

- 1) The sum of mole fractions of solute and solvent is always equal to:
 - A) 0.1
 - B) 10.0
 - C) 1.0
 - D) Zero
- 2) Two forces of magnitude 20 N and 10 N act at a point then which one of the following cannot be their possible sum?
 - A) 30 N
 - B) 10 N
 - C) 35 N
 - D) 15 N
- 3) Glycolysis completes with the net gain of:
 - A) 2 ATP
 - B) 3 ATP
 - C) 4 ATP
 - D) 32 ATP
- 4) An Azeotropic mixture of two miscible liquids boils at lower temperature than its components when:
 - A) The system shows negative deviation from Raoult's law.
 - B) The system shows positive deviation from Raoult's law
 - C) The system perfectly obeys Raoult's law
 - D) Both A) and B)
- 5) When a force is applied to a body, several effects are possible. Which one of the following effects could not occur?
 - A) The body speeds up
 - B) The body rotates
 - C) The body changes direction
 - D) Mass of body decreases
- 6) When you go to Karachi, please
 - A) Collect a good watch for me.
 - B) Acquire a good watch for me.
 - C) Bring a good watch for me.
 - D) Arrange a good watch for me.
- 7) Restriction enzymes are of great use in genetic engineering because:
 - A) They cut DNA at a specific base level
 - B) They cut D.N.A at several specific levels
 - C) They help in binding the pieces of D.N.A
 - D) They are nuclease
- 8) Optical fibers guides:
 - A) Current
 - B) Light
 - C) Sound
 - D) Voltage
- 9) Methanoic acid HCOOH has one carbon-oxygen bond of length 123 PM and another of 136 PM. The $\text{C}=\text{O}$ and $\text{C}-\text{O}$ bond lengths respectively would be:
 - A) 136 PM, 123 PM
 - B) 123 PM and 136 PM
 - C) 136 PM, 136 PM
 - D) 123 PM and 123PM
- 10) Abscissic acid (ABA) promotes:
 - A) Triple response
 - B) Sex expression
 - C) Flower initiation
 - D) Leaf, flower and fruit fall
- 11) Choose the compound in which hydrogen bonding is not possible?
 - A) CH_3OCH_3
 - B) H_2O
 - C) $\text{CH}_3\text{CH}_2\text{OH}$
 - D) CH_3COOH
- 12) The ratio of output voltage V_0 to the voltage difference V_{in} between the positive (+) input and negative (-) input of opamp is (where $V_{in}=V_+-V_-$):
 - A) Current gain
 - B) Voltage gain
 - C) Open-loop gain
 - D) Close-4oop gain
- 13) Why have you broken this jug?
Passive form of the sentence is:
 - A) Why has this jug been broken by you?
 - B) Why have this jug been broken by you?
 - C) Why this jug has been broken by you?
 - D) Why had that jug been broken by you?
- 14) Surplus amino acid in the body are broken down to form urea in:
 - A) Spleen
 - B) Kidneys
 - C) Liver
 - D) Pancreas
- 15) Lipids are chemically:
 - A) Acids
 - B) Alcohols
 - C) Ethers
 - D) Esters
- 16) The resistance of light dependant resistance LDR:
 - A) Increases with light
 - B) Decreases with light
 - C) Decreases with darkness
 - D) None of the above
- 17) "Remember to brush your teeth after dinner," she said.
Indirect form of the sentence is.
 - A) She told him to remember to brush his teeth after dinner.
 - B) She reminded him to brush his teeth after dinner.
 - C) She advised him to remember to brush his teeth after dinner.
 - D) She said to him to remember to brush his teeth after dinner.
- 18) Which of the following represent the bile salts?
 - A) Bilirubin
 - B) Biliverdin
 - C) Haemoglobin
 - D) Both A) and B)
- 19) Benzene undergoes substitution reactions more easily than addition reactions because:
 - A) of its cyclic nature
 - B) of having three double bonds
 - C) of aromatic character
 - D) of delocalization of electrons
- 20) The maximum kinetic energy of an electron ejected from a metal by photon depends on:
 - A) The photon's frequency only
 - B) The metal work function
 - C) The intensity of incident light
 - D) None of the above

- 21) A spring system executes simple harmonic motion. If a load is added to it then the time period of spring-mass system will be:
 A) increased B) decreased
 C) the same D) halved
- 22) Conversion of excess glucose into fat is known as:
 A) Glycolysis B) Lipogenesis
 C) Ketogenesis D) Glycogenesis
- 23) Ring test is shown by compounds having:
 A) Sulphate radical B) Chloride radical
 C) Nitrate radical D) None of the above
- 24) The diode that converts electrical energy into light energy is called:
 A) Solar cell B) Photodiode
 C) Vacuum diode D) Light emitting diode
- 25) Choose the correct sentence out of the following:-
 A) The country was hard hit by the war.
