PHYSICS

1 If during circular motion. tangential velocity of a body becomes double then centripetal force becomes:

A Double

B one half

C **Four Times**

D one fourth

2 Under what condition and object will have zero displacement but non zero distance?

A linear motion

B **circular motion**

C random motion

D Oscillation

3 Which one of the following properties is not exhibited by the longitudinal wave?

A Interference

B Reflection

C Defection

D **Polarization**

4 The speed of sound in the ear is 332 M/s. The speed of sound at 22 *c will be:

A **345.2 M / s**

B 340 M/ s

C 350 M / s

D 330 M / s

5 Astronomers calculate speed of distance stars and galaxies using which of the following phenomena?

A beats

B interference

C superposition principle

D **Doppler Effect**

6 In a ripple tank, 40 ways pass through a certain point in one second. if the wavelength of the wave is 5 cm, then speed of the wave is:

A 0.5 ms-1

B 1 ms-1

C 1.5 ms-1

D **2 ms-1**

7 In which process the entire of heat supplied to the gas is converted to the internal energy of the gas?

A **Isochoric process**

B isobaric process

C isothermal process

D adiabatic process

8 The internal energy of a system during an isothermal process:

A degrees

B increase

C becomes zero

D **remain constant**

9 If the potential at a point which is 1m from a charge is 1 volt, then the

potential at a point which is 2m from the same charge will be:

A 2 v

B 1 v

C **0.5 v**

D 3 v

10 The values of electric intensity will_____ Due to the presence of dielectric medium:

A increase

B increase exponentially

C **decrease**

D remain same

11 The slope of distance _____ time graph will always be:

A negative

B **positive**

C 0

D Maxim

12 At what angle of projection of a projectile the range becomes half of its maximum value?

A **15°**

B 20°

C 30°

D 40°

13 If we drop an object, its initial velocity is zero. how far will it fall in time "t" ?

A $9.8\ t^2$

B $4.9\ t^2$

C **$0.49\ t^2$**

D $98\ t^2$

14 The Newton-second is unit of:

A work

B power

C **impulse**

D momentum

15 1.75 m height weight- lifter rises weights with a mass of 50 kg to a height of 0.5 m above his head. How much work is being done by him? ($g=10ms^{-2}$)

A 2125 J

B 2500 J write Answer is **250** Option is not available

C 100 J

D 50 J

16 What is the speed of 2.0 kg metallic Bob at the mean position of a simple pendulum, when released from its extreme position 0.5 m height? ($g=10ms^{-2}$)

A **$3.16\ ms^{-1}$**

B $10\ ms^{-1}$

C $100\ ms^{-1}$

D 50 ms-1

17 When the speed of your car is halved, by what factor does its kinetic energy decreases?

A 1/2

B **1/4**

C 1/8

D 1/6

18 Which one of the following force is non conservative force?

A **Frictional force**

B Gravitational force

C electric force

D elastic spring force

19 The Earth rotates on its Axis once a day. suppose, by some process the earth contracts so that its radius is only half As large as present, then along the earth will take to complete its rotation?

A 24 hours

B 18 hours

C **6 hours**

D 12 hours

20 1 Radian is equal to:

