

Total Marks: 800

ETEA 2007

Total Question: 200

- 1) The man sitting next to me on the plane was nervous because the _____ before:
 - a. Had not flown
 - b. Did not fly
 - c. Has not flown
 - d. Has not been flying
- 2) In time of war govts. Do things which are expedient. The underline word means?
 - a. Endorsed by war council
 - b. Concomitant
 - c. Need of the hours
 - d. Useful but not necessarily right
- 3) Her mother would prefer to cook:
 - a. Than to eat
 - b. Instead of eating
 - c. Rather than to eat
 - d. Rather than eat
- 4) The word seismology stand for:
 - a. An instrument for detecting earthquakes
 - b. Study of sea creatures
 - c. A branch of astrology
 - d. Scientific study If earth quakes
- 5) Autocracy is the government of:
 - a. One person with absolute power
 - b. Lawyers fraternity
 - c. Elected representatives of the masses
 - d. Intelligentsia
- 6) She dresses with great _____ and that is how she impresses people:
 - a. pride
 - b. outrageousness
 - c. ostentation
 - d. panche
- 7) The air we today _____ has many harmful elements in it:
 - a. Breathe
 - b. Are breathing
 - c. Breath
 - d. Have breathed
- 8) Going to _____ is considered vulgar by elders of our village.
 - a. The cinema
 - b. Cinema
 - c. A cinema
 - d. Cinemas
- 9) Most people think _____ is an essential feature of modern life.
 - a. The television
 - b. A television
 - c. The TV
 - d. Television
- 10) His driving is rather _____. He moves smoothly and then all of sudden becomes negligent
 - a. Careless
 - b. Erratic
 - c. Relentless
 - d. Care free
- 11) A person who hates other peoples and avoids human society is known as:

- a. Misanthrope
 - b. Inhuman
 - c. Sadist
 - d. Misogynist
- 12) The student were _____ and the teacher, therefore, did not take the class.
- a. Only few
 - b. A few
 - c. Not much
 - d. Few
- 13) The largest demand of energy is generally fulfilled by:
- a. Hydroelectric power
 - b. Nuclear power
 - c. Solar energy
 - d. Fossil fuels
- 14) The magnitude of ix(j xk) is:
- a. 0
 - b. 1
 - c. -1
 - d. 2i
- 15) An atom has net charge of -1. It has 18 electrons and 20 neutrons. Its mass number is:
- a. 38
 - b. 39
 - c. 37
 - d. 20
- 16) Which one of the following bond is broken first in glycolysis to release the energy?
- a. Glycosidic
 - b. Peptide
 - c. Ester
 - d. None
- 17) The teeth adopted for cutting are:
- a. Canines
 - b. Incisors
 - c. Premolar
 - d. Molars
- 18) Which one of the following isotopes of natural uranium under goes reaction with slow neutron?
- a. ${}_{92}\text{U}^{235}$
 - b. ${}_{92}\text{U}^{238}$
 - c. ${}_{92}\text{U}^{234}$
 - d. ${}_{92}\text{U}^{239}$
- 19) Conc: H_2SO_4 is added to a mixture of $\text{K}_2\text{Cr}_2\text{O}_7$ and metal chloride in solid state. Brown vapors are formed which one is the correct formula.
- a. CrOCl_2
 - b. COCl_2
 - c. CrO_2Cl_2

- d. CrCl_3
- 20) The ionization energy of hydrogen atom is 13.6eV. The ionization potential required will be:
- 4.9V
 - $8.5 \times 10^{-19}\text{V}$
 - 3.4V
 - 13.6V
- 21) Which of the following is not correct.
- Xe is the most reactive among the rare gases
 - He is an inert gas
 - Radon is obtained from decay of radium
 - The most abundant rare gas found in atmosphere is He
- 22) Distillation under reduced pressure is used to purify liquids which:
- Are explosive
 - Are highly volatile
 - Decompose at their boiling point
 - Have high boiling point
- 23) Amicable is nearly opposite in meaning to:
- Hostile
 - Indispensable
 - Inimical
 - Amiable
- 24) It looks like a single flower but it is in fact an inflorescence called?
- Panicle
 - Typical raceme
 - Compound umbel
 - Capitulum
- 25) Two waves of the same frequency and amplitude, traveling in opposite direction along the same path will form:
- Electromagnetic waves
 - Micro waves
 - Standing waves
 - Sound waves
- 26) NH_3 has higher boiling point than expected because.
- With water it forms NH_4OH
 - It has strong inter molecular hydrogen bonds
 - It has strong inter molecular covalent bonds
 - Its density decreased on freezing
- 27) Mangroves are:
- Xerophytes
 - Mesophytes
 - Heliophytes
 - Halophytes
- 28) In simple A.C. inductive circuit:
- The voltage leads the current by 90°