 B) The country was hardly hit by the war.
 C) The country was severely hit by the war.
 D) The country was more hardly hit by the war.
- 26) Fatigue free muscles are:
 A) Striped B) Unstriped
 C) Cardiac D) Triceps
- 27) Excretion of bile pigments in blood indicates:
 A) Anaemia B) Diabetes
 C) Rickets D) Jaundice
- 28) Which arrangement of the Photon is in their decreasing energy?
 A) $x \text{ rays} > i.r. > u.v. > \text{visible}$
 B) $x \text{ rays} > u.v. > \text{visible} > i.r.$
 C) $u.v. > x \text{ rays} > \text{visible} > i.r.$
 D) $i.r. > \text{visible} > x \text{ rays} > u.v.$
- 29) The colours in the soap bubble are due to:
 A) Interference B) Dispersion of light
 C) Scattering of light D) Refraction of light
- 30) You did not kill a lion in the forest.
Passive form of the sentence as:
 A) A lion is not killed by you In the forest
 B) A lion was not killed by you in the forest.
 C) A lion is killed not by you in the forest.
 D) A lion has not killed by you in the forest.
- 31) An individual with contrasting alleles is called:
 A) Homozygous B) Monoecious
 C) Heterozygous D) Dioecious
- 32) Which is the strongest acid?
 A) CH_3COOH B) Cl_2CHCOOH
 C) ClCH_2COOH D) Cl_3CCOOH
- 33) An object in a satellite orbiting around the earth is weightless because:
 A) $g = 0$ B) No force acts on it
 C) Its motion is free fall D) It is far away from earth
- 34) The expression for binding energy is:
 A) $E_B = fh$
 B) $E_B = [(ZM_p + N M_n) - ZM^A]C^2$
 C) $E_B = ZM_p C^2 + N M_n ZM^A C^2$
 D) $E_B = ZM_p + N M_n - M C^2$
- 35) Mathematics difficult but is fascinating.
 A) seems B) is seeming
 C) seemed D) seem
- 36) The colour of bone marrow is:
 A) Red B) Yellow
 C) Orange D) Both A) and B)
- 37) Enzymes are basically:
 A) Proteins B) Carbohydrates
 C) Hydrocarbons D) None of the above
- 38) Half life of given sample is 44 years. The sample will reduce to 50% of the original value after:
 A) 22 years B) 88 years
 C) 11 years D) None of the above
- 39) Please come to the point; don't beat ___ the bush.
 A) across B) about
 C) along D) around
- 40) Ozone is:
 A) Greenish, tasteless, light gas
 B) Blue green, and bitter in taste
 C) Blue, poisonous and explosive gas
 D) Purple yellow, poisonous and non explosive gas
- 41) Rectified spirit is:
 A) 100% ethanol B) 95% ethanol
 C) 90 % ethanol D) 35% ethanol
- 42) The time rate of change of magnetic flux has the same dimensions as that of:
 A) Current B) Resistance
 C) Magnetic induction D) Potential difference
- 43) A non-connective tissue is:
 A) Areolar tissue B) Tendon
 C) Neuron D) Ligament
- 44) Lucas Test is used to detect the presence of:
 A) Alcohols B) Phenols
 C) Amino acids D) Carboxylic acids
- 45) The transverse nature of light is verified with the phenomenon of:
 A) Interference B) Polarization
 C) Diffraction D) Dispersion

- 46) She has complained _____ me to the Principal.
A) about B) from
C) against D) over
- 47) Speech and language area are located in:
A) Thalamus B) Medulla oblongata
C) Right cerebral hemisphere D) Left cerebral hemisphere
- 48) Choose the correct statement:
A) The aliphatic polyamides are generally known as Nylons
B) The aliphatic polyamides are generally known as Polyester
C) The aliphatic polyamides are generally known as Epoxy Resins
D) None of the above
- 49) $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10 \text{H}_2\text{O}$ is the formula of:
A) Bauxite B) Borax
C) Carborundum D) Colemanite
- 50) I said to him, 'Can you read this letter?'
Indirect form of the sentence is:
A) I said to him whether he read that letter.
B) I asked him if could he read this letter.
C) I told him that he could read that letter.
D) I asked him if he could read that letter.