A 57 1°

B 57 2°

C **57 3°**

D 57 4°

21 In translation from grid station, power losses are minimised by:

A increasing current

B decreasing current

C increasing resistance

D **increasing voltage**

22 The domestic electricity supply has a frequency of:

A 150 Hz

B 100 Hz

C 50 Hz

D **25 Hz**

23 PIV stands for:

A Positive Inverse voltage

B Power integrated voltage

C **Peak inverse voltage**

D Peek integrated voltage

24 In full wave rectification, the diodes are used:

A 1

B **2**

C 3

D 4

25 The wavelength associated with an electron is of the order of:

A Visible light

B **X-rays**

C radio waves

D infrared

26 Which Photon carries the most energy?

A Blue

B **violet**

C red

D green

27 Which one of the following series lies in the ultraviolet region?

A Balmer series

B Pascher series

C **Lyman series**

D Bracket series

28 The main difference between X rays and γ rays is?

A frequency

B wavelength

C energy

D **origin**

29 There are initially 400 atoms in a radioactive sample. what would be the number of atoms after three half-life?

A 400

B 200

C **50**

D 25

30 While using radiation therapy, cancerous thyroid is treated with _____ radioisotope:

A Carbon

B 235-Uranium

C Thorium

D **iodine-131**

31 In capacitors, energy is stored in the form of:

A Gravitation energy

B Kinetic energy

C **Electric intensity**

D Magnetic induction

32 Ohm time's farads is equivalent to:

A **Time**

B Charge

C Distance

D capacitor

33 One-kilowatt hour is commonly termed as one commercial unit of electric energy which is equal to:

A 3.6×10^5 J

B **3.6×10^6 J**

C 3.6×10^4 J

D 3.6×10^3 J

34 When a wire is compressed and its radius become 2R then its resistance will be:

A 16 R

B 4 R

C 1/16 R

D **1/4 R**

35 One of the following is an ohmic device:

A filament bulb

B Semiconductor diode

C transistor

D **copper wire**

36 The change in resistance of metallic conductor at temperature below 0 °C is:

A Non linear

B Curve

C **linear**

D curvilinear

37 When current are flowing through two long Parallel wires Same direction electric field between them:

A strong

B **weak**

C Remains same

D infinite

38 Magnetic flux is maximum when angle between magnetic field and vector area is:

A **0°**

B 90°

C 180°

D 45°

39 Transformer is a device which steps up or Steps down the input:

A Current

B **Voltage**

C energy

D power

CHEMISTRY

40 If a Stationary bar magnet is placed near a coil at rest maximum lines of force pass through the coil ,the Galvanometer shows:

A Maximum current

B minimum current

C **No current**

D intermediate value of current

41 Alkyl halides involving _C_X Bond breakage and_C _NU Bond formation simultaneously would follow the mechanism:

A SN_1

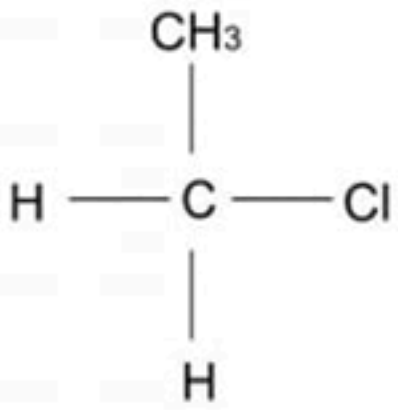
B **SN_2**

C E_1

D E_2

42 Secondary alkyl halide is:

A



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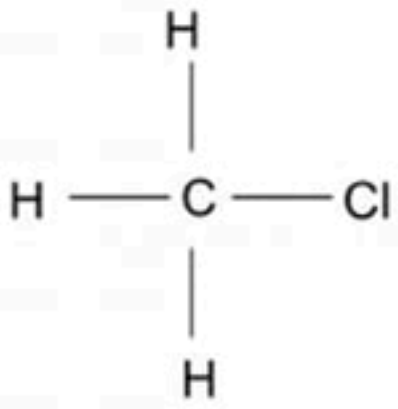

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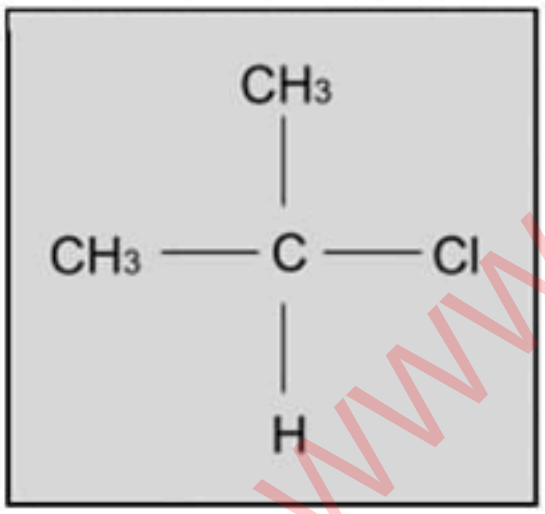


D

CH_3Cl

43 R-X reaction with alcohols forms:

A R-OH

B **ROR**

C R-X-OH

D RH

$C_6H_5O(CH_3)_2$

44 IUPAC name of is:

A 2-methyl-3-hexanone

B **2,6- Dimethyl cyclohexanone**

C 3 methyl cyclohexanone

D 4- methyl-3-hexanone

45 Phenol is known as:

A Carpolic Acid

B Carbonylic Acid

C **Carbolic Acid**

D Carboxylic Acid

46 Phenol is more acidic than alcohols because of the following reason:

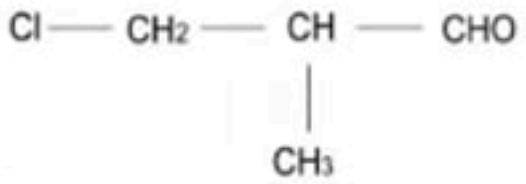
A Delocalisation of negative charge in the OH group

B Delocalisation of positive charge on the carbon atom in ring

C **Delocalisation of negative charge in the ring**

D Delocalization of positive charge in the OH group

47 The common name of following aldehyde



is:

A ⍺---Methyl--Ý--Chloro Propionaldehyde

B β--Chloro--Ý--methyl Propionaldehyde

C **β--Chloro--⍺--methyl Propionaldehyde**

D β--methyl--⍺--chloro Propionaldehyde

48 Which of the following regent is used to separate purify carbonyl and non-carbonyl compounds:

A HCN

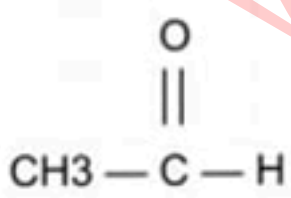
B $BrMgCH_3$

C **$NaHSO_3$**

D H_2O

49 Secondary alcohol is the product of reduction of which carbonyl compound?

A



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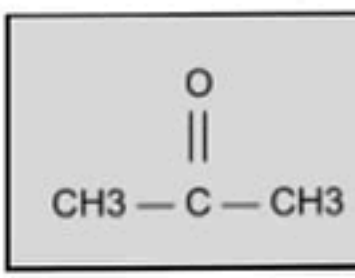

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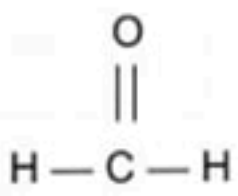

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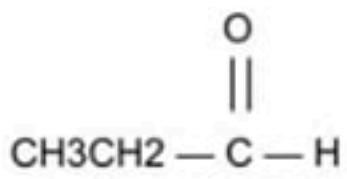


50 Which of the following is the strongest acid?

A Propionic acid

B Fluoroethanoic acid

C **Trichloroethanoic acid**

D Nitro Ethanoic acid

51 Hydrolysis of acyl chloride results in the formation of:

A Acid anhydride

B **Carboxylic acid**

C Amides

D Esters

52 The exact reactivity order for carboxylic acid derivatives is:

A Anhydride > Acyl Chloride > ester

B Ester > Anhydride > Acyl chloride

C Amide > Acyl chloride > ester

D **Acyl Chloride > Anhydride > ester**

53 Based on the physio-chemical properties, proteins may be classified into the following types:

A Simple proteins

B Compound proteins

C Derived proteins

D **All of the above**

54 Based on function, thyroxin can be classified as:

A **Hormonal protein**

B Structural protein

C Transport protein

D Genetic protein

55 L-Asparaginase enzyme has been used for the treatment of:

A Jaundice

B **Blood Cancer**

C Rickets

D Heart disease

56 Potassium, Rubidium, Cesium react with oxygen to form which types of oxides?

A Peroxide

B **Superoxide**

C Suboxide

D Normal Oxide

57 Magnesium reacts with Nitrogen to form:

A Mg_2N_2

B **Mg_3N_2**

C MgN_2

D MgN

58 Densities of alkali metals are low due to:

A Weak intermolecular forces

B **Large atomic volume**

C Smaller size

D ns1 Configuration

59 In 3rd series of transition elements, paramagnetic behaviour is maximum for Mn^{+2} and:

A **Cr^{3+}**

B Ti^{3+}

C V^{3+}

D Zn^{+2}

60 Electronic configuration of chromium (Proton number 24) is:

A $[Ar]3d^4 4S^2$

B $[Ar]3d^5 4s^2$

C **$[Ar]3d^5 4S^1$**

D $[Ar]3d^6 4S^2$

61 The transition element which does not show variable valency os;

A Cu

B Sc

C **Zn**

D Cr

62 Select the organic compound which belongs to Arene family:

A CH2 = CH2

B CH3 — 0— CH3

C CH3 -- NH2

D **C6H6**

63 The type of isomerism existing in a compound of molecular formula C2H60 is:

A **Functional group**

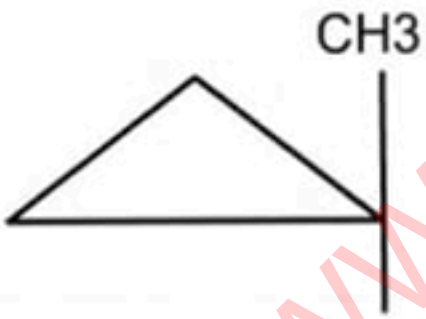
B Position

C Chain

D Metamerism

64 Which of the following compounds show geometric isomerism?

A



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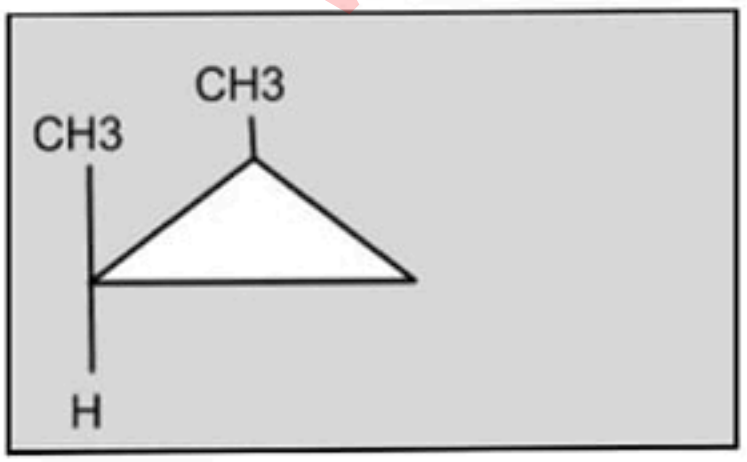

