction**
- D. All of these

CHEMISTRY >> Chemistry of Hydrocarbons

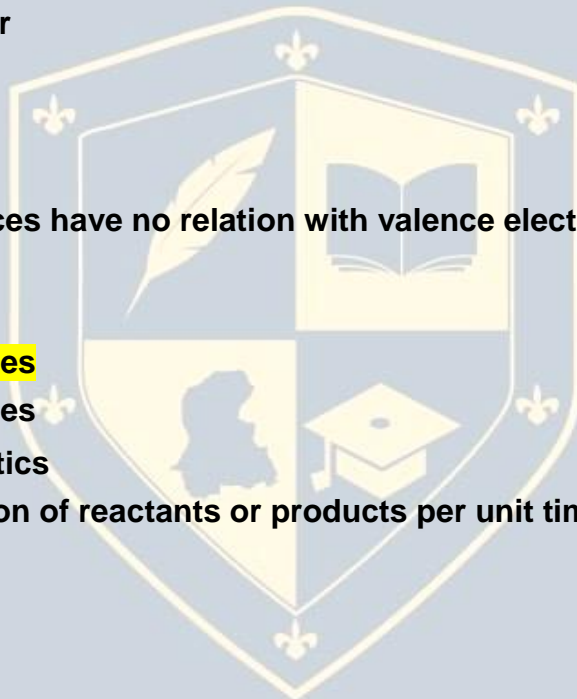
67. Which of the following Halogen react fast with alkanes in substitution reactions?

- A.  $\text{Cl}_2$
- B.  $\text{F}_2$**
- C.  $\text{I}_2$
- D.  $\text{Br}_2$

CHEMISTRY >> Chemical Bonding

68. The outermost s and p orbitals of Noble gases are completely filled that why they are:

- A. stable, reactive
- B. stable ,uncreative**
- C. unstable, reactive
- D. unstable ,uncreative



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CHEMISTRY >> Chemical Equilibrium

69. Le Chatelier Principle is about:

- A. Reaction Mixture
- B. Reactants
- C. Equilibrium Mixture**
- D. Products

CHEMISTRY >> Aldehydes and ketones

70. In IUPAC nomenclature, aldehydes are named as \_\_\_\_\_?

- A. Alkanol
- B. Alkanal**
- C. Alkanone
- D. Alkaldehyde

CHEMISTRY >> Transition Elements

71. The oxidation number in  $[\text{MnO}_4]^{-2}$

- A. 7
- B. -7
- C. 6**
- D. -6

CHEMISTRY >> Macromolecules

72. In which of the following body part protein is not present?

- A. Skin
- B. Hair
- C. Nails
- D. Bones**

CHEMISTRY >> Gases

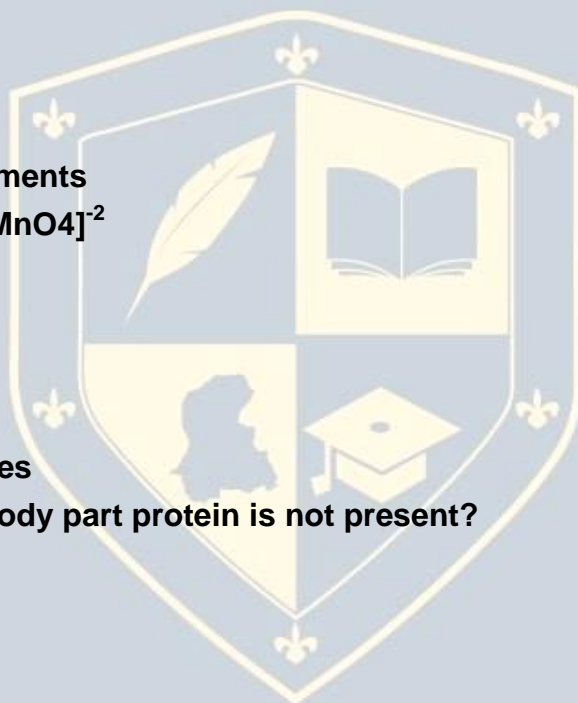
73.  $25 \text{ cm}^3$  of the sample of  $\text{H}_2$  gas effuses four times as rapidly as  $25 \text{ cm}^3$  of an unknown gas what will be the molar mass of unknown gas?

- A.  $16 \text{ g mol}^{-1}$
- B.  $32 \text{ g mol}^{-1}$**
- C.  $72 \text{ g mol}^{-1}$
- D.  $48 \text{ g mol}^{-1}$

CHEMISTRY >> Thermochemistry and Energetic of Chemical Reactions

74. Which one of the following is correct about heat energy?

- A. Path function**
- B. State function
- C. Move from cold to hot body
- D. Property of a system



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CHEMISTRY >> Alkyl Halides

75. Which of the following alkyl halide give  $S_N1$  reactions?

- A. 1-chloropropane
- B. 2-chloropropane
- C. n-butyl chloride
- D. 2-methyl,2-chloropropane**

CHEMISTRY >> Macromolecules

76. Masses of enzymes is between \_\_\_\_?

- A. Thousands
- B. Millions
- C. Hundreds
- D. Billions

CHEMISTRY >> Chemical Bonding

77. Intervening electrons have a negative charge which repulses other electrons and \_\_\_\_ attraction b/w nucleus and electrons:

- A. blocks
- B. reduces**
- C. increases
- D. enhances

CHEMISTRY >> Chemical Equilibrium

78. An exothermic reaction is allowed to reach equilibrium, if heat energy is then removed, the equilibrium will shift:

- A. to the product side**
- B. to reactant side
- C. toward the middle
- D. None of these

