KMU/MDCAT 26-Nov Test

Total Number of MCQs: 200 Time: 3.5 Hours No Negative Marking

S.No	MCQs
1)	Cell death due to tissue damage is called? a) Apoptosis b) Necrosis c) Cancer d) Metastasis
2)	Autoclave chambers are used for of surgical instruments? a) Sterilization b) Filtration c) Desiccation d) Radiation
3)	The incubation period of syphilis is: a) 1-2 weeks b) 2-3 weeks c) 3-4 weeks d) 0-7 days
4)	Muscle fatigue results due to deficiency of _____ and excess accumulation of_____. a) Adenosine triphosphate, lactic acid b) Adenosine triphosphate, ionic imbalance c) Glucose, lactic acid d) Glucose, ionic imbalance
5)	A male or female child of an affected mother has 50% chance of acquiring the disorder. Such a disorder is a) X linked recessive disorder b) X linked Dominant disorder c) Y linked Dominant disorder d) Y linked recessive disorder
6)	Which is the factory for synthesis of sugar in autotrohic eukaryotes? a) Mitochondria b) Chloroplast c) Ribosome d) Amyloplasts
7)	The co enzyme NAD is made up of a) Vitamins b) Amino acids c) Nucleotides d) Sugar
8)	Storage diseases are caused by the excessive accumulation of substances withint he cell, due to defects (mutations) in one of the _____ enzymes. a) Amylase b) Lysosomal c) Lyase d) Lipase
9)	Function of the nucleolus is to form: a) Nuclear envelope b) Chromosome c) rRNA d) cytoplasm
10)	a shallow groove in cerebrum is called ___ and deep groove is called _____ a) sulcus, fissure b) fissure, sulcus c) gyrus, fissure d) fissure, gyrus
11)	which brings membrane potential to threshold? a) Influx of sodium ions across the post synaptic membrane b) Outflow of sodium ions across the post synaptic membrane c) Outflow of calcium ions across the post synaptic membrane d) Influx of potassium ions across the post synaptic membrane
12)	What alters the shape of enzymes and makes them functional a) Cofactor b) Other enzymes c) Proteins d) Both a and c
13)	Which of the following is known as the vessels of the vessels? a) Vasa vasorum b) Tunica media c) Tunica externa d) Tunica interna
14)	Which of the following is true about occurrence of erythroblastosis foetalls? a) Occurs when both father and mother are Rh +ive b) Occurs when both father and mother are Rh –ve

c) Occurs when mother is Rh +ive and father is Rh –ive
d) Occurs when mother is Rh – ive and father is Rh +ive

15) All are properties of water, EXCLUDINGS?
a) Universal solvent
b) Polar nature
c) Hydrogen bonding
d) Becomes denser when its freezes

16) Thymus gland is involved in maturation of which of the following?
a) Platelets
b) Eosinophils
c) B- Lymphocytes
d) T-Lymphocytes

17) Which component is present only in the cell wall of Gram-positive bacteria but NOT in Gram negative bacteria?
a) Teichoic acid
b) Lipids
c) Peptidoglycan
d) Periplasmic space

18) In brestfeeding mothers, which hormone would be at an increased level?
a) Prolactin
b) Thyroxin
c) Aldosterone
d) Insulin

19) Mendel's law of independent assortment can be explained by:
a) Behavior of chromosomes in mitosis
b) Behavior of chromosomes in meiosis
c) Gene behavior in mitosis
d) Both a and b

20) Which of the following is a rod shape virus?
a) Bacteriophage
b) Herpes virus
c) Hepatitis virus
d) Tobacco mosaic virus

21) Glucose is classified as a _____ ?
a) Monosaccharide
b) Disaccharide
c) Oligosaccharide
d) Polysaccharide

22) Which of the following is the opposite of condensation reaction?
a) Decarboxylation
b) Hydration
c) Dehydration
d) Hydrolysis

23) The cells of the nonvirulent strain of streptococcus pneumonia are
a) Capsulated and called S-type
b) Non-capsulated and called S-type
c) Capsulated and called R-type
d) Non-capsulated and R-type

24) The total number of cranial nerves in a human body are
a) 12 pairs
b) 24 pairs
c) 31 pairs
d) 62 pairs