- b. The voltage lags behind the current by 90°
 - c. The current leads the voltage by 90°
 - d. The current and voltage are in phase
- 29) The phenomenon of mutual induction is practically used in:
- a. Transformer
 - b. Generator
 - c. Galvanometer
 - d. Avometer
- 30) If K_c is small, it indicates that the equilibrium occurs:
- a. At a low product concentration
 - b. Only with the help of catalyst
 - c. At high product concentration
 - d. None of these
- 31) Four chambers heart is found in:
- a. Lizard
 - b. Fish
 - c. Crocodile
 - d. None
- 32) The color coding of carbon resistor is such that the first band green, the second band is yellow the third band is red, and the fourth band is golden the value of resistance is:
- a. 4500 ohm with 10% tolerance
 - b. 5400 ohm with 10% tolerance
 - c. 5400 ohm with 5% tolerance
 - d. 4500 ohm with 5% tolerance
- 33) Metallic carbide on the treatment with water gives a colorless gas which burns readily in air gives a white precipitate with $\text{AgNO}_3 + \text{NH}_4\text{OH}$ the gas is:
- a. CH_4
 - b. C_2H_2
 - c. C_2H_4
 - d. C_2H_6
- 34) Which one of the following is homeothermic animals?
- a. Uromastix
 - b. Salamander
 - c. Sea horse
 - d. Kangaroo
- 35) An object in satellite orbiting around the earth is weightless because:
- a. $g=0$
 - b. Is moving with escape velocity
 - c. Is too far away from the earth
 - d. Satellite is falling freely
- 36) Transition elements are less reactive because of:
- a. High ionization energy
 - b. High heat of vaporization
 - c. Less heat of hydrogen of ion

- d. All are correct
- 37) Vitro fertilization takes place in zoo.
- River
 - Sea
 - Land
 - Laboratory
- 38) Speed of sound is independent of:
- Density of medium
 - Temperature of medium
 - Pressure of medium
 - Elasticity of medium
- 39) The number of legs in scorpion are:
- One pair
 - Two pair
 - Three pair
 - Four pair
- 40) The S.I unit of electromotive force is:
- Joule per coulomb
 - Joule per second
 - Coulomb per volt
 - Volt per ampere
- 41) In the action of HNO_3 , on metals, the evolution of NO_2 is favored by:
- Conc. HNO_3
 - Dilute HNO_3
 - Fuming HNO_3
 - Very dilute HNO_3
- 42) Detritivore feeds on:
- Plants
 - Animals
 - Organic debris
 - Bacteria
- 43) Lithium is generally used as an electrode in high energy density batteries because:
- It is the lightest metal
 - It has the high negative reduction potential
 - It is quite reactive
 - It does not corrode easily
- 44) In the following pairs, one organelle is involved in the formation of other except:
- Golgi bodies - lysosomes
 - Nucleus – ribosome
 - Endoplasmic reticulum- peroxisome
 - Endoplasmic reticulum – Golgi bodies
- 45) At constant temperature, if the volume of the given mass of a gas is doubled, then the density of the gas becomes:
- Double
 - One half
 - One quarter