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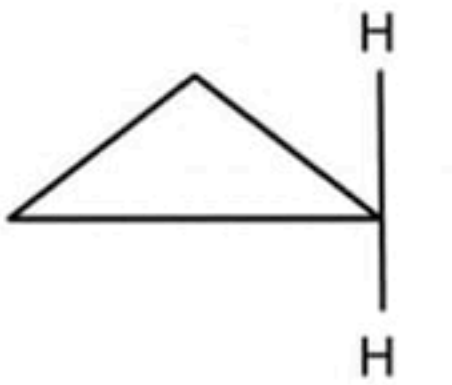


D

65 Generic formula of cycloalkane is?

A CnH2 n+2

B **CnH2n**

C CnH2n+ 1

D CnHzn-2

66 Electrophile in sulphonation of benzene is:

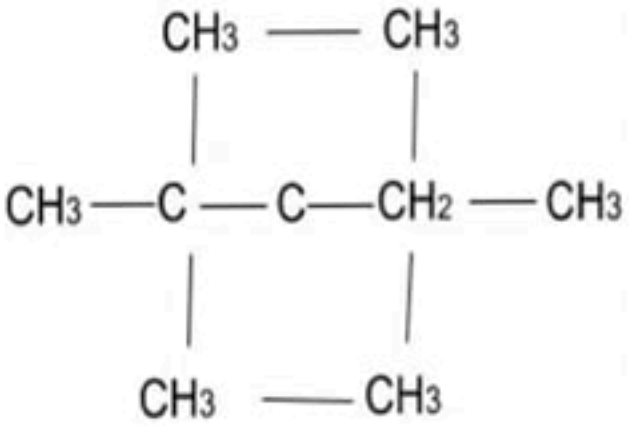
A HSO_4-

B H_2SO_4

C **SO_3**

D HSO_3-

67 The following has IUPAC name of:



A . 2,3 - tetramethyl butane

B **2,2,3,,3-tetramethyl pentane**

C 3,3,4,4 - tetramethyl butane

D 3,4- bis (dimethyl butane).

68 Acetophenone can be formed by which of the following reaction of benzene?

A Alkylation

B **Acylation**

C Halogenation

D Nitration

69 In alkanes, each Carbon has hybridization:

A **sp3**

B Sp

C sp2

D dsp

70 When CH3 is attached with the benzene ring, it makes the ring:

A Good electrophile

B **Good nucleophile**

C Resonance hybrid

D Extraordinary stable

71 Which of the following reaction has greater Kp than Kc (Kp > Kc)?

A $2NO + CL_2 \rightleftharpoons 2NOCL$

B $2SO_2 + O_2 \rightleftharpoons 2SO_3$

C **$2NOCL \rightleftharpoons 2NO + CL_2$**

D $NO_2 + 3H_2 \rightleftharpoons 2NH_3$

72 The equation N2g+ 3H2g = 2NH3, represents:

A Contact process

B **Haber's process**

C Solvay process

D Avogadro's law

73 The unit of the rate constant is the same as that of the rate of reaction in:

A **Zero order reaction**

B First order reaction

C Second order reaction

D Third order reaction

74 The study of rates of chemical reactions and the factors that affect the rates of chemical reactions is known as:

A Thermodynamics

B Stoichiometry

C Electrochemistry

D **Chemical Kinetics**

75 For the reaction A(g) —> products, When the concentration of' A(g) 'doubles, the rate of reaction increases four folds, which means it is:

A Negative order reaction

B First order reaction

C Zero order reaction

D **Second order reaction**

76 For which of the following order of the reaction, rate of reaction in inversely proportional to the concentration reaction?