CHEMISTRY >> Chemistry of Hydrocarbons

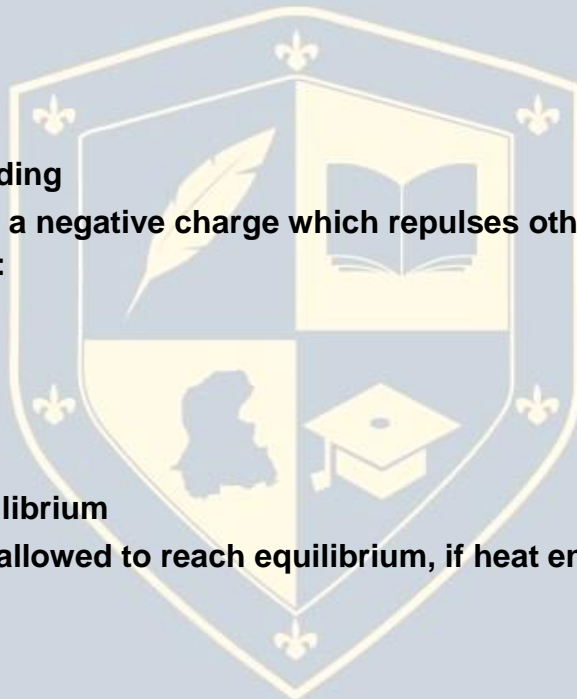
79. Reaction of vinyl acetylene with HCl produces?

- A. Polyvinyl polymer
- B. Polyvinyl Acetylene
- C. Neoprene
- D. Chloroprene**

CHEMISTRY >> Fundamental Principles of Organic Chemistry

80. Which one of the following is called as marsh gas?

- A. Methane**
- B. Ethane
- C. Propane
- D. Butane



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CHEMISTRY >> Liquids

81. Which of the substance has the highest melting point?

- A.  $\text{CO}_2$
- B.  $\text{H}_2\text{O}$
- C.  $\text{NaCl}$
- D.  $\text{MgO}$**

CHEMISTRY >> S and P Block elements

82. The first ionization potential of alkaline earth metal is greater than alkali metals because:

- A. They are more reactive
- B. They have greater atomic radii
- C. They have smaller atomic sizes**
- D. All

CHEMISTRY >> Introduction to Fundamental Concepts of Chemistry

83. Avogadro's hypothesis is applicable to \_\_\_\_\_ only.

- A. all gases
- B. inert gases
- C. ideal gases
- D. light gases

CHEMISTRY >> Thermochemistry and Energetic of Chemical Reactions

84. Which one of the following is not an example of state function?

- A. Temperature (T)
- B. Volume (V)
- C. Enthalpy (E)
- D. Heat (q)**

CHEMISTRY >> Gases

85. \_\_\_\_\_ are estimated to constitute more than 99% of the visible universe.

- A. solids
- B. liquids
- C. gases
- D. plasmas**

CHEMISTRY >> Electrochemistry

86. The electrolysis of aqueous solutions of salt is complex because of the ability of water:

- A. to vaporize
- B. to be oxidize and reduce simultaneously**
- C. to form hydrogen bonds
- D. All of these

**CHEMISTRY >> Chemical Bonding**

87. The elements of which group show abnormally very low values of electron affinity in every period of periodic table:

- A. group 2A
- B. group 5A
- C. both A & B**
- D. none of these

**CHEMISTRY >> Transition Elements**

88. In complex compounds the oxidation number is written in:

- A. English
- B. Greek
- C. Roman numeral**
- D. Hebrew

**CHEMISTRY >> Solids**

89. The boiling point of water is lower than HF because of \_\_\_ hydrogen bonding.

- A. strong
- B. moderate
- C. weak**
- D. constant

**CHEMISTRY >> Macromolecules**

90. Catalytic activity of enzyme is enhanced by:

- A. Activator
- B. Coenzyme
- C. Co-factor
- D. Both A and B**

**CHEMISTRY >> Macromolecules**

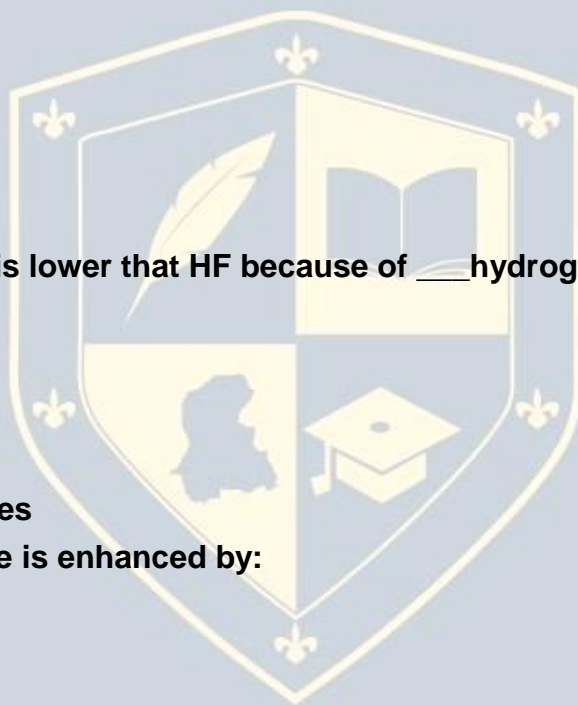
90. Catalytic activity of enzyme is enhanced by:

- A. Activator
- B. Coenzyme
- C. Co-factor
- D. Both A and B**

**CHEMISTRY >> Alcohol and Phenols**

91. Which of the following enzymes present in yeast helps out in fermentation:

- A. Diastase
- B. Maltase
- C. Zymase
- D. all of above**



**SINDH ACADEMY  
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CHEMISTRY >> Carboxylic Acids

92. Which of the following is an example of Monocarboxylic acid ?

- A. Oxalic acid
- B. Methanoic acid**
- C. Glutaric acid
- D. Adipic acid

CHEMISTRY >> Carboxylic Acids

93. In IUPAC nomenclature, Carboxylic acids are named as \_\_\_\_\_?

- A. Alkoxy acid
- B. Alkanoic acid**
- C. Alkyl carboxylic acid
- D. Alkoxylate acid

CHEMISTRY >> Aldehydes and ketones

94. Which of the following compound does not give cannizzaro reaction?

- A. Benzaldehyde
- B. Trimethyl acetaldehyde
- C. Formaldehyde
- D. Acetaldehyde**

CHEMISTRY >> Liquids

95. Due to which of the following forces present in water aquatic life is protected in Cold climate ?

- A. Dipole dipole forces
- B. Debye forces
- C. H-bonding**
- D. London dispersion forces

CHEMISTRY >> Chemistry of Hydrocarbons

96. Which one of the following is correct structure of benzene?

- A. Tetrahedral
- B. Hexagonal planer**
- C. Hexagonal irregular
- D. Trigonal planar

CHEMISTRY >> Aldehydes and ketones

97. Formalin solution contains how much water?

- A. 52%
- B. 8%
- C. 40%**
- D. 30%

CHEMISTRY >> Aldehydes and ketones

98. Reduction of ketones produce \_\_\_\_\_?

- A. Aldehydes
- B. Methanol
- C. Primary alcohols
- D. Secondary alcohols**



CHEMISTRY >> Liquids

99. The amount of heat required to form vapors of one mole of a liquid at its boiling point is called as?

- A. Molar heat of fusion
- B. Molar heat of vapourization**
- C. Molar heat of sublimation
- D. Molar heat of Evaporation

CHEMISTRY >> Chemical Equilibrium

100. Decomposition of Ozone has a very low value of equilibrium constant because of its

- A. stability
- B. reactivity
- C. compressibility
- D. Instability**

CHEMISTRY >> Chemical Bonding

101. When atoms share their electrons to complete its valence shell and attains nearest noble gas configuration, the bond formed is

- A. Ionic bond
- B. covalent bond**
- C. metallic bond
- D. dative bond

CHEMISTRY >> Carboxylic Acids

102. By which of the following way acetamide can be prepared?

- A. Hydrolysis of ethyl chloride
- B. Heating methyl cyanide
- C. Heating ammonium acetate**
- D. Heating ethyl acetate

CHEMISTRY >> Chemistry of Hydrocarbons

103. Ethyne has which hybridization?

- A.  $sp^3$
- B.  $sp^2$
- C.  $sp$**
- D.  $sp^2d$

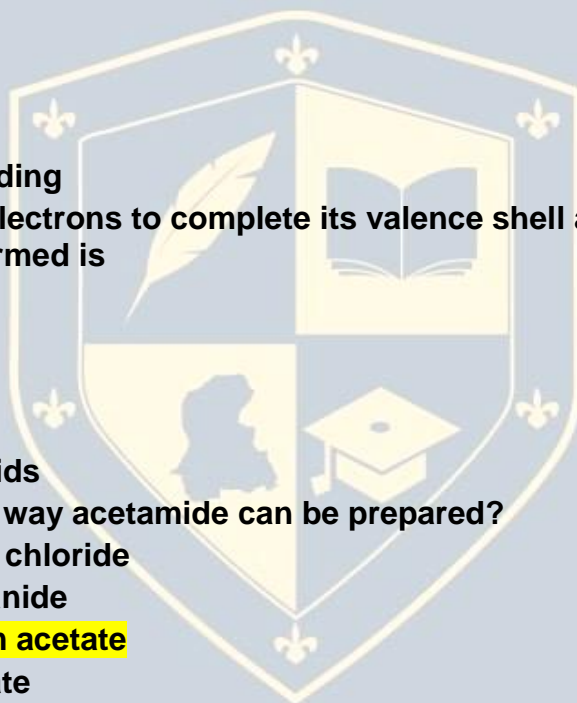
104. Alkyl halides generally give which type of elimination reactions?

- A. alpha-elimination
- B. gamma-elimination
- C. beta-elimination**
- D. syn-elimination

CHEMISTRY >> Liquids

105. At which temperature water has maximum density?

- A.  $2^\circ\text{C}$
- B.  $4^\circ\text{C}$**
- C.  $0^\circ\text{C}$
- D.  $<0^\circ\text{C}$



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CHEMISTRY >> S and P Block elements

106. One of them is not an alkali metal, Mark it:

- A. Francium
- B. Caesium
- C. Rubidium
- D. Radium**

CHEMISTRY >> Transition Elements

107.  $K_2(Cu(CN)_4)$  which one is correct

- A. Potassium tetra cyano recperate
- B. Coordination number is 2
- C. The ligand is positively charged
- D. Central atom is present in the avionic sphere**

CHEMISTRY >> Alcohol and Phenols

108. Which of the following alcohol does not converted into carboxylic acid when react with  $K_2Cr_2O_7/H_2SO_4$  ?

- A.  $CH_3C(CH_3)_2OH$**
- B.  $CH_3CH(CH_3)OH$
- C.  $CH_3OH$
- D.  $C_2H_5OH$

CHEMISTRY >> Atomic Structure

109. Spectrum is the visual display or \_\_\_\_\_ of component of white light when it is passed through prism.

- A. rarefaction
- B. radiation
- C. collection
- D. dispersion**

CHEMISTRY >> Introduction to Fundamental Concepts of Chemistry

110. If 9.8 g of sulfuric acid dissolved in excess quantity of water, it will yield \_\_\_\_\_ moles of hydrogen ion ( $H^+$ ) and \_\_\_\_\_ mole of sulphate ions ( $SO_4^{2-}$ )