- d. Four times
- 46) Calcium super phosphate is:
- $\text{Ca}(\text{H}_2\text{PO}_4)_2$
 - $\text{Ca}_3(\text{PO}_4)_2$
 - $\text{Ca}(\text{H}_2\text{PO}_4)_2 + 2(\text{CaSO}_4 \cdot 2\text{H}_2\text{O})$
 - $\text{CaHPO}_4 + 2\text{CaSO}_4$
- 47) Which one of the following reversible reactions cannot be affected by pressure:
- $\text{H}_2 + \text{I}_2 \rightarrow 2\text{HI}(\text{g})$
 - $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3(\text{g})$
 - $\text{PCl}_5 \rightarrow \text{PCl}_3 + \text{Cl}_2$
 - $2\text{NO} + \text{O}_2 \rightarrow 2\text{NO}_2$
- 48) A cross between F_1 hybrids with either of parents is called?
- Back cross
 - Test cross
 - Reverse cross
 - None
- 49) A projectile is thrown horizontally from a 490m high cliff with a velocity of 10m/s. The time taken by projectile to reach the ground is:
- 2.5 s
 - 7.5s
 - 5s
 - 10s
- 50) Our plays have been very capricious in their performance. The underlined word means:
- Wonderful
 - Unpredictable
 - Adventurous
 - Tricky
- 51) Who is considered to be the father of genetics?
- Weisman
 - Bateson
 - Mendel
 - Morgan
- 52) The increase in temp of intrinsic semiconductor will.
- Increase its conductivity
 - Decrease its conductivity
 - Not effect conductivity
 - None
- 53) Stability of ionic compound is due to:
- Electro negativity
 - Lattice energy
 - Sublimation energy
 - Electron affinity
- 54) A zero order reaction is one whose rate is independent of:
- Temp of the reaction
 - Concentration of reactant

- c. Concentration of products
 - d. Material of the vessel in which the reaction is carried out
- 55) Which one of them is a true fish?
- a. Cuttle fish
 - b. Silver fish
 - c. Jelly fish
 - d. Sea horse
- 56) The excited state of an atom which can persist for unusual longer time is called?
- a. Metastable state
 - b. Ground state
 - c. Excited state
 - d. Normal state
- 57) The widely used pvc is polymerized product of:
- a. $\text{CH}_2=\text{CH}_2$
 - b. $\text{CH}_2=\text{CCl}_2$
 - c. $\text{ClCH}_2=\text{CH}_2\text{Cl}$
 - d. $\text{CH}_2=\text{CH}_2\text{Cl}$
- 58) If the distance b/w the two charged particles is halved, the coulomb force b/w them becomes:
- a. Half
 - b. One quarter
 - c. double
 - d. four times
- 59) the neutralization of a strong acid by a strong base liberates an amount of energy per mole of H^+ ion that:
- a. depends upon which acid and base are involved
 - b. depends upon temperature at which reaction takes place
 - c. depends upon which catalyst is used
 - d. Is always the same
- 60) The main excretory organs in cockroach are:
- a. Flame cell
 - b. Cilia
 - c. Nephridia
 - d. Malpighian tubes
- 61) The phenomena used for producing emf in coil of generator is:
- a. Mutual induction
 - b. Self-induction
 - c. Electrostatic induction
 - d. Electromagnetic induction

62) IUPAC name of the compound:



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- 4-methyl-3-hexanol
- Heptanol
- 4-methyl-2-hexanol
- 4-ethyl pentanol-2

63) Man reproduction is:

- Mono estrous
- Di estrous
- Tri estrous
- Poly estrous

64) Microsporium causes:

- Food spoilage
- Decay of leather goods
- Dandruff
- Wood rot

65) When a light signal travels along the length of the optical fibre power lost by it, is due to:

- Refraction
- Reflection
- Diffraction
- Scattering and absorption

66) Which of the following ions has largest heat of hydration:

- Ba^{+2}
- K^{+1}
- Li^{+1}
- Be^{+2}

67) How many ATPs are produced during non-cyclic photophosphorylation:

- 2
- 4
- 6
- 8

68) Net change of entropy in the Carnot's cycle is:

- 0
- ive
- +ive
- None of these

69) Which of the following has the high energy photon?

- Visible light
- X-rays
- Ultraviolet light
- Gamma rays

70) In a closed room of 1000m³, a perfume bottle is opened up. The room develops smell. This is due to which property of gases.