A 1st order reaction

B 2nd order reaction

C **Negative order of reaction**

D Zero order of reaction

77 The thermal energy at constant pressure is called:

A **Enthalpy**

B Internal energy

C Heat capacity

D Work done

78 Born-Haber cycle is used to determine the lattice energies of:

A Molecular solids

B Metallic solids

C **Ionic solids**

D Covalent solids

79 One calorie is equal to:

A 4.18 KJ

B **4.18**

C 0.418 KJ mol

D 0.418 KJ

80 The oxidation state of 'S' in the $(S_2O_3)^{-2}$ is:

A +4

B +6

C -2

D **+2**

81 The common oxidation number of halogens is:

A **-1**

B +1

C -2

D 0

82 During oxidation process, oxidation number of an element:

A Decreases

B **Increases**

C Remains constant

D Both A&B

83 Which of the following has the height value of electronegativity?

A 1

B Br

C Cl

D **F**

84 Which of the following hybrid orbitals has maximum 'S' –character?>

A Sp3 – hybrid orbital

B Sp2 – hybrid orbital

C **Sp – hybrid orbital**

D Dsp2 – hybrid orbital

85 The first ionization energy is maximum for:

A Na

B **Mg**

C Al

D K

86 The efficiency of chemical reaction cay be expressed as:

A Theoretical yield

B Actual yield

C **%yield**

D Maximum yield

87 In a vessel, 10g N2, 10g H and 10g O2 are present. Which one will have least number of atoms?

A H2

B N2

C **O2**

D Both H2 & N2

88 The empirical formula of Glucose C6H12O6 is:

A C6H12O16

B CHO

C **CH2O**

D CH2O2

89 The relationship between quantum number n and l is:

A N = 1-1

B l = n-2

C **l = n-1**

D N = 1-2

90 Quantum number values for '2p' orbitals are:

A **N=2, l=1**

B N=1, l=2

C N=1, l=0

D N=2, l=0

91 Which pair has 1 electron in it's 's' orbital?

A Li, Fe

B **Na & Cr**

C K & Mn

D H & He

92 Which of the following has the lowest e/m ratio?

A Li+2

B H+1

C He

D **Be**

93 According to the general gas equation density of an ideal gas depends upon:

A Pressure

B Temperature

C Molar mass of the gas

D **All of the above**

94 The actual volume of gas molecules is considered negligible at following pressures:

A **2 atm**

B 4 atm

C 6 atm

D 8 atm

95 CO_2 and SO_2 both are triatomic molecules but heat of vaporization of SO_2 is greater than that of CO_2 due to:

A High electronegativity of S

B Greater size of SO_2

C **SO_2 is polar and CO_2 is non-polar**

D SO_2 is more acidic than CO_2

96 Which of the following has the lowest vapour pressure at 20 oC?

A Diethyl ether

B Chloroform

C Carbon tetrachloride

D **Water**

97 Which of the following is not a molecular solid?

A **Bromine**

B Sulphur

C Phosphorus

D Carbon dioxide

98 The lattice energy is also called as:

A Energy of affinity

B **Bond energy**

C Crystal energy

D Potential energy

99 For a gaseous phase reaction, when number of moles of reactants and products are equal:

A The values of Kp and Kc are different

B The values of Kp is greater than Kc

C The values of Kc is greater than Kp

D **The values of Kp and KC are the same**

100 Purification of table salt (NaCl) by passing HCl gas through its saturated aqueous solution is an example of:

A Law of mass action

B Hess's law

C **Common ion effect**

D Henry's law

ENGLISH

101 We prefer fruits_____ sweets

A **To**

B On

C Over

D From

102 Choose the correct spelling

A Exantuated

B Axantuated

C Accenchuated

D **Accentuated**

103 Choose the correct spelling

A Cotioned

B **Cautioned**

C Causchuned

D Coschuned

104 Choose the correct spelling

A **Eccentric**

B Eccentrac

C Akcantric

D Accentric

105 Choose the correct spelling

A Dafinite

B Defanite

C Dafanite

D **Definite**

106 The Headmaster____ to speed to you

A **Wants**

B Is wanting

C Was wanting

D Want

107 Choose the correct option: Knowledge and wisdom____ no time for connection

A Has

B **Have**

C Had

D Are

108 Identify the errors and choose the correct option:

I hope this letters finds in the best of your spirits

A **I hope this letter will find you in good of high spirits**

B I hope this letter finds you in best of your spirit

C I hope letter finds you in the best of spirits

D I hope the letter found you in greatest of spirite

109 Identify the errors and choose the correct option:

A Gulliver travel was written by swift

B Gulliver travels was written to swift

C **Gulliver's travels was written by swift**

D Gulliver's travel was written by swift

110 Fill in the blank with the appropriate article as required. Umbrella is of no avail against a thunderstorm

A The

B A

C **An**

D No article required

111 Choose the correct sentence

A I wish I have been a millionaire

B I wish I am being a millionaire

C **I wish I were a millionaire**

D I wish I was millionaire

112 Pick the correct option

_____

A **No start is brighter than the moon**

B No star is more bright than the moon

C No star is brighter then the moon

D No star is brighter than moon

113 Choose the correctly structured sentence.

A Had he lived in England he would miss his family

B **Had he lived in England, he would have missed his family**

C Had he lives in England he had missed his family

D Had he live in England he will missed his family

114 She always carried an umbrella. The sentence indicates___tense.

A Present tense

B **Past simple**

C Past perfect

D Present perfect

115 Ahmed____ me for a long time

A Know

B Have known

C Knows

D **Knew**

116 Pick the correct option: his first inning consists of four 6s and three 4s

A His first inning's consists of four 6 and three 4

B His first innings consist of four 6's and three 4's

C **His first innings consist of four 6's and three 4's**

D His first inning's consist of four 6's and three 4's

117 Choose the correctly punctuated sentence:

A **What a fall was there, my countrymen! Long live the king!**

B What a fall was there! My countrymen. Long live the King!