- 51) Phytochromes are involved in:
A) Photorespiration B) Photophosphorylation
C) Photoperiodism D) Phototropism
- 52) 1 amu is equal to 1.661×10^{-24} g, then 1.0 g will be equal to:
A) 6.022×10^{23} amu B) 6.022×10^{23} amu
C) 6.022×10^{24} amu D) 6.022×10^{24} amu
- 53) If a soap bubble is charged:
A) Its size decreases B) Its size increases
C) No change D) None of them
- 54) How many genotype will be produced by crossing of two alleles "A" and "a"?
A) One B) Two C) Three D) Four
- 55) An electric current of 1 A is passing through a cross section of the coil in 1 second. How many electrons are involved in providing a current of 1A? The charge on 1 electron is 1.602×10^{-19} C.
A) 3.21×10^{18} B) 2.2×10^{16}
C) 1.602×10^{19} D) 6.42×10^{18}
- 56) A botanist who proposed the cell-theory was:
A) Schleiden B) Schwann
C) Robert Hook D) Robert Brown
- 57) For a certain chemical reaction the slope of the plot was determined and plotted against the concentration (a — x)2 and a straight line was obtained. It indicates that the reaction is of:
A) First order B) Second order
C) Third order D) Zero order
- 58) One mole is the amount of substance which contains as many elementary entities as contained in:
A) 0.12 kg of $^{12}_6\text{C}$ B) 1.2 kg of $^{12}_6\text{C}$ atom
C) 0.012 kg of $^{12}_6\text{C}$ atom D) 0.12 kg of $^{16}_8\text{O}$
- 59) Smooth endoplasmic reticulum makes:
A) Enzymes B) Protein
C) Sugar D) Lipids
- 60) Select the chemical method used for the determination of reaction rate:
A) Conductometry B) Polarimetry
C) pH metry D) Volumetric analysis
- 61) The uncertainty recorded in the radius of a sphere is 1.6%. The uncertainty in the area of that sphere is:
A) 4.8% B) 3.2%
C) 1.6% D) 0.8%
- 62) How many atoms of oxygen in R.N.A are greater than D.N.A?
A) One B) Two
C) Three D) Four
- 63) Bakelite is obtained from:
A) Adipic acid and hexamethylenediamine
B) Dimethyl terephthalate and ethyl glycol
C) Neoprene
D) Phenol and formaldehyde
- 64) Consider the following endothermic reaction: $\text{N}_{2(g)} + \text{O}_{2(g)} \rightleftharpoons 2\text{NO}_{(g)}$. What will happen to the equilibrium if the temperature of the system is raised?
A) The equilibrium will shift in the backward
B) The equilibrium position will suffer no change
C) The equilibrium will shift in the forward direction
D) All of the above
- 65) A hunter aiming a bird in a tree should aim:
A) A little above the bird B) A little below the bird
C) Exactly at the bird D) Very high
- 66) A bacterium that converts NO_2 to NO_3 is:
A) Rhizobium B) Bacillus
C) Nitrosomonas D) Nitrobacter
- 67) Why it is so that if aromatic compounds, burned in air, produce a very smoky flame?
A) Aromatic compound cannot be completely converted into CO_2 and other products during burning
B) The available amount of oxygen present in air is not sufficient to completely burn available compound
C) Aromatic compound produces compounds on burning that are of black colour
D) None of the above
- 68) Acetic acid reacts with methanol in the presence of an acid catalyst to give:
A) Methyl formate B) Ethyl formate
C) Methyl acetate D) Ethyl acetate
- 69) An ideal transformer steps up or steps down:
A) Energy B) AC voltage
C) DC voltage D) Power

- 70) Growth promoting substance in plant is:
 A) F.A.D B) Chlorophyll a
 C) I.A.A D) ABA
- 71) Select the strongest reducing agent:
 A) Cl^{-1} B) Ne
 C) Na^{+} D) Ca^{+2}
- 72) Three equal resistors connected in parallel have equivalent resistance $R/3$. When they are connected in series then the equivalent resistance is:
 A) $R/3$ B) R
 C) $2R$ D) $3R$
- 73) Choose the correct sentence out of the following:
 A) The sun has been shining since two hours.
 B) The sun has been shining for about two hours.
 C) The sun has been shining from two hours.
 D) The sun has been shining by two hours.
- 74) Steroid hormones are produced by:
 A) Testes and ovaries B) Adrenal glands and gonads
 C) Adrenal cortex and gonads D) Gonads and thyroids
- 75) Which one of the following is not a vector quantity?