- Diffusion
- Viscosity
- Density
- None

71) Fibrinogen is necessary for:

- Metabolism
- Blood clotting
- Reproduction
- Respiration

72) Two boats moving parallel in the same directions:

- a. Will be pulled toward each other
b. Will be pulled away each other
c. Will have no effect on each other
- 73) A well stoppered thermos flask containing some ice cubes is an example of:
a. Closed system
b. Open system
c. Isolated system
d. None of above
- 74) Homicide:
a. Is a poison
b. Mean killing members of one species
c. Mean murder
d. Means the murderer of one's own family
- 75) All the flowers come at the same level due to equal size of their pedicel in:
a. Corymb
b. Umbel
c. Catkin
d. panicle
- 76) Two parallel wires are carrying currents in opposite direction. These two wires:
a. Will attract each other
b. Will repel each other
c. Will have no effect on each other
d. None of above
- 77) Which of the following is not correct in case of carboxylic acids:
a. They are polar molecules
b. They form H-bonds
c. They are stronger than mineral acids
d. They have higher boiling points than corresponding alcohols
- 78) A living tissue which in addition to its regular function also provides support to plants is:
a. Xylem
b. Collendryma
c. Sclerendryma
d. Panache
- 79) The applied force which the solid can withstand without breaking is called:
a. Stiffness of solid
b. Strength of solid
c. Ductility of solid
d. Toughness of solid
- 80) When Ethanal is treated with Fehling's solution. It gives a precipitate of:
a. Cu
b. CuO
c. Cu₂O
d. Cu₂O + Cu₂O₃
- 81) Opening and closing of stomata is controlled by which of the following factors?
a. Sugar
b. pH
c. Potassium
d. All of above
- 82) As the temp of black body is increased the wavelength of max intensity radiation:
a. Will shift towards the longer wavelength
b. Will shift towards the shorter wavelength
c. Will not change
d. None of these
- 83) The Cl atom attached to benzene ring is:
a. M-directing
b. O-directing
c. O-and P-directing and deactivating
d. O- and P- directing and activating
- 84) Control center of speech is:
a. Medulla oblongata
b. Diencephalons
c. Cerebrum

- d. Cerebellum
- 85) Decay of one radioactive atom per second is equal to:
- One curie
 - One Becquerel
 - One half life
 - One of the above
- 86) Acetic anhydride is obtained with acetyl chloride in the reaction with:
- P₂O₅
 - H₂SO₃
 - CH₃COONa
 - CH₃COOH
- 87) It is very difficult to relax while working with their new boss because he is a hard:
- Worker
 - Hearted
 - Taskmaster
 - Nut to crack
- 88) Filter feeders extract food particles from:
- Water
 - Soil
 - Air
 - Blood
- 89) The ecological factor which does not change from place to place is:
- Precipitation
 - Temperature
 - Gravity
 - Light
- 90) Fast neutrons can be slowed down by collisions with.
- Electrons
 - Protons
 - Phonons
 - Photons
- 91) Which form of matter possesses higher magnitude of internal energy:
- Gaseous matter
 - Solid matter
 - Liquid matter
 - All have the same magnitude
- 92) On the basis of which of the following ratio we can prove a law of independence assortment:
- 9:3:3:1
 - 9:3:4
 - 1:2:1
 - 2:1:1
- 93) If a shell explodes in air, its fragments fly off in different directions. The total momentum of fragments:
- Increases
 - Decreases
 - Remain constant
 - None of these
 - e.
- 94) A bottle of dry NH₃ and a bottle of dry HCl connected through a long tube are opened simultaneously at both ends. The white NH₄Cl ring. Formed will be:
- At the center of the tube
 - Near the NH₃ bottle
 - Near the HCl bottle
 - Throughout the length of the tube
- 95) Photorespiration occurs when:
- Stomata are opened
 - Day is humid
 - Concentration of CO₂ inside leaf is high
 - Concentration of O₂ inside leaf is high
- 96) If HCl is added to _____ CH₂=CH-CH₃ what is formed?
- |
CH₃