- A. 0.1, 0.2
- B. 0.1, 0.3
- C. 0.2, 0.4
- D. 0.2, 0.1**

CHEMISTRY >> Electrochemistry

111. If a certain atom gains electrons its oxidation number will be:

- A. Negative
- B. Positive**
- C. zero
- D. Unity

**CHEMISTRY >> Reaction Kinetics**

112. Higher order reactions has half-life:

- A. same as first order
- B. Different from first order reactions
- C. Directly proportional to Concentration of reactants
- D. None of these**

**BIOLOGY >> Life processes in animals and plants (Nutrition/Gaseous exchange/Transport)**

113. The attraction between water molecules and cell wall of xylem is termed as:

- A. cohesion
- B. tension**
- C. adhesion
- D. imbibitions

**BIOLOGY >> Prokaryotes**

114. What is true for pili and flagella like structures of bacteria:

- A. both are same in size
- B. both help in movement
- C. both are composed of proteins**
- D. All of Above

**BIOLOGY >> Coordination and Control/ Nervous and Chemical Coordination**

115. The thalamus and the hypothalamus are located in which region of the brain?

- A. brain stem
- B. cerebrum
- C. cerebellum
- D. Diencephalon**

**BIOLOGY >> Support and Movement**

116. The place of attachment of leaf with the shoot is called?

- A. pith
- B. pit
- C. pulvinus**
- D. all of these

**BIOLOGY >> Bio-Energetics**

117. In photosynthesis dark reaction, is called so because:

- A. It occurs in dark.
- B. It does not require light energy.**
- C. It cannot occur during daytime.
- D. It occurs more rapidly at night.

**BIOLOGY >> Diversity among Animals**

118. Which one is not the characteristic of Kingdom Animalia?

- A. All animals are ingestive heterotrophs
- B. All animals are eukaryotes
- C. It is largest kingdom
- D. All animals develop from the dissimilar gametes**

**BIOLOGY >> Enzymes**

119. Number of substrate molecules converted into product by one molecule of enzyme active site per unit time is called?

- A. turnover number**
- B. substrate number
- C. reaction number
- D. none of these

**BIOLOGY >> Evolution**

120. Mating with non-relatives is known as?

- A. inbreeding
- B. outbreeding**
- C. breeding
- D. none of these

**BIOLOGY >> Biodiversity (Acellular Life/Variety of Life)**

121. The Prokaryotic Life is characterized by

- A. absence of locomotion
- B. absence of nuclear envelope**
- C. absence of Protein
- D. absence of nuclear material

**BIOLOGY >> Evolution**

122. Inbreeding increases the frequency of which of the following?

- A. heterozygous
- B. genetic diversity
- C. genetic linkage
- D. homozygous**

**BIOLOGY >> Biodiversity (Acellular Life/Variety of Life)**

123. The branch that deals with the study of viruses is known as?

- A. Entomology
- B. a. Bacteriology
- C. virology**
- D. epidemiology

**BIOLOGY >> Cell Structure and Function**

124. What type of molecule is Chlorophyll?

- A. Inorganic
- B. Cationic
- C. Anionic
- D. Organic**

**BIOLOGY >> Diversity among Animals**

125. Coelom is lined by which of the following?

- A. Parietal mesoderm
- B. Visceral mesoderm
- C. Mesoderm
- D. both a and b**

**BIOLOGY >> Reproduction**

126. Which method is of asexual reproduction?

- A. sporulation
- B. fission
- C. apomixis
- D. all of these**

**BIOLOGY >> Life processes in animals and plants (Nutrition/Gaseous exchange/Transport)**

127. Select the phase/s of breathing:

- A. Inhalation
- B. Exhalation
- C. Both and A and B**
- D. vocal waves

128. The organisms able to use sunlight directly as a source of energy are?

- A. Plants**
- B. Animals
- C. Fungi
- D. Omnivores

**BIOLOGY >> Coordination and Control/ Nervous and Chemical Coordination**

129. The gap in the myelin sheath between adjacent Schwann cells is called?

- A. dendrite
- B. soma
- C. node of ranvier**
- D. stroma

**BIOLOGY >> Enzymes**

130. The complex that forms when a substrate binds to enzyme is called?

- A. enzyme-substrate complex**
- B. enzyme complex
- C. substrate complex
- D. structural complex

**BIOLOGY >> Variation and Genetics / Inheritance**

131. In peas, the gene for yellow color (C) is dominant to the gene for green color (c). To determine the genotype of an unknown yellow pea, what kind of pea should you cross with it?

- A. Another unknown green pea
- B. Any genotype
- C. Homozygous dominant
- D. Homozygous recessive (cc) or known heterozygous (Cc)**

**BIOLOGY >> Biodiversity (Acellular Life/Variety of Life)**

132. What type of viruses are the HBV virus?

- A. DNA Enveloped virus
- B. RNA enveloped virus
- C. DNA Virus**
- D. RNA naked virus