C What a fall was there, my countrymen, Long live the king.

D What a fall was there, my countrymen, Long live the king

118 Choose the correct option:

A He and I was playing

B **He and I were playing**

C He and I were being playing

D He and I was being playing

119 Choose the correct option:

A Every one of the prisons are full

B Every one of the prisons had full

C Every one of the prisons have full

D **Every one of the prisons is full**

120 Not only the parents but also their son ___ for interview

A Has called

B Have called

C Have been called

D **Has been called**

BIOLOGY

121 When the temperature of the body surrounding rises, baby responds by

A Vasoconstriction

B **Vasodilation**

C Shivering

D Raising body hairs

122 The excretion of hypertonic urine in humans is associated best with the

A Glomerular capsule

B Proximal convoluted tubule

C **Loop of henle**

D Distal convoluted tubule

123 In humans, the temperature regulation control conter is located in

A Kidneys

B **Brain**

C Lungs

D Liver

124 As an excretory organ, liver

A Detoxifies many chemical poisons

B Produces ammonia for excretion by the kidneys

C Produces urine and uric nitrogen of amino acids

D **All of the above**

125 The active uptake of sodium in the ascending limb or thick loop of henle is promoted by the action of

A **Aldosterone**

B Thyroxine

C ADH

D Cortisone

126 Which of the following muscles are considered as 'Voluntary Muscles'?

A Smooth muscles

B Cardiac muscles

C **Skeletal muscles**

D Glandular muscles

127 Which one of the following 'myoenic' types of muscle?

A Glandular muscles

B **Cardiac muscles**

C Skeletal muscles

D Smooth muscles

128 What do we call the cell surface membrane of a muscle fiber?

A Sarcolemma

B Plasma membrane

C **Sarcoplasm**

D Myofibrils

129 Which of the following neurotransmitters function, both as neurotransmitter and hormones, decreasing our perception of pain?

A Epinephrine

B Serotonin

C Dopamine

D **Endorphins**

130 Which body function is controlled through a positive feedback mechanism?

A **Labor contractions**

B Body temperature

C insulin production

D Thyroxine release

131 Which of the following is common to all neurons?

A **A cell which contains a nucleus**

B A thick myelin sheath

C Presence of node of Ranvier

D Presence of Schwann cells

132 Neurons are cells adopted for the rapid transmission of electrical

impulses. To do this, they have long thin process called:

A **Axons**

B Dendrites

C Myelin sheath

D Schwann cells

133 ___ is a junction between two neurons or between a motor neuron and a muscle cell

A Impulse

B **Synapse**

C Axon

D Cleft

134 Which of the following represents the changes that occur in the ovary and the uterus approximately every 28 days involving evolution with the breakdown and loss of the lining of the uterus

A Ovulation

B **Menstrual cycle**

C Uterine cycle

D Embryo formation

135 Which of the following diseases is sexually transmitted?

A Tuberculosis

B **AIDs**

C Dengue fever

D Cholera

136 Which of the following hormones of the pituitary gland regulate the menstrual cycle?

A Follicle stimulating hormone and estrogen

B Luteinizing hormone and estrogen

C **Follicle stimulating hormone and luteinizing hormone**

D Estrogen and progesterone

137 Haemophilia A and B, color blindness and testicular feminization are example of

A X-linked dominant trait

B Y-linked recessive trait

C Y-linked inheritance

D Pseudosutosomal trait

NOTE: None of these is correct.