- a. $\text{CH}_3\text{-CH-CH}_3$
|
Cl
- b. $\text{CH}_2\text{-C-CH}_3$
|
Cl
- c. $\text{CH}_2\text{=CH-CH}_3$
- d. None of these
- 97) When beta particle is emitted from lead $_{82}\text{Pb}^{214}$ the mass number and charge number of bismuth formed as:
- $_{83}\text{Pb}^{214}$
 - $_{81}\text{Pb}^{214}$
 - $_{85}\text{Pb}^{214}$
 - None of these
- 98) Acetaldehyde on oxidation by $\text{Na}_2\text{Cr}_2\text{O}_7/\text{H}_2\text{SO}_4$ gives:
- CH_3COOH
 - $\text{C}_2\text{H}_5\text{OH}$
 - $\text{OHC}\cdot\text{CHO}$
 - None of these
- 99) In gene action the gene that mark the expression of another gene is termed as:
- Hypostatic
 - Epistatic
 - Hemi static
 - Neostatic
- 100) If a material particles starts motion with speed equal to the speed of light. Then the mass of this moving particle will:
- Remain constant
 - Become zero
 - Become equal to rest mass particle
 - Become infinite
- 101) Which is the correct formula of ammonium carbonate?
- H_2NPNH_2
 - $\text{NH}_4\text{COONH}_4$
 - $\text{H}_2\text{NCOONH}_2$
 - $\text{NH}_2\text{COONH}_4$
- 102) Which statement is not true about pteridophytes:
- Presence of lateral meristem
 - Independent sporophyte
 - Absence of vessels
 - Presence of heteromorphic life cycle
- 103) Transition from $n=4, 5, 6\dots$ To $n=3$ in hydrogen spectrum gives:
- Balmer series
 - Lyman series
 - Paschen series
 - Pfund series
- 104) The bottom line is that we cannot ignore the cultural aspect in education. the underlined expression means:
- Most important thing
 - The last line in an essay
 - Conclusion
 - Trend
- 105) Greenhouse effect is not produced by the abundance of the gas called
- Methane
 - CO_2
 - Nitrous oxide
 - Sulphur dioxide
- 106) The range of projectile is the same for two angles which are mutually:

- a. Orthogonal
b. Supplementary
c. Complementary
d. Sum is 45 degree
- 107) The $\text{CH}_3\text{CH}_2\text{Cl}$ react with dry Ag_2O to give:
a. Diethyl ether
b. Ethane
c. Ethanol
d. Ethanol
- 108) The step is glycolysis in which energy transfer is not involved is:
a. Glucose phosphate \rightarrow fructose diphosphate
b. Fructose diphosphate \rightarrow Dap
c. Pgal \rightarrow pg ap
d. Pgap \rightarrow pga
- 109) The vectoral form of centripetal force is:
a. $F_c = mv^2/r$
b. $F_c = (mv^2/r)r$
c. $F_c = (mv^2/r^2)r$
d. $F_c = (mv^2/r^2)r$
- 110) Which one among the following is in fact a fruit but is available at vegetables shop.
a. Capsicum annum:
b. Solanum tuberosum
c. Medicago denticulate
d. Bauhinla variegata
- 111) A 50 mH coil carries a current of 2 ampere. The energy to red is magnetic field is:
a. 10joules
b. 0.1 joules
c. 0.01joules
d. 1.0joules
- 112) In an ecosystem having four trophic levels the amount of energy fixed at producer level is 23197kcal about how much energy will be produced by the primary consumer?
a. 2317kcal
b. 232kcal
c. 1564kcal
d. None
- 113) A body of mass 1 kg is suspended from a balance in the elevator which is accelerating downward with an acceleration of 4m/s^2 reading of the balance will be.
a. 9.8N
b. 13.8N
c. 5.8N
d. 0
- 114) The equilibrium constant for a reaction $\text{N}_2 + \text{O}_2 \rightarrow 2\text{NO}$ is 4×10^{-4} at 2000K. In the presence of catalyst the equilibrium is attained 10 times faster. The equilibrium constant in presence of catalyst at 2000K is.
a. 10×10^{-4}
b. 4×10^{-4}
c. 40×10^{-4}
d. 4×10^{-2}
- 115) The radio waves of constant amplitude are called?
a. Modulated waves
b. Carrier waves
c. Standing waves
d. Rectified waves
- 116) The lowest vapor pressure is exerted by:
a. Water
b. Kerosene oil
c. Mercury
d. Rectified spirit
- 117) The cartilage present in trachea is:
a. Fibrous
b. Hyaline
c. Elastic