 A) Electric field intensity
 B) Gravitational field intensity
 C) Magnetic induction
 D) Electromotive force
- 76) B.C.G vaccines are usually given to:
 A) Children B) Adults
 C) Special persons D) All of the above
- 77) Proteins, carbohydrates and fats form three great classes of foodstuffs commonly called:
 A) Trivirates B) Triumvirates
 C) Trisvirates D) All of the above
- 78) The velocity of projectile at its maximum height is:
 A) Zero B) Minimum
 C) Maximum D) In between maximum and minimum
- 79) If you want to play cricket,.....
 A) you ought to join our club.
 B) you ought to join with our club.
 C) you ought joined our club.
 D) you ought to join in our club.
- 80) Replication of D.N.A occurs in:
 A) Inter phase B) Prophase
 C) Metaphase D) Anaphase
- 81) Allah, the Almighty, has blessed him ___ a son.
 A) by B) along
 C) from D) with
- 82) Regeneration of cartilage is carried on by:
 A) Collagenous fibers B) Blood vessels
 C) Perichondrium D) Matrix
- 83) CH_4 on complete oxidation in the presence of Cu as catalyst under 200 atm yield:
 A) Methanol B) Formaldehyde
 C) Formic acid D) Carbon dioxide gas
- 84) The solids in which the molecules or ions are arranged in a regular repetitive manner are called:
 A) Amorphous solids B) Glassy solids
 C) Polymers D) Crystals
- 85) Nuclear mitosis occurs in the kingdom of:
 A) Monera B) Protista
 C) Plantae D) Fungi
- 86) Compared to benzene, nitration of toluene takes place at:
 A) slower rate B) faster rate
 C) same rate D) depends on the conditions
- 87) Lenz's law is a particular form of law of conservation of:
 A) Charge B) Current
 C) Energy D) Magnetic field
- 88) The sense of hearing is concerned with:
 A) Cerebrum B) Cerebellum
 C) Medulla D) Hypothalamus
- 89) Sodium hydroxide acts on Aluminum oxide to form:
 A) NaAlO_3 B) $\text{Na}_3\text{Al}_2\text{O}_6$
 C) NaAlO_2 D) NaAl_2O_3
- 90) The number of significant figures in the measurement $x = 10.00300$ are:
 A) 7 B) 8
 C) 5 D) 3
- 91) You need to go to the hospital _____ possible. An erratic heart-beat can be very dangerous.
 A) as good as B) as long as
 C) as much as D) as soon as
- 92) Largest lymphatic duct is the:
 A) Abdominal duct B) Thoracic duct
 C) Femoral duct D) Subclavian duct
- 93) The σ bond formed between carbon and oxygen atoms in aldehyde and ketone is due to the overlap of:
 A) sp^2-sp B) sp^2-sp^2
 C) sp^3-sp^2 D) $\text{sp}-\text{sp}$
- 94) Two equal, anti parallel and non concurrent forces that produce only angular acceleration are:
 A) Couple B) Couple arm
 C) Collinear forces D) Torque
- 95) Redox action takes place during the process of:
 A) Respiration B) Photosynthesis
 C) Growth D) Both A and B

- 96) Paper is biodegradable material. It produces gas whose emission is environmentally objectionable. Which is that gas?