25) Enzymes are _____
a) Carbohydrates
b) Proteins
c) Lipids
d) Can be lipids or proteins

26) Who proposed the concept that an organism can pass on acourred modification to its offsprings?
a) Lamarck
b) Darwin
c) Maithus
d) Aristotle

27) Cytotoxic T-cells _____
a) Directly kill invaders
b) Aid B cells in their job
c) Both a and b
d) Suppress T cell activity

28) A bacterium with single polar flagellum is:
A) Amphitrichous

b) Atrichous
c) Lophotrichous
d) Monotrichous

29) The genome of the human immunodeficiency virus (HIV) is made up of
a) cDNA
b) DNA
c) RNA
d) rRNA

30) Hip joints and shoulder joints are examples of
a) Cartilaginous joint
b) Synovial joints
c) Hinge joint
d) Ball and socket joint

31) Locus of a gene on a chromosome means its
a) position
b) Function
c) Start point
d) End point

32) The carotenoids absorbs light in the visible spectrum between _____ and ____ wavelengths.
a) 400-600nm
b) 630-700nm
c) 620-700nm
d) 500-600nm

33) The cells of the endoderm of coelentrerates are speciallised for
a) Excretion
b) Digestion
c) Defence
d) Respiration

34) Viruses are NOT classified based on
a) Morphology
b) Host specificity
c) Cell membrane
d) Envelop

35) An additional covering surrounds the cell wall of some bacteria that either prevents the bacteria from being phagocytosed by host cells or help them to make biofilm.
a) Capsule
b) Slime
c) Glycocalyx
d) Spore

36) The protein coat surrounding the genome of virus is called
a) Capsid
b) DNA sheath
c) Phage
d) Virold

37) In the non-cyclic electron transport of light reaction', the deficit of ____ electrons occur in the chlorophyll, as it absorbs energy.
a) 1
b) 2
c) 3
d) 4

38) What is the number of carbon atoms in Pyruvic acids?
a) 2
b) 3
c) 4
d) 5

39) Sucrose is hydrolyzed into:
a) Lactose and glucose
b) Lactose and fructose
c) Glucose and fructose
d) Glucose and galactose

40) _____ is the heat required to convert a gram of water into vapours at its boiling point.
a) Heat of vaporization
b) Specific heat capcity
c) Heat of ionization
d) Polarity of water

41) Which mode of genetic exchange between bacteria involves cell-to-cell contact between the bacterial cells?
a) Transduction
b) Transformation
c) Conjugation
d) A and B

42) _____ regulates the selective permeability of the plasma membrane, allowing movement of molecules according to the

needs of the cells.
a) Membrane proteins
b) Membrane carbohydrate
c) Membrane glycolipids
d) Membrane cholesterol

43) The neuron is said to be polarized when the
a) Inside of the plasma membrane has a negative energy compared to the outside.
b) Inside of the plasma membrane has a positive energy compared to the outside.
c) Inside of the plasma membrane has same energy compared to the outside.
d) Positive charge moves inside the neuron.

44) Which part of the brain plays a key role in long term memory?
a) Thalamus
b) Hippocampus
c) Hypothalamus
d) Amygdala

45) Which of the following is an example of hydrolase:
a) Transmethylase
b) Oxygenases
c) Peroxidase
d) Phosphatase

46) All of the following are true about Neutrophils, Except
a) most abundant form of WBCs
b) Have short life span
c) made by the thymus gland
d) released by the bone marrow

47) According to Neo-Darwanism, which one of the following is a case of evolution?
a) Reproductive isolation
b) Infinite large population
c) Environmental stability
d) Both a and b

48) Darwin's origin of species by natural select0ion is mainly concerned with
a) Origin of life
b) Adaptation
c) Extinction
d) Speciation

49) The sinoatrial node is located in the _____ wall of the right atrium.
a) Lower dorsal
b) Upper dorsal
c) On the interatrial septum
d) Near the coronary sinus

50) Where does the Trachea lies in relation to the esophagus?
a) Dorsal
b) Ventral
c) Medial
d) Lateral

51) Which of the following is true about bradykinin.
a) It is produced at the site of tissue injury.
b) It has no role in the leakage of fluids into the tissues in inflammation
c) It destroys phagocytes.
d) It produces interferon gamma.