- d. Neurotic
- 118) Which of the following is conservative field:
- Gravitational field
 - Electric field
 - Magnetic field
 - All such fields
- 119) Rabbits, Pabulus, rats, grasshoppers and grasses constitute a _____.
- llabitate
 - Biome
 - Community
 - Population
- 120) How many atoms are contained in one mole of $\text{Ca}(\text{OH})_2$.
- $5 \times 6.02 \times 10^{23}$ atoms
 - $30 \times 6.02 \times 10^{23}$ atoms
 - $3 \times 6.02 \times 10^{23}$ atoms
 - $6 \times 6.02 \times 10^{23}$ atoms
- 121) Size if the flower of chrysanthemum may be enlarged by removing:
- All leaves
 - A few leaves
 - All branches except one
 - All floral but except one
- 122) Reason for Alkali metals to be soft is that.
- They are less metallic in nature
 - There is only one valency
 - They do not have close packed structures
 - They have high I.E
- 123) IF three coplanar forces acting on a body keep it in equilibrium, then these forces are:
- Concurrent
 - Non concurrent
 - Parallel
 - Anti-parallel
- 124) If water samples are taken from mesa. River, clouds, lakes or snow, they will be found of contain hydrogen and oxygen in the ratio of 1:8 by weight, this indicates the law.
- Definite proportion
 - Multiple Proportion
 - Reciprocal proportion
 - None of the above
- 125) Corpuscular animals are active during.
- Night
 - Day
 - Twilight
 - Spring
- 126) the dimensions of angular acceleration are:

- a. $[L^{-1} T^{-1}]$
b. $[LT^{-2}]$
c. $[T^{-2}]$
d. $[L^2 T^{-2}]$
- 127) Red tides in oceans are produced by:
a. Diatoms
b. Dino flagellate
c. Water molds
d. Myxomycota
- 128) The resistances of three arms of the balanced wheat stone bridge are 50 ohm, the resistance in the 4th arm is:
a. 25 ohm
b. 50ohm
c. 75ohm
d. 100ohm
- 129) If the pressure and temp (k) of two liters of CO₂ are doubled. The volume of CO₂ would become:
a. 5 liter
b. 4 liter
c. 8 liter
d. 2 liter
- 130) For a reversible reaction to reach an equilibrium state the reaction is said to be carried out:
a. Glass vessel
b. Iron vessel
c. Open vessel
d. Closed vessel
- 131) Goiter is caused by deficiency of:
a. Sodium in water
b. Calcium in water
c. Iodine in water
d. Sugar in water
- 132) The current gain of transistor having collector current of 10mA and the base current of 40uA is:
a. 2.5
b. 25
c. 250
d. 2500
- 133) Which of the following is cycloalkane:
a. C₆ H₁₄
b. C₆ H₁₂
c. C₆ H₁₂
d. C₆ H₈
- 134) Which one of the following is found in plant cell only:
a. Peroxisome
b. Lysosome
c. Glyoxisome
d. Ribosome
- 135) Laser light is the result of:
a. Spontaneous emission

- b. Ordinary emission
 - c. Absorption of radiation
 - d. Stimulated emission
- 136) Neuron that carries messages from sense organ to the central nervous system is.
- a. Afferent
 - b. Efferent
 - c. Associated
 - d. Interneuron
- 137) The number of photoelectrons emitted per second from the metal surface depends upon:
- a. Intensity of light
 - b. Frequency of light
 - c. Wavelength of light
 - d. Speed of light
- 138) The unit of conductance is?
- a. Ohm
 - b. Ohm/meter
 - c. Ohm meter
 - d. Mho
- 139) At what place the motion of the bob of simple pendulum will be slowest:
- a. At poles of earth
 - b. At equator of earth
 - c. Anywhere on the surface of earth
 - d. None of these
- 140) A liquid is in equilibrium with its vapors at its boiling point. On the average the molecules in the two phase have equal:
- a. Potential energy
 - b. Total energy
 - c. Kinetic energy
 - d. Intermolecular energy
- 141) Lithotripsy is a technique to:
- a. Remove kidney stones without surgery
 - b. Remove kidney stones with surgery
 - c. Treat kidney with medicines
 - d. Remove appendix
- 142) Which one of the following plant feeds on water mites:
- a. Nepenthes
 - b. Utricularia
 - c. Dionea
 - d. Drosera
- 143) If the resultant of two vectors. Each of magnitude A is also of magnitude of A the angle between the vectors will be:
- a. 30
 - b. 45
 - c. 60
 - d. 120
- 144) The 2 % solution by weight if sodium chloride solution is prepared. The molality of this solution is:
- a. 0.35 molal
 - b. 0.25 molal
 - c. 0.2 molal
 - d. 0.02 molal