A) CO_2 B) SO_2
C) CH_4 D) NO_2
- 97) The minimum number of forces that keep the body in equilibrium are:
A) Two B) Three
C) Four D) Five
- 98) A ball of mass 5 kg is dropped from a height of 78.4 m. The time taken by the ball to hit the ground is:
A) 2s B) 4s
C) 8s D) 16s
- 99) How many sigma bonds are there in $\text{CH}_2 = \text{CH} - \text{CH} = \text{CH}_2$:
A) 6 B) 9
C) 11 D) 4
- 100) In electromagnetic waves the electric and magnetic vectors are:
A) Parallel B) Anti parallel
C) Perpendicular D) None of the above
- 101) The negative gradient of electric potential is also called:
A) Potential energy B) Electric field intensity
C) Electric potential difference D) Electro volt
- 102) In human being, the number of cranial nerves are:
A) 8 pairs B) 10 pairs
C) 12 pairs D) 31 pairs
- 103) Ethene and Ethyne can be distinguished by employing the test:
A) Br_2 in organic solvent B) Baeyer's reagent
C) Phenyl Hydrazine D) Tollen's reagent
- 104) The ionization potential of Hydrogen atom is:
A) 13.6 V B) 1.36 V
C) 10.2 V D) 4.3 V
- 105) Live attenuated vaccines are used to treat all of the following diseases except:
A) Typhoid and plague B) Polio and measles
C) Cholera and rabies D) Mumps and influenza
- 106) Cracking problem of fuel combustion can be avoided by:
A) reforming B) improving octane number
C) adding TEL D) All of the above
- 107) The shortest wavelength of radiation in Paschen series is:
A) $\frac{R_H}{9}$ B) $\frac{9}{R_H}$
C) $9 R_H$ D) $9 + R_H$
- 108) All of the following are polysaccharides except:
A) Lactose B) Cellulose
C) Starch D) Glucose
- 109) Select the compound that will give Positive Iodoform test:
A) Benzaldehyde B) 2-Pentanone
C) 3-Hexanone D) 3-Pentanone
- 110) The part of electromagnetic spectrum in which Lyman series lies is:
A) Visible region B) Infrared region
C) Ultra violet region D) X-rays
- 111) A single ovum of human being contains:
A) X — chromosomes B) XX — chromosomes
C) YY — chromosomes D) XY — chromosomes
- 112) Choose the correct statement:
A) Ionic solids exist in the form of molecules
B) Ionic solids have high volatility
C) Ionic solids exist in the form of liquids and
D) Ionic solids have high melting points and boiling points
- 113) The centripetal force acting on a body rotating in a circle of radius 'r' is 'F'. If the body moves in a circle of radius half of the initial value keeping other quantities constant, then the percentage change in the centripetal force is:
A) 300% B) 100%
C) 400% D) 200%
- 114) In a dihybrid cross, how many homozygous offsprings can be produced?
A) 4 B) 3
C) 2 D) 9
- 115) Which is true about London forces?
A) London forces are present in non-polar molecules
B) London forces are present in polar molecules
C) London forces are created between instantaneous dipole and induced dipole
D) All of the above.
- 116) Which one of the following properties of electromagnetic waves do not change in vacuum?
A) Speed B) Wavelength
C) Frequency D) All of the above
- 117) In human being, the carrier of colour blind is:
A) Male B) Female
C) Both male and female D) None of them
- 118) The correct electronic configuration of Nickel (28) is:
A) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 4s^2$
B) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 4s^2 4p^1$
C) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2 4p^2$
D) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^1 4p^3$
- 119) Hook's law correlates the:
A) Force and displacement B) Force and extension
C) Force and compression D) Stress and strain
- 120) Ghani Khan is _____ of Pashto.
A) John Keats B) a John Keats
C) the John Keats D) like John Keats

- 121) The number of ATP formed directly by a single krebs cycle is:
A) One ATP B) Two ATP
C) 32 ATP D) 36 ATP
- 122) Select the correct equilibrium constant expression, Kc for the following reversible reaction.

$$\text{Ce}^{4+}(\text{aq}) + \text{Fe}^{2+}(\text{aq}) \rightleftharpoons \text{Ce}^{3+}(\text{aq}) + \text{Fe}^{3+}(\text{aq})$$
 A) $\frac{[\text{Ce}^{3+}(\text{aq})][\text{Fe}^{3+}(\text{aq})]^2}{[\text{Ce}^{4+}(\text{aq})][\text{Fe}^{2+}(\text{aq})]}$ B) $\frac{[\text{Ce}^{3+}(\text{aq})][\text{Fe}^{3+}(\text{aq})]}{[\text{Ce}^{4+}(\text{aq})][\text{Fe}^{2+}(\text{aq})]}$
 C) $\frac{[\text{Ce}^{3+}(\text{aq})]^2[\text{Fe}^{3+}(\text{aq})]}{[\text{Ce}^{4+}(\text{aq})][\text{Fe}^{2+}(\text{aq})]}$ D) $\frac{[\text{Ce}^{3+}(\text{aq})][\text{Fe}^{3+}(\text{aq})]}{[\text{Ce}^{4+}(\text{aq})]^2[\text{Fe}^{2+}(\text{aq})]}$
- 123) MRI works on the principle of:
A) Beats B) Interference
C) Resonance D) Standing waves
- 124) Myoglobin combines with:
A) Four oxygen molecules
B) Three oxygen molecules
C) Two oxygen molecules
D) One oxygen molecule
- 125) Sunken stomata are present in:
A) Hydrophytes B) Xerophytes
C) Mesophytes D) All of the above
- 126) Bohr predicted the radius of the orbit of the electron in hydrogen atom to be:

$$r = \frac{n^2 \epsilon^0 h^2}{e^2 \pi m}$$
 If electron moves from $n = 1$ to $n = 2$, by how much times the radius of the orbit will increase?