138 Which traits ar most likely to affect men than women?

A The form of appearance of a trait

B X linked dominant

C Autosomal dominant

D Autosomal recessive

139 Alleles both have an effect on the phenotype heterozygotic organism

A Dominant

B Recessive

C Multiple

D **Co-dominant**

140 When both the allele of a genes are same, the organism is said to be:

A Heterozygous

B Genotype

C **Homozygous**

D Phenotype

141 In which type of cell. Cell wall is not present?

A Plant cells

B Fungal cells

C Bacterial cells

D **Liver cells**

142 70S size ribosomes are found in the cells of

A Algae

B Protozoans

C Fungi

D **Bacteria**

143 According to the fluid mosaic model of cell membrane, which zone is embedded inside?

A **Hydrophobic**

B Globular

C Hydrophilic

D Filamentous

144 The membrane separating the vacuole from cytoplasm is called

A Cristae

B Cisternae

C **Tonoplast**

D Vacuolar membrane

145 Select the one which is not a function of smooth endoplasmic reticulum (SER)?

A Metabolism of lipids

B Transmission of impulses

C Transport of materials

D **Processing of glycoproteins**

146 Which of the following organelles are involved in the synthesis of plant cell wall?

A Endoplasmic reticulum

B **Golgi complex**

C Lysosomes

D Peroxisomes

147 Which property of water helps to maintain the integrity of cell membranes?

A Specific heat capacity

B Hydrogen bonding

C Cohesion and adhesion

D **Hydrophobic exclusion**

148 Water act as universal solvent because of

A Heat of vaporization

B Hydrogen bonding

C **High polarity**

D Cohesion and adhesion

149 Lipids store double amount of energy as compared to carbohydrates because of

A High proportion of oxygen

B High C-O ratio

C Low proportion of carbon

D **High proportion of C-H**

150 Which of the following is an unsaturated fatty acid?

A **Oleic acid**

B Palmitic acid

C Butyric acid

D Acetic acid

151 Monosaccharides have a general formula represented by

A **$Cn(H_2O)n$**

B $C(H_2O)n$

C $C_2(H_2O)n$

D $C_2(H_2O)n$

152 NAD is an example of

A Mononucleotide

B **Dinucleotide**

C Tri nucleotide

D Tetra nucleotide

153 Lock and key model of enzyme action proposed by Emil Fischer suggested that

A Enzymes are unbiased for the substrate

B Enzymes are restricted to one reaction type

C **Enzymes are restricted to one reaction type**

D An enzyme can catalyze variety of reactions

154 Most enzymes have and optimum temperature of around

A 30oC

B **40oC (close to exact range i.e 36.1 to 37.8)**

C 50oC

D 20oC

155 Enzymes work by lowering the ___ of the reactions that catalyze

A Kinetic energy

B **Activation energy**

C Heat energy

D Potential energy

156 First stable compound during calvin cycle is

A **3-phosphoglycerate**

B Glyceraldehyde 3-phosphatse

C 1,3 bisphosphoglyceratae

D Ribulose biphosphate

157 What is the function of ribulose?

A **Intermediate in photosynthesis**

B Respirator fuel

C Intermediate in cellular respiration

D Component of DNA and RNA

158 Which of the following processes does not need pyruvic acid as a substrate?

A Alcohol fermentation

B **Calvin cycle**

C Aerobic respiration

D Lactic acid fermentation

159 Which of the following is a copper containing protein in electron transport chain?

A Plastoquinone

B Cytochrome-C

C **Plastocyanin**

D Ferredoxin

160 In electron transport chain, ATP synthesis takes place when electron moves from

A Primary electron acceptor (PEA) to plastoquinone

B **Plastoquinone (Pq) to cytochromes**

C Cytochromes to plastocyanin

D Plastocyanin (Pc) to photosystem 1 (PS-I)

161 "law of independent assortment" states

A **The each pair of alleles assort independent of other pairs of alleles during gamete formation**

B That allele for each pair of contrasting trait have unequal probability to assort with the alleles of other pairs

C That that coexisting alleles for each trait segregate (separate) from each other at meiosis so that each gamete receives only one of the two alleles

D That pertain to inheritance of single trait (monohybrid cross)

162 Phenotype is

A The genetic complement ie the genes in an individual for a particular trait

B Partner of gene pair

C **The form of appearance of a trait**

D The position of a gene on the chromosome

163 In complete dominance

A Different alleles of a gene are both expressed in heterozygous condition

B **One alleles (R) is completely dominant over the other (r) and the presence of recessive allele is functionally hidden the heterozygote (Rr) has the same sound phenotype (RR) heterozygote**

C The phenotype of the heterozygote is intermediate between phenotypes of the homozygotes

D Gene mutation may produce many different alleles of a gene

164 Which one of the following is found in both messenger RNA and DNA of a mammalian cell?

A Double helical structure

B Ribose sugar

C Thymine

D **Sugar- phosphate backbone**

165 The cells in our body are all genetically identical apart from the:

A Somatic cells

B **Reproductive cells**

C Muscle fibers

D White blood cells

166 Transcription is the process in which an RNA copy of the DNA sequence and coding the gene is produced with help of an enzyme called

A DNA polymerases

B **RNA polymerase**

C DNA transcriptase

D RNA transcriptase

167 The particular array of chromosomes that an individual process is called its

A Genotype

B **Phenotype**

C Karyotype

D Allele

168 During meiosis, the homologous chromosomes comes together and form pairs this process is called

A Linkage

B **Synapsis**

C Pairing

D Crossing over

169 At what phase the DNA content of a cell is doubled?

A Prophase

B **Interphase**

C Anaphase

D Telophase

170 Which statement correctly describes transcription of DNA?

A It produces aminon acids

B **It produces messenger RNA**

C It results in increased DNA synthesis

D It is a semi conservative process

171 This theory says that "mitochondria and chloroplast area in effect ancient bacteria which now live inside the large cells"