- 145) Which one among the following is not macro element needed by plants:
- Mg
 - Sulphur
 - Iron
 - Potassium
- 146) Newton's rings are formed due to:
- Reflection of light
 - Interference of light
 - Diffraction of light
 - Polarization of light
- 147) If the length of second pendulum becomes four times then its time period will become:
- 4 times
 - 2 times
 - Half times
 - One fourth
- 148) Which of the following is correct:
- Molecularity of a reaction is same as the order of reaction
 - In some cases Molecularity of a reaction is the same order of reaction
 - Molecularity of a reaction is more than order of reaction
 - All are correct
- 149) Laiba's is trying to determine the %age of protein in beans because she is a:
- Bio chemist
 - Micro biologist
 - Physiologist
 - Mycologist
- 150) A closed surface contains equal and opposite charges. The net electric flux through the closed surface is:
- Max
 - Min
 - 0
 - +ive as well as -ive
- 151) The O₂ gas is chemically inert at room temp because?
- Atoms in the O₂ molecules are held by multiple bonds
 - O=O bonds are strong
 - O₂ molecules do not collide with sufficient force to break their bonds at ordinary temperature
 - All of above
- 152) The e.m.f of galvanic cell can be calculated from:
- The size of the electrode
 - The pH of the solution
 - The amount of metal in the anode
 - The E⁰ values of the half cell
- 153) Which of these are carriers of genetic information?
- tRNA
 - mRNA
 - DNA
 - Nucleolides
- 154) Critical angle of medium depends upon the:
- Speed of light
 - Wavelength of light
 - Refractive index of the medium
 - Intensity of light
- 155) The phase change of 180° is equivalent to a path difference.
- $\lambda/2$
 - λ
 - 2λ
 - 4λ
- 156) The constancy of e.m.f ratio for electron shows that:
- Electron mass is 1837th of proton
 - Electrons are universal particles of all matter
 - Electrons produced in discharge tube only

- d. None
- 157) Genome of which of the following consist of single molecule of DNA.
- HAV
 - HBV
 - HCV
 - HIV
- 158) As soon as he reached home, he realized that he had lost a five:
- Thousands rupees note
 - Thousands rupee's note
 - Thousand rupees note
 - Thousand rupee note
- 159) Plantigrad locomotion is found in:
- Man
 - Dog
 - Horse
 - Dolphin
- 160) The alternating current can be measured from its:
- Magnetic effect
 - Heating effect
 - Chemical effect
 - All of these
- 161) The catalytic hydrogenation of benzene yields
- Xylene
 - Cyclohexane
 - Toluene
 - Benzoic acid
- 162) The magnetic force acting on a unit charge moving perpendicular to the magnetic field with velocity is called?
- Magnetic induction]
 - Magnetic permeability
 - Magnetic flux
 - Permittivity
- 163) Which of the following is a compound.
- Ammonia
 - Air
 - Brass
 - Oxygen
- 164) The pneumococcus strain used by Griffith in his experiments was:
- Lophotrichous
 - Amphitrichous
 - Atrichous
 - Monotrichous
- 165) An electron revolves around the nucleus and completes 50rev/min the work done by the coulombs forces is:
- 50j
 - 50erg
 - 50 foot pound
 - 0
- 166) A person throws a ball vertically upward while standing in a train moving with uniform velocity. The ball will fall.
- In his hand
 - Behind him
 - In front of him
 - Beside him
- 167) The best known and the most highly developed fuel cell is the hydrogen/oxygen fuel cell. This is known as:
- Proton exchange membrane cell
 - Bacon cell
 - Regenerative cell
 - None of these
- 168) Which one of the following is produced as a result of sexual reproduction
- Conidium
 - Odium
 - Ascospore