A) 2 times B) 3 times
C) 4 times D) 5 times
- 127) The waveform of sinusoidal voltage, its frequency and phase can be found by:
A) CRO B) Diode
C) Transistor D) Radio
- 128) Which blood group transfusion can be made without risk?
A) Group A to group B B) Group AB to group O
C) Group A to group O D) Group B to group AB
- 129) The first law of thermodynamics has a statement which implies that:
A) No heat enters or leaves the system
B) The temperature remains constant
C) All work is mechanical
D) Energy is conserved
- 130) Haemophilia affects males more than females because of:
A) Dominant autosomes B) Dominant X-linked
C) Recessive X-linked D) y-chromosome linked
- 131) The volume occupied by 3.2 g of oxygen at STP is:
A) 22.4 dm³ B) 2.24 dm³
C) 11.2 dm³ D) 16.0 dm³
- 132) When a neutral body is rubbed and it becomes positively charged, it must have:
A) Lost electrons B) Lost protons
C) Gained protons D) Gained electrons
- 133) Penicillin is obtained from:
A) Algae B) Yeast
C) Mushroom D) Mold
- 134) Which of the following elements with a given electronic configuration has the highest ionization potential value?
A) 1s² 2s² 2p³ B) 1s² 2s² 2p⁴
C) 1s² 2s² 2p⁶ 3s¹ D) 1s² 2s² 2p⁶ 3s² 3p³
- 135) When a charged particle enters a uniform magnetic field, there is a change in:
A) Kinetic energy B) Magnitude of velocity
C) Direction of velocity D) All of these
- 136) Insuline is produced by:
A) Alpha-cells B) Beta-cells
C) Delta-cells D) Gamma-cells
- 137) Which one is not responsible for the formation of acid rain?
A) CO₂ B) SO₂ C) CO D) NO₂
- 138) Which of the following hybridization can explain the shape of BeCl₂?
A) sp² hybridization B) sp hybridization
C) sp³ hybridization D) dsp² hybridization
- 139) According to Millikan's oil drop experiment the charge on an oil droplet is:
A) Quantized B) Integral multiple of 'e'
C) Not less than 'e' D) All of them
- 140) Did he buy a car yesterday?
Passive form of the sentence is:
 A) Was a car bought by him yesterday?
 B) Has a car been bought by him yesterday?
 C) Is a car bought by him the other day?
 D) Had a car been bought by him yesterday?
- 141) The enthalpy of the elements at 1 atm: pressure and 298 K is arbitrary given the value of:
A) 0.1 B) 1.0 C) 29.8 D) Zero
- 142) If two forces P and Q are such that $|P + Q| = |P - Q|$, then the angle between P and Q is:
A) 0° B) 30° C) 90° D) 180°
- 143) Chlorophyll a and b chiefly absorb:
A) Violet blue light B) Orange light
C) Blue —red light D) Red, orange light
- 144) Select the correct statement about lattice energy:
A) The energy absorbed when 1 mole of ionic crystal Lattice is formed from its constituent ions in the gaseous state.
B) The energy liberated when 1 mole of an ionic crystal Lattice is formed from its constituent ions in the gaseous state
C) The energy liberated when 1 mole of an ionic crystal Lattice is splitted into its constituent ions in the gaseous state
D) None of the above

- 145) Two blocks of masses 1.0 kg and 3.0 kg placed in contact are acted upon by a force of 40 N. The acceleration of 1.0 kg mass will be:
A) 40 m s^{-2} B) 10 m s^{-2} C) 30 m s^{-2} D) 50 m s^{-2}
- 146) Choose the correct sentence out of the following:
A) Each of them deserves praise.
B) Each one of them deserves praise.
C) Each one of them deserve praise.
D) Every one of them deserves praise.
- 147) Following nasal passages are composed of cartilage except:
A) Trachea B) Bronchus
C) Bronchioles D) Tracheoles
- 148) A set of xylem tissues are:
A) Vessels, tracheids, parenchyma
B) Sieve tubes, companion cell, fibers
C) Parenchyma, sieve tube, vessels
D) Fibers, companion cells, tracheids
- 149) Which of the following compounds on treatment with NaHCO_3 will liberate CO_2 ?
A) CH_3COOH B) $\text{C}_2\text{H}_5\text{NH}_2$
C) CH_3COCH_3 D) $\text{CH}_3\text{CH}_2\text{OH}$
- 150) A body in equilibrium must not have:
A) Kinetic energy B) Velocity
C) Momentum D) Acceleration
- 151) Choose the correct sentence out of the following:
A) The meeting does not approve in your scheme.