**BIOLOGY >> Evolution**

133. The total aggregate of genes in a population at any one time is called population's?

- A. genome
- B. gene pool**
- C. genetic group
- D. genomic library

**BIOLOGY >> Reproduction**

134. A human female produce how many oocytes in each of her ovary?

- A. 30000
- B. 200000**
- C. 300000
- D. 20000

135. The cause behind vomiting is:

- A. peristalsis
- B. anti peristalsis**
- C. swallowing
- D. Hunger pangs

**BIOLOGY >> Biodiversity (Acellular Life/Variety of Life)**

136. The Herpes virus is responsible for which of the following types of Herpes?

- A. simplex**
- B. duplex
- C. triplex
- D. quadruplex

**BIOLOGY >> Coordination and Control/ Nervous and Chemical Coordination**

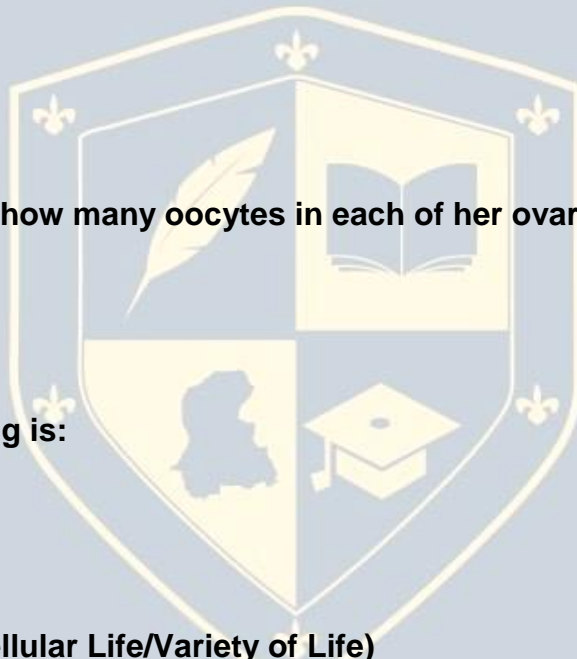
137. Central nervous system consists of:

- A. brain and spinal cord**
- B. spinal nerves only
- C. cerebellum and brain stem only
- D. cerebrum and spinal column

**BIOLOGY >> Biological Molecules Enzymes**

138. If the 1 amino acid is joined together by peptide bonds, it becomes:

- A. protein**
- B. globular protein
- C. functional protein
- D. secretive protein



**BIOLOGY >> Variation and Genetics / Inheritance**

139. In which of the following cases, genotypic and phenotypic ratio will remain same in F2 generation?

- A. Law of independent assortment
- B. Law of Segregation
- C. Test cross
- D. Incomplete dominance**

**BIOLOGY >> Biological Molecules Enzymes**

140. Which structure of protein gives information about the folding of a protein?

- A. primary structure
- B. secondary structure
- C. tertiary structure**
- D. quaternary structure

**BIOLOGY >> Variation and Genetics / Inheritance**

141. Which of the following characters of pea plant is dominant?

- A. Yellow pods
- B. White flowers
- C. Wrinkled seeds
- D. Axial flowers**

**BIOLOGY >> Prokaryotes**

142. What type of prokaryotic genetic recombination requires the presence of plasmids?

- A. transduction
- B. transformation
- C. binary fission
- D. conjugation**

**BIOLOGY >> Support and Movement**

143. The muscle which moves a body part towards the midline of the body is:

- A. flexor muscles
- B. Extensor muscles
- C. adductor muscles
- D. abductor muscles**

**BIOLOGY >> Diversity among Animals**

144. Octopus belongs to phylum mollusca because:

- A. It has suckers and tentacles.
- B. It has a soft body covered by a shell.
- C. It has a soft, unsegmented body with a thin, flexible internal shell.**
- D. It has a soft, segmented body with a head and a foot.

**BIOLOGY >> Bio-Energetics**

145. How are high energy phosphate bonds broken down in ATP?

- A. anabolism
- B. catabolism
- C. hydrolysis**
- D. all of these

**BIOLOGY >> Cell Structure and Function**

146. Which of the following is a mesh of interconnected membranes involved in protein synthesis and transport?

- A. ER**
- B. cytoskeleton
- C. golgi apparatus
- D. all of these

**BIOLOGY >> Evolution**

147. Which of the following theories representing Lamarckian evolution is false?

- A. Inheritance of acquired characteristics
- B. Theory of genetic change**
- C. both a and b
- D. none of these

**BIOLOGY >> Enzymes**

148. Enzymes showing substrate specificity are specific to how many substrates?

- A. 1**
- B. 3
- C. 2
- D. 4

**BIOLOGY >> Evolution**

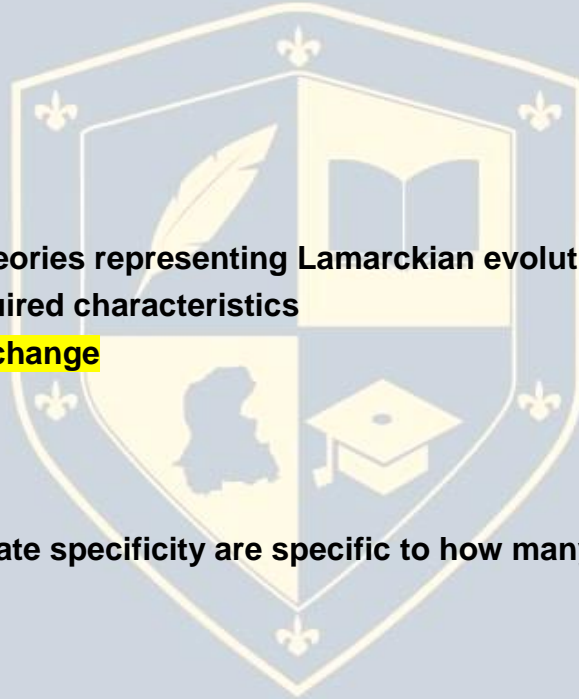
149. The ultimate source of all the change is?