52) Which of the following is a prokaryote?
a) Protista
b) E.coli
c) Amoeba
d) Fungi

53) Endospore formation is _____
a) A reproductive process
b) A vegetative process
c) Can be reproductive or vegetative depending on the conditions
d) Is related to invading host cells

54) Which among the following is not the role of sertoli cells?
a) Protects sperms
b) Provides liquid medium to sperms
c) Provides nourishment to sperms
d) Secrete testosterone

55) At the beginning of the menstrual phase the _____ are at the lowest level.
a) Follicle-stimulating horomone
b) Ganodotropins
c) Ovarian hormones
d) None of these

56) Which cartilage is found at the end of long bones?
a) Calcified
b) Elastic
c) Fibrous
d) Hyaline

57) How many actin filaments surrounds the myosin at each end?
a) 2 b) 4 c) 6 d) 8

58) When the Rh antibodies produced in Rh-ve persons?
a) Naturally before birth
b) Naturally after birth
c) After exposure to Rh antigen
d) After exposure to Rh antibodies

59) Which of the following types of Haemophilia is more common in the human population?
a) Haemophillia A
b) Haemophillia B
c) Haemophilia C
d) Haemophillia VI

60) Parazoa are simple multicellular animals which are believed to have evolved from?
a) Bacteria
b) Protists
c) Fungi
d) Plants

61) Which structure is responsible for the excretion in arthropods?
a) Nephron
b) Pronephridia
c) Metanephridia
d) Malpighlan tubles

62) Alternation of generation is the character of _____ phylum?
a) Annelida
b) Arthropoda
c) Coelenterate
d) Echinodermata

63) Which of the following can be effective in preventing viral infection in humans?
a) Taking antihistamines
b) Getting vaccinated
c) Applying antisseptics
d) Taking antibiotics

64) Purines are _____ nitrogenous bases.
a) Double ringed
b) Single ringed
c) Double bond
d) Single bond

65) What is 'Flavin adenine dinucleotide+?
a) Catalyst
b) Coenzyme
c) Cofactor
d) Enzyme

66) The cerebellum is primarily concerned with
a) Thinking and reasoning
b) Balancing during active movement
c) Temperature regulation
d) Initiation of muscular contraction

67) Adding substrates will NOT make a difference to the enzyme catalyzed reaction
a) When few enzyme molecules are left unsaturated
b) When the substrate cools down
c) When the substrate heats up
d) When many enzyme molecules remain unsaturated

68) All animals begin life as a _____.
a) Multicellular fertilized egg
b) Single fertilized egg
c) Hollow blastula
d) Gastrula

69) CHEMISTRY
X is a compound that do not react with Na metal but produces carboxylic acid when heated under reflux with acidified potassium dichromate?
a) Propanal
b) Propanone
c) Propan-1-ol
d) Propan-2-ol

70) which reaction will proceed in forward direction?
a) Kc=10
b) Kc=1
c) Kc=1/10
d) Kc=1/100

71) Which pair of ions have five unpaired d-electrosn?
a) Fe+2 and Mn+2
b) Fe+2 and Mn+3
c) Fe+3 and Mn+3
d) Fe+3 and Mn+2

72) Which one of the following is a nucleophile
a) H_2O

b) $AlCl_3$
c) BF_3
d) Cl_3

73) Which one is more metallic?
a) Na
b) Mg
c) Cs
d) K

74) Which of the following spectral lines series lies in the visible region?
a) Lyman series
b) Balmer series
c) Pfund series
d) Bracket series

75) Which of the following represents the functional group of acid halides?
a) R-OH
b) R-COX
c) R-X
d) R-COOH

76) Which of the following prefix is used when two methyl groups are attached with second last carbon of alkane chain?
a) N-
b) Iso-
c) Neo
d) Germinal

77) Which of the following organic acid does NOT have a COOH group?
a) Acetic acid
b) Ascorbic acid
c) Butyric acid
d) Picric acid

78) Which of the following cell reactions correctly represent the electrolysis of water?
a) $2H^+ + 2e \rightarrow H_2(g)$
b) $2H_2O + 2e \rightarrow H_2(g) + 2(OH^-)$
c) $2(OH^-) \rightarrow 2H_2O + O_2(g) + 4e$
d) $2H_3O \rightarrow O_3(g) + 4H + +4e$