B) The meeting do not approves of your scheme.
C) The meeting does not approve of your scheme.
D) The meeting does not approve about your scheme.
- 152) The interval of pace maker signals from S.A.N to A.V.N is:
A) 01 second B) 0.1 second
C) 02 seconds D) 0.2 second
- 153) Commonly used coagulant used for the purification of water is:
A) $\text{Ca}(\text{NO}_3)_2$ B) MgCl_2
C) $\text{Al}_2(\text{SO}_4)_3$ D) $\text{Ca}(\text{OH})_2$
- 154) Forces controlling the reactions are proportional to the product of the active masses (concentration) of chemicals.
The above statement is of:
A) Raoult's Law B) Le Chatelier's principle
C) The law of conservation of energy
D) The law of mass action
- 155) Sound waves cannot be:
A) Polarized B) Reflected
C) Refracted D) Diffracted
- 156) He said to me, "May you succeed in life!" Indirect form of the sentence is:
A) He said to me that may you succeed in life.
B) He prayed that I might succeed in life.
C) He prayed that he might succeed in life.
D) He prayed that you may succeed in life.
- 157) A Test cross is:
A) $\text{Tt} \times \text{Tt}$ B) $\text{Tt} \times \text{tt}$
C) $\text{TT} \times \text{Tt}$ D) $\text{TT} \times \text{TT}$
- 158) Which compound is formed when Ammonium hydroxide is added to silver chloride?
A) $[\text{Ag}(\text{NH}_3)_2]\text{Cl}$ B) $[\text{Ag}(\text{NH}_3)]\text{Cl}$
C) $[\text{Ag}(\text{NH}_3)_4]\text{Cl}$ D) $[\text{Ag}(\text{NH}_3)_6]\text{Cl}$
- 159) The spring constant of a spring is k. If the spring is cut into two halves then the spring constant of one of the half is:
A) $k + 2$ B) $k/2$ C) $2k$ D) k
- 160) Carotenoid contains:
A) Carotenes B) Xanthophylls
C) Chlorophyll - C D) Both A) and B)
- 161) Which one is spontaneous chemical reaction?
A) $\text{Zn} + \text{Cu}^{2+} \rightarrow \text{Zn}^{+2} + \text{Cu}$
B) $\text{Zn}^{2+} + \text{Cu} \rightarrow \text{Cu}^{2+} + \text{Zn}$
C) $2\text{Fe}(\text{OH})_3 \rightarrow 2\text{Fe} + \frac{3}{2}\text{O}_2 + 3\text{H}_2\text{O}$
D) $2\text{NaCl} \rightarrow 2\text{Na} + \text{Cl}_2$
- 162) A force of 6 N acts horizontally on a stationary mass of 2 kg for 4 s. The kinetic energy in Joule is:
A) 12 B) 144 C) 72 D) 48
- 163) If it did not rain in time, there ___ a horrible famine.
A) would have been B) will be
C) would be D) will have been
- 164) A person travels a distance $x = 20t + 2At^2$, where A is a constant. The acceleration of the person is:
A) $A/4\text{ms}^{-2}$ B) $4/A\text{ms}^{-2}$
C) 4ms^{-2} D) $4A\text{ms}^{-2}$
- 165) Attraction of water molecules to the xylem vessels is called:
A) Adhesion B) Cohesion
C) Collision D) Corrosion
- 166) In which of the following compounds hydrogen bonding is possible?
A) PH_3 B) CH_4 C) NH_3 D) SiH_4
- 167) Which of the following are Ohmic materials?
A) Semiconductors B) Tungsten filament
C) Thermistor D) Metals
- 168) Tobacco is a:
A) Long day plant B) Short day plant
C) Day neutral plant D) Intermediate plant
- 169) Ripening of fruits can be promoted by:
A) Gibberellic acid B) Indole acetic acid
C) Florigen D) Ethylene gas
- 170) Sucrose sugar is considered as:
A) Monosaccharide B) Oligosacchides
C) Polysaccharides D) All of the above
- 171) In the nuclear reaction
 ${}_{11}\text{Na}^{24} + {}_{12}\text{Mg}^{23} \rightarrow \text{X}$, the particle X is;
A) Electron B) Positron
C) Proton D) Neutron
- 172) The least toxic excretory product is:
A) Ammonia B) Urea
C) Uric acid D) Fatty acid
- 173) Which one of the following will give an ionic product?