- A. migration
- B. mutation**
- C. genetic drift
- D. selection

**BIOLOGY >> Bio-Energetics**

150. Stomata cover only what portion of the leaf surface?

- A. 10%
- B. 50%
- C. 1-2%**
- D. 0.3 to 0.4%



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**BIOLOGY >> Diversity among Animals**

151. The sponges in which sperms develop first are included in the category of?

- A. Peritandrous
- B. Protandrous**
- C. Protandrous
- D. Protandrous

**BIOLOGY >> Enzymes**

152. The optimal temperature for enzymes to work in body is how many degree celcius?

- A. 30
- B. 32
- C. 35
- D. 37**

**BIOLOGY >> Enzymes**

153. An activated enzyme consisting of polypeptide chain and a cofactor is called?

- A. Apoenzyme
- B. Holoenzyme**
- C. Activated enzyme
- D. both b and c

**BIOLOGY >> Bio-Energetics**

154. What is reduced during sugar production in photosynthesis?

- A. ATP
- B. NADH
- C. carbon dioxide**
- D. oxygen

**BIOLOGY >> Diversity among Animals**

155. Identify the characteristic of acoelomates?

- A. Absence of mesoderm
- B. Absence of brain
- C.. Coelom that is incompletely lined with a mesoderm
- D. Solid body without a cavity surrounding internal organs**

**BIOLOGY >> Evolution**

156. During which of the following levels of biological organization can natural selection occur?

- A. gene
- B. individual
- C. group
- D. all of these**

**BIOLOGY >> Cell Structure and Function**

157. A plant cell wall is mainly composed of which of the following?

- A. protein
- B. lipid
- C. cellulose**
- D. starch

**BIOLOGY >> Reproduction**

158. From beginning of the 3rd month of pregnancy the human embryo is referred to as the?

- A. zygote
- B. foetus**
- C. embryo
- D. all of these

**BIOLOGY >> Coordination and Control/ Nervous and Chemical Coordination**

159. The largest lobe of the brain is:

- A. Frontal**
- B. Parietal
- C. Temporal
- D. Occipital

**BIOLOGY >> Reproduction**

160. The organs that produce reproductive cells are known as?

- A. gametes
- B. gonads**
- C. glands
- D. follicles

**BIOLOGY >> Life processes in animals and plants (Nutrition/Gaseous exchange/Transport)**

161. The process which does not require energy:

- A. Diffusion
- B. Facilitated diffusion
- C. Osmosis
- D. active transport**

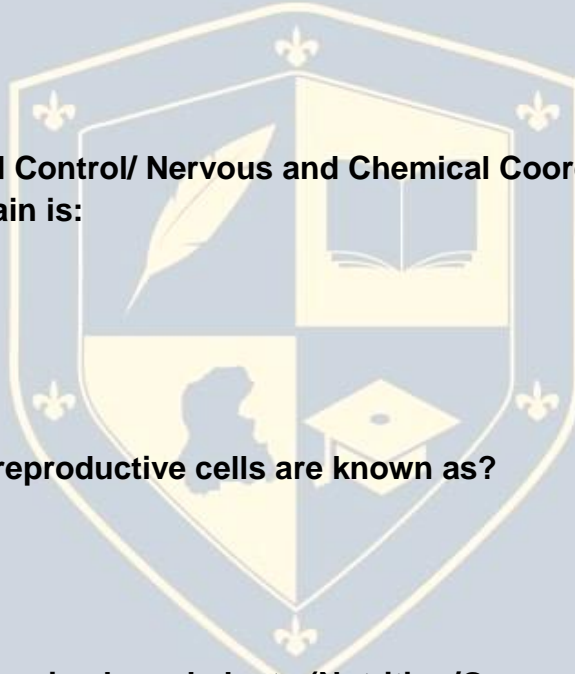
**BIOLOGY >> Support and Movement**

162. The contraction of muscle by actin and myosin is described by which biological theory?

- A. Endosymbiotic theory
- B.. Central Dogma theory
- C. Cross-bridge theory
- D. Sliding filament theory**

163. The catalytic activity of an enzyme is restricted to its small protein called?

- A. intermediate site
- B. active site**
- C. passive site
- D. both a and b



**BIOLOGY >> Support and Movement**

164. The proteins at the junction between sarcomeres form the:

- A. H zone
- B. M line
- C. Z line**
- D. A band

**BIOLOGY >> Prokaryotes**

165. Sex pili is formed in which of the following processes?

- A. sexual reproduction
- B. binary fission
- C. mitosis
- D. conjugation**

**BIOLOGY >> Support and Movement**

166. Which of the following bone forms hip joint with hip bone?

- A. tibia
- B. fibula
- C. tarsals
- D. femur**

**BIOLOGY >> Cell Structure and Function**

167. What is the approximate ratio of RNA and protein in a ribosome?

- A. 1:1**
- B. 2:1
- C. 1:2
- D. 1:3

**BIOLOGY >> Evolution**

168. Which of the following is NOT an example of evidence supporting the endosymbiotic theory?

- A. Mitochondria and other plastids multiply by binary fission.
- B.. Mitochondria contain their own DNA, which is a single circular chromosome.
- C. Mitochondria have their own ribosomes, which are 70s.
- D. none of these**

**BIOLOGY >> Diversity among Animals**

169. One similarity between annelids and arthropods:

- A. Closed circulatory system.
- B. Nitrogenous waste product is uric acid.
- C. Ventral nerve cord.**
- D. None of the above.