A Darwin's theory of evolution

B Lamarckism

C Neo-darwinism

D **Endosymbiont theory**

172 The organs which are similar but differ in structure are called

A **Analogous organs**

B Homologous organs

C Convergent evolution

D Divergent evolution

173 ____ occurs because natural selection gives some alleles a batter chance of survival than others

A Fitness

B **Evolution**

C Crossing over

D Artificial selection

174 The DNA that has been altered and which now contains length of nucleotides from two different organisms is called a

A Plasmid

B Combined DNA

C Vector

D **Recombinant DNA**

175 It is a method for rapid production of a very large number of copies of a particular fragment of DNA

A Gel electrophoresis

B **Polymerase chain reaction**

C DNA extraction

D Recombination

176 What is the effect of DNA ligase?

A DNA is broken up at specific sites

B **DNA fragments are joined together**

C DNA replication occurs

D DNA transcription occurs

177 Which of the following is the components/ tools of recombinant DNA technology?

A Gene of interest

B Molecular scissors

C Molecular glue and expression system

D **All of the above**

178 Gel electrophoresis is a technique

A **Employed by forensic scientists to assist in the identification of the individuals by their respective type of DNA**

B Collect all the genes found in one complete set of chromosomes

C Is a technique to separate different size fragment of charge bearing polymers (proteins, RNA or DNA)

D Grows single cells of a group of cells in a glass ware on artificial medium under aseptic conditions

179 Transgenic organisms

A Have a foreigh gene inserted into them

B Have an important role in the large scale production of medicinal products

C Are considered beneficial to humans

D **All of the above**

180 Which of the following is not necessary for PCR to occur?

A dATP

B primers

C DNA fragments

D **Ribonucleotides**

181 The end product of glycolysis in acrobic respiration is

A Ethanol and carbon dioxide

B Lactate

C **Pyruvate**

D Acetyl CoA

182 Which of the following is not related enveloped virus?

A **They survive for a short time**

B Their envelop is sensitive to sunlight

C They are tolerant to antidotes

D Envelop is derived from host

183 Numerous opportunistic diseases might attack a person suffering from which of the following diseases?

A Measles

B Influenza

C Hepatitis A

D **AIDS**

184 The complete, mature and infection virus particle is known as

A Venome

B Genome

C **Virion**

D Capsid

185 Which of the following is not TRUE about Human Immunodeficiency virus (HIV)?

A It is retrovirus

B It is surrounded by an envelop

C **It does not cause AIDS**

D It causes the deficiency of the human immune system

186 Select a method which cause the oxidation of constituent of a bacterial cell

A Steam

B Filtration

C **Dry heat**

D Radiation

187 Which of the following is TRUE about the structure of a typical bacterium?

A It has a cell wall

B It has cytoplasm

C It has genetic material

D **All of the above**

188 Red algae do not contribute towards

A Making coral reefs

B Forming limestone deposits

C **Making fertilizers**

D Forming chalk deposits

189 Which of the following is true about amoeba?

A They havae flagella

B They are multicellular

C They do not cause any disease in humans

D **They move by forming specialized cytoplasmic projections called pseudopodia**

190 The directional movement toward or away from the stimulus is called

A **Tropism**

B Orientation

C Taxis

D Non orientation

191 Photophosphorylation takes place in the _____ of the chloroplasts

A Stroma

B **Granum**

C Inner membrane

D Outer membrane

192 Select an amniote from the following

A Snake

B **Frog**

C Parrot

D Crocodile

193 In roots the apoplast pathway of water is disrupted when water reaches

A Plasmodesmata

B Cortex

C **Endodermis**

D Pith

194 Regarding structure of human heart chordae tendinea are present in

A Atria

B Pulmonary valve

C **Ventricles**

D Aortic valve

195 The only vein in human body carrying oxygenated blood is

A Femoral

B **Pulmonary**

C Renal

D Iliac

196 The cells which play very important in developing immunity are

A Monocytes

B Neutrophils

C **Lymphocytes**

D Thrombocytes

197 Which of the following blood vessels have the highest pressure of blood?

A **Aorta**

B Pulmonary arteries

C Pulmonary veins

D Vena cava

198 Autoimmune disease act at the principle of

A Self against antigens

B Antigens against self

C **Self against self**

D Antigens self-destroyed

199 In human heart, the left atrium receives

A The superior Vena Cava

B The inferior Vena Cava

C The coronary sinus

D **The four pulmonary veins**

200 Antibodies are manufactured in

A T lymphocytes

B Red blood cells

C Platelets

D **B Lymphocytes**