- d. Zoospore
- 169) A metal forms strong base, salts and stable carbonates. The metal is:
- Transition metal
 - Alkali metal
 - Alkaline metal
 - None of these
- 170) Gonorrhoea is a sex disease caused by:
- Bacteria
 - Virus
 - Parasite
 - None
- 171) The resolving power of the lens can be improved by using.
- Lens of short focal length
 - Lens of large focal length
 - Lens of short wavelength
 - Lens of large wavelength
- 172) Which of the following oxy acids of chlorine is least oxidizing in nature?
- HOCl
 - CHIO_2
 - HClO_3
 - HClO_4
- 173) Which one of the non-polar but contain polar bonds.
- HCl
 - HF
 - Water
 - Carbon dioxide
- 174) The building with numerous arches looked _____ in moonlight.
- Brightly
 - Splendidly
 - Mysteriously
 - Magnificent
- 175) Which of the following is an inactive enzyme without its cofactor:
- Coenzyme
 - Apo enzyme
 - Holoenzyme
 - Denatured enzyme
- 176) The gate which inverts the output of AND gate is:
- Or gate
 - NAND gate
 - XOR gate
 - XNOR gate
- 177) By reacting phenol with bromine water the product obtained is:
- O-bromophenol
 - M-bromophenol
 - P-bromophenol
 - 2,4,6-tribromophenol
- 178) Protein is converted into a peptone by which of the following enzyme.
- Amylase
 - Trypsin
 - Lipase
 - Hydrolase
- 179) The dimensions of energy are the same as those of
- Momentum
 - Acceleration
 - Force
 - Work
- 180) Sudden as well as rapid mitosis leads to:
- New organ
 - New tissue
 - Cancer
 - Muscles
- 181) An electron when accelerated through a potential difference of one volt will gain an energy equal to:
- One erg

- b. One joule
c. One electron volt
d. One Walt sec
- 182) Which isomerism is not shown by alkene:
a. Metamerism
b. Chain isomerism
c. Position isomerism
d. Geometrical isomerism
- 183) Death occurs if level of glucose in blood falls to:
a. 60
b. 50
c. 40
d. 30
- 184) Complex with bidentate ligands are called?
a. Ligands
b. Chelates
c. Complexes
d. None of these
- 185) Blood cell are produced by:
a. Liver
b. Spleen
c. Bone marrow
d. Heat
- 186) The lowering in vapor pressure is the highest for:
a. 0.2mole urea
b. 0.1 M glucose
c. 0.1 M MgSO₄
d. 0.1 mBaCl₂
- 187) The process in which heat neither enters nor leaves the system but still the temperature of system changes is:
a. Isobaric process
b. Isothermal process
c. Adiabatic process
d. Isochoric process
- 188) Which of the following reaction show nucleophilic substitution of alkyl halide R-X?
a. $Rx + H_2 \rightarrow RH + Hx$
b. $Rx + KcN \rightarrow RcN + Kx$
c. $2Rx + 2Na \rightarrow R-R + 2Nax$
d. $R-x + Mg \text{ ethers } Rngx$
- 189) Organs of locomotion in earth worm are:
a. Papillae(Papillae)
b. Setae
c. Pseudopodia
d. Cuticle
- 190) If $a \cdot b = 1, a = 2$ and $b = 1$ then the angle b/w them is:
a. 30
b. 60
c. 90
d. 45
- 191) The existence if a substance in more than one solid modification is known as:
a. Isomorphism
b. Amp orphism
c. Polymorphism
d. None of them
- 192) In a pond ecosystem porfundal none is missing because:
a. Pond is shallow
b. Water is turbid
c. Producers are less
d. Wateris turbulent
- 193) A concentrated solution has got:
a. Low solute potential
b. High water potential
c. High solute potential
d. Low pressure potential
- 194) If work is done at rate of 240 watt x min by a machine its power is:

- a. 240watt
 - b. 14400 watt
 - c. 4 watt
 - d. 120 watt
- 195) In which group all the elements do not belong to the same block and all the elements of valence electrons.
- a. 0 group
 - b. 1st group
 - c. 3rd group
 - d. 7th group
- 196) On strong heating orthoboric acid gives:
- a. Meta boric acid
 - b. Tetra boric acid
 - c. Boric anhydride
 - d. None of these
- 197) Which one of the following animals lays eggs?
- a. Scally ant eater
 - b. Spiny ant eater
 - c. Bat
 - d. Whale
- 198) The reverse process of photoelectric effect is:
- a. X-rays
 - b. Annihilation of matter
 - c. Materialization of energy
 - d. Pair production
- 199) The empirical formula of an acid is CH_2O . the probable molecular formula of acid may be:
- a. CH_2O_2
 - b. CH_2O_2
 - c. $\text{C}_2\text{H}_4\text{O}_2$
 - d. $\text{C}_3\text{H}_6\text{O}_4$