**BIOLOGY >> Life processes in animals and plants (Nutrition/Gaseous exchange/Transport)**

170. Who proposed pressure flow theory?

- A. Dixon
- B. Mohl
- C. Sanger
- D. Munch**

**BIOLOGY >> Evolution**

171. Which of the following is not an evidence for evolution?

- A. Fossil record
- B. Common ancestor organisms
- C. Vestigial structures
- D. none of these**

**BIOLOGY >> Biological Molecules Enzymes**

172. Which of the statement is not true for compounds like glycoprotein and glycolipids?

- A. They are conjugated molecules of carbohydrates
- B. Both have role in the extracellular matrix of animals and bacterial cell wall
- C. They are components of biological membranes.
- D. Both are produced and secreted by endoplasmic reticulum**

**BIOLOGY >> Coordination and Control/ Nervous and Chemical Coordination**

173. Which type of the receptors are present in the ear?

- A. Chemoreceptors
- B. Photoreceptors
- C. Thermoreceptors
- D. Mechanoreceptors**

**BIOLOGY >> Biodiversity (Acellular Life/Variety of Life)**

174. Which of the following virus is enveloped?

- A. adenovirus**
- B. herpes virus
- C. poliovirus
- D. none of these

**BIOLOGY >> Variation and Genetics / Inheritance**

175. Your neighbor has a flower garden in which there are red flowers and white flowers. These flowers are diploid organisms, and flower color is an autosomal trait. The gene for red flowers (R) is dominant, while the gene for white flowers (r) is recessive. Which of the following is the genotype of a white flower?

- A. RR
- B.. Rr
- C. rR
- D. rr**

**BIOLOGY >> Diversity among Animals**

176. Which of the following is paired correctly?

- A. Pisces- jellyfish
- B. Echinodermata- cuttlefish
- C. Mollusca- starfish
- D. Arthropoda- silver fish**

**BIOLOGY >> Coordination and Control/ Nervous and Chemical Coordination**

177. Which brain part is responsible for the formation of long term memory?

- A. Medulla
- B. Thalamus
- C. Hippocampus**
- D. Corpus callosum

**BIOLOGY >> Bio-Energetics**

178. For every 3 molecules of carbon dioxide in Calvin cycle how much G3P is produced?

- A. 6**
- B. 2
- C. 4
- D. 8

**BIOLOGY >> Prokaryotes**

179. A huge micro organism Acanthurus named nigrofuscus discovered in intestine of brown suigeonfish

- A. a bacterium**
- B. a virus
- C. a parasite
- D. protozoa

**BIOLOGY >> Cell Structure and Function**

180. Growth and development of plant cells is the role of?

- A. parenchymatous cells
- B. chlorenchymatous cells
- C. meristematic cell**
- D. sclerenchymatous cells

**ENGLISH >> Structure of Sentence**

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

181. To walk, biking and driving are Pat's favorite ways of getting around.

- A. To walk, biking, and driving
- B. Walking, biking, and driving**
- C. To walk, biking, and to drive
- D. Walking, biking, and to drive

ENGLISH >> Tenses

Demonstrate control of tenses and sentence structure

182. When I was young, I \_\_\_\_\_ (use) play cricket a lot.

- A. use
- B. used
- C. used to**
- D. use to

ENGLISH >> Correct use of articles and prepositions

Demonstrate correct use of articles and prepositions

183. Bilal has \_\_\_\_\_ terrible headache.

- A. a**
- B. an
- C. the
- D. no article

ENGLISH >> Vocabulary

Comprehend key vocabulary

184. We are planning to get a big, \_\_\_\_\_ table for our dining-room.

- A. rough
- B. empty
- C. deep
- D. round**

ENGLISH >> Use of writing conventions of spelling, capitalization and punctuation

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

185. Choose the correct sentence.

- A. i think june is the hottest month.
- B. I think june is the hottest month.
- C. I think June is the hotest month.
- D. I think June is the hottest month.**

ENGLISH >> Mistakes in Sentences or short written texts

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

186. I found the (A)/ two first chapters (B) /of the book (C)/ particularly interesting. (D)

- A. I found the
- B. two first chapters**
- C. of the book
- D. particularly interesting.

ENGLISH >> Use of writing conventions of spelling, capitalization and punctuation

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

187. Choose the correct sentence.

- A. He always loved sweets, chocolates, biscuits and cakes.
- B. He always loved, sweets, chocolates, biscuits and cakes.
- C. He always loved sweets, chocolates, biscuits and, cakes.**
- D. He always loved sweets, chocolates biscuits and cakes.

ENGLISH >> Correct use of Subject Verb Agreement

Demonstrate correct use of subject-verb agreement

188. Physics \_\_\_\_\_ difficult to understand.

- A. were
- B. are
- C. is**
- D. have been

ENGLISH >> Tenses

Demonstrate control of tenses and sentence structure

189. What tense is the verb in this sentence? 'I'll take you in my car.'

- A. Present
- B. past
- C. future**
- D. none of these

ENGLISH >> Correct use of Subject Verb Agreement

Demonstrate correct use of subject-verb agreement

190. Either of the two dresses shall \_\_\_\_\_ good.

- A. looking
- B. look**
- C. looks
- D. looked

ENGLISH >> Correct use of articles and prepositions

Demonstrate correct use of articles and prepositions

191. Our neighbors have \_\_\_\_\_ cat and \_\_\_\_\_ dog.

- A. a... an
- B. a...a**
- C. a...the
- D. an...an

ENGLISH >> Vocabulary

Comprehend key vocabulary

192. coveted:

- A. worn
- B. greatly desired or envied**
- C. eager
- D. detested

ENGLISH >> Structure of Sentence

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

193. \_\_\_\_\_ his parents allow him or not, John intends to go to the party.