A) $\text{CH}_3\text{CH}_2\text{OH} + \text{PCl}_5 \rightarrow$ B) $\text{CH}_3\text{CH}_2\text{OH} + \text{Na} \rightarrow$
C) $\text{CH}_3\text{CH}_2\text{OH} + \text{PCl}_3 \rightarrow$ D) $\text{CH}_3\text{CH}_2\text{OH} + 5\text{OCl}_2 \rightarrow$

- 174) The angular displacement made by the minute hand of a watch after 5.0 minutes is:
A) 30° B) 120° C) 180° D) 360°
- 175) The intensity of a wave is:
A) Directly proportional to amplitude
B) Directly proportional to (amplitude)²
C) Inversely proportional to amplitude
D) Inversely proportional to (amplitude)²
- 176) The diameter of human capillary is:
A) 5 microns B) 6 microns
C) 7 microns D) 8 microns
- 177) Organisms phenotypically similar but genotypically different are said to be:
A) Monozygous B) Homozygous
C) Heterozygous D) Multizygous
- 178) Which of the following can function as Lewis acid?
A) CN B) NH_3
C) $\text{CH}_3\text{-O-CH}_3$ D) I^-
- 179) Conversion of alternating current into direct current is called:
A) Rectification B) Amplification
C) Oscillation D) Regeneration
- 180) Gibberellin was isolated from:
A) An algae B) A fungus
C) A bacterium D) A virus
- 181) All amino acids found in proteins are:
A) α -amino acids B) β -amino acids
C) Both α and β D) None of the above
- 182) Which of the following pairs have the same units and dimensions?
A) Resistance and resistivity
B) Conductivity and resistivity
C) Electromotive force and potential difference
D) Resistivity and temperature coefficient of resistivity
- 183) Process of bone formation is called:
A) Calcification B) Chondrification
C) Decalcification D) Ossification
- 184) Which is a trimer of ethyne?
A) PVC B) Benzene
C) Toluene D) Teflon
- 185) The activity of the radioactive material can be expressed in the units of:
A) Curie B) Becquerel
C) Tesla D) Both A) and B)
- 186) Bicep muscle is attached to the humerus by:
A) Tendon B) Ligaments
C) Elastic fibers D) Areolar
- 187) Which is NOT true about amino acids?
A) They have two functional groups
B) They show both acidic and basic characteristics
C) They are the basic units of proteins
D) They do not exist in solid state
- 188) The work function of a metal is 6.63 eV. The threshold frequency of the metal is:
A) 1.6×10^{15} Hz B) 1.6×10^{12} Hz
C) 6.63×10^{-34} Hz D) 1.6×10^{-19} Hz
- 189) Concentration of water molecules is inversely proportional to the:
A) Water potential B) Pressure potential
C) Solute potential D) Osmotic potential
- 190) Which is the least polar molecule?
A) HF B) HI C) HCl D) HBr
- 191) The birds sitting on an overhead transmission line suffer no harmful effects because:
A) Their bodies have high resistance
B) Their feet are good insulators
C) There is negligible potential difference between their feet
D) Wires are insulated
- 192) They arrived at about mid night
A) because their flight was detained.
B) because their flight was delayed.
C) because their flight was derailed.
D) because their flight was diverted.
- 193) The target organ for vasopressin is:
A) Heart B) Liver
C) Stomach D) Kidneys
- 194) Ketones are prepared by the oxidation with $\text{Na}_2\text{Cr}_2\text{O}_7$ and H_2SO_4 of:
A) Primary alcohol B) Secondary alcohol
C) Tertiary alcohol D) All of the above
- 195) The sinusoidal AC current in a circuit is $I = 50 \sin(20t)$. The peak value of current is:
A) 100 A B) 25 A C) 50 A D) 20 A
- 196) Thirst is controlled by:
A) Pituitary gland B) Adrenal gland
C) Parathyroid D) Thyroid
- 197) Which of the following is a condensation polymer?
A) Nylon 6,6 B) Teflon
C) Polypropylene D) Orlon
- 198) Current in the semiconductors is caused by the movement of:
A) Protons B) Electrons only
C) Holes only D) Both electrons and holes
- 199) Auxins inhibit the growth of:
A) Apical buds B) Lateral buds
C) Parthenocarp D) Root growth
- 200) Which of the following statement is NOT true?
A) Natural rubber is hydrocarbon
B) Natural rubber is isoprene
C) Natural rubber is polymer of 1, 3 Butadiene
D) Natural rubber can be vulcanized