- A. Whether**
- B. While
- C. Although
- D. Despite

ENGLISH >> Correct use of articles and prepositions

Demonstrate correct use of articles and prepositions

194. They had been waiting at the departure lounge for almost three hours when they finally got ---- the train.

- A. on**
- B. in
- C. up
- D. to

ENGLISH >> Use of writing conventions of spelling, capitalization and punctuation

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

195. Choose the correct sentence.

- A. Didnt you hear that the exam was changed to next week.
- B. Didn't you hear, that the exam was changed to next week?
- C. Didn't you hear that the exam was changed to next week?**
- D. Did'nt you hear that the exam was changed to next week?



ENGLISH >> Tenses

Demonstrate control of tenses and sentence structure

196. We \_\_\_\_\_ (eat) the popcorn and \_\_\_\_\_ (drink) the orange juice.

- A. eat, drink
- B. ate, drink
- C. eat, drank
- D. ate, drank**

ENGLISH >> Structure of Sentence

Demonstrate control of tenses and sentence structure

197. Which one is correct?

- A. Had she clean her home?
- B. Is that she cleaned her home?
- C. Did she clean her home?**
- D. Has she cleaned her home?

ENGLISH >> Vocabulary

Comprehend key vocabulary

198. China is one of the most \_\_\_\_\_ countries in the world.

- A. popular
- B. populous**
- C. populate
- D. popularized

ENGLISH >> Mistakes in Sentences or short written texts

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

199. He is a scientist (A)/ but out of (B)/ his three sons (C)/ neither have become scientists. (D)

- A. He is a scientist
- B. but out of
- C. his three sons
- D. neither have become scientists.**

ENGLISH >> Correct use of articles and prepositions

Demonstrate correct use of articles and prepositions

200. \_\_\_\_\_ camel is the ship of the desert.

- A. A
- B. An
- C. The**
- D. No article

LOGICAL REASONING >> Logical Problems

Fact Checking

201. Fact1: All drink mixes are beverages Fact 2: All beverages are drinkable Fact 3: All beverages

are red If the above three statements are facts than which of the following statement will also be a fact I. Some drink mixes are red II. All beverages are drink mixes. III. All red drink mixes are drinkable

- A. I only
- B. II only
- C. III only**
- D. None of them is a fact

LOGICAL REASONING >> Logical Deduction

Verbal Classification

202. Which one does not belong to others?

- A. Apple
- B. Mango
- C. Cucumber**
- D. Orange

LOGICAL REASONING >> Letter and Symbol Series

Complete the series

203. Complete the series AB, EF, \_\_\_\_\_, MN

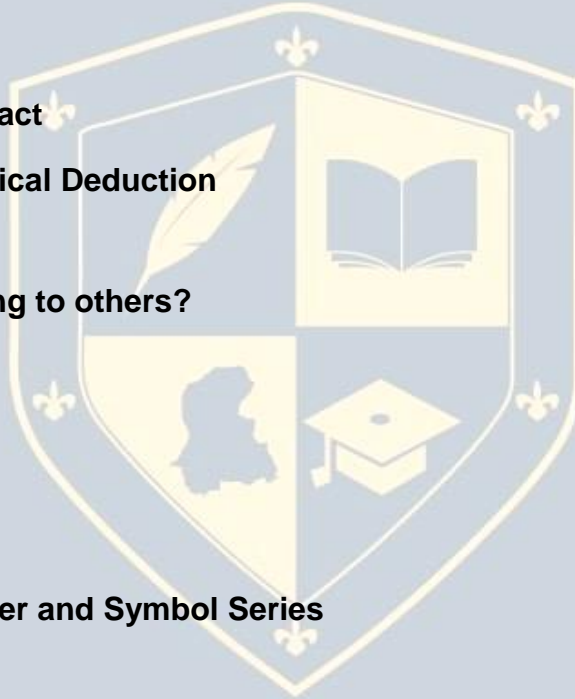
- A. IJ**
- B. RS
- C. WX
- D. MN

LOGICAL REASONING >> Logical Problems

Verbal Classification

204.  $\sqrt{16} + 3\sqrt{8} =$

- A. 2
- B. 4
- C. 6**
- D. Both A and B



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## LOGICAL REASONING >> Critical Reasoning

### Statements and Conclusions

205. Statements Pakistan is a multilingual country. Urdu is the national language of Pakistan.

Conclusions (I) All Pakistanis should learn many languages. (II) To be an Indian one needs to learn Urdu.

- A. Only conclusion (I) follows
- B. Only conclusion (II) follows
- C. Both conclusions follow
- D. Both of them do not follow**

## LOGICAL REASONING >> Cause & Effect

### Dependent Causes/ Independent Causes/

206. I. Punjab Board has announced the results of class 12. II. A candidate committed suicide after checking his results in class 12.

- A. Statement I is the cause and statement II is its effect.
- B. Statement II is the cause and statement I is its effect.**
- C. Both statements I and II are independent causes
- D. Both statements I and II are the effects of independent cause.

## LOGICAL REASONING >> Course of Action

### Statements and Actions

207. Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

- A. both of them follows
- B. None of them follows**
- C. Only I follows
- D. Only II follows

**LOGICAL REASONING >> Logical Problems**

**Making Judgements**

208. Which is the largest ocean in the world?

- A. Atlantic ocean
- B. Pacific ocean**
- C. Arctic ocean
- D. Indian ocean

**LOGICAL REASONING >> Letter and Symbol Series**

Complete the series

209. Complete the series A25, B625, C15625, \_\_\_\_\_?

- A. D390625**
- B. D364748
- C. D390524
- D. D390525

**LOGICAL REASONING >> Critical Reasoning**

Cause and effect

210. Statements The government has decided to roll back the hike in the prices of cooking gas and kerosene. Some ministers had resigned in protest against the hike in prices of cooking gas and other petroleum products.

- A. I is cause and II is effect**
- B. II is cause and I is effect
- C. Both are independent causes
- D. both are effects of independent causes