79) Which method is generally used to prepare alkynes?
a) Dehydrologenation of vicinal dihalide
b) Hydrogenation of alkene
c) Hydrolysis
d) Hydration of alkene

80) which compound is formed when magnesium is reacted with 2 molecules of water?
a) $Mg(OH)_2$
b) $MgOH$
c) Mg_2OH
d) $Mg_2(OH)_2$

81) When an element occurs in different physical forms it is called ___
a) Antisotropy
b) Isomorphism
c) Polymorphism
d) Allotropy

82) What mass of $CaCO_3$ give 48.8 liters (measured at STP) of CO_2 on strong heating?
a) 100g
b) 150g
c) 200g
d) 300g

83) What is the reason of small atomic radii of sodium ions as compared to sodium atoms?
a) Electronegativity
b) Effective nuclear charge
c) Shielding effect
d) Electron affinity

84) What is the radius of 3rd orbit of electron of H-atom
a) 3.39 A°
b) 4.761 A°
c) 5.29×10^{11} A°
d) 9.7 A°

85) What is the other name of positive rays?
a) Canal rays
b) Magnetic rays
c) Quantum
d) Photon rays

86) What is the magnetic quantum number for S-orbital?
a) 2 b) 3 c) 5 d) 7

87) The volume of a fixed mass of gas is directly proportional to absolute temperature and constant pressure as stated by
a) daltons law
b) Boyles law
c) Avogadro's law
d) Charles law

88) The tautomer of propanol is
a) Propanal
b) Propanone

c) Methyl ethyl ether
d) Butanone

89) The substituent attached to the benzene ring that act as ring deactivator is
a) NO_2
b) COOH
c) Cl
d) NH_3

90) The specific heat of water is
a) 4.2 kj/mol/k
b) 4.2 j/g-k
c) 4.6 j/g/k
d) 42 j/g/k

91) The SI unit of pressure is
a) Pascal
b) mmHG
c) Torr
d) Atm

92) The reactant which consumes first in a chemical reaction is called?
a) Consumed reactant
b) Limiting reactant
c) Excess reactant
d) Non-reacted reactant

93) The number of particles (atoms, molecules, ions) in one mole of any substance is numerically equal to
a) 6.023×10^{23}
b) 6.023×10^{25}
c) 6.023×10^{-23}
d) 4.02×10^{23}

94) The final substitution product in the chlorination of methane in the presence of UV light and excess chlorine is
a) Methylene chloride
b) Carbon tetrachloride
c) Methylene dichloride
d) Chloroform

95) The element chlorine is found in a gaseous state while bromine is found in
a) Solid state
b) Liquid state
c) Crystalline forms
d) Condensed form

96) The correct sequence according to acidity of alcohols is
a) Primary > secondary > tertiary
b) Tertiary > secondary > primary
c) Secondary > primary > tertiary
d) Primary < secondary < tertiary

97) The correct order of reactivity of alkyl halides is
a) R-Br > R-Cl > R-F > R-I
b) R-Br > R-F > R-I > R-Cl
c) R-I> R-Br > R-Cl > R-F
d) R-Cl > R-I > R-Br > R-F

98) The bond that determines the secondary structure of a protein is
a) Co-ordinate bond
b) Covalent bond
c) Hydrogen bond
d) Ionic bond

99) Super batteries with high charge density are also called:
a) Primary batteries
b) Secondary batteries
c) Solar batteries
d) Fuel batteries

100) Silver Mirror with Tollens reagent is formed by
a) Acid halides
b) Alcohols
c) Ketones
d) Aldehydes

101) Select the correct IUPAC name among the following
a) 2-Bromo- 4 – chloro – 3 – iodopentane
b) 4 – bromo – 2 chloro – 3 – iodopentane
c) 4 – bromo – 2 – iodo – 3 – chloropentatne
d) 2 – chloro – 3 – iodo – 4 bromopentane

102) Oxidation of secondary alcohol gives which of the following product?
a) Aldehyde
b) Carboxylic acids
c) Ester
d) Ketone

103) One molecule of oxygen has the same mass as
a) 8 moles of helium
b) 16 moles of H_2

c) 2 molecular of CH_4
d) One gram atom of Sulphur

104) Lucas test is based on?
a) Order of reaction
b) Condition of reaction
c) Molecularity of reaction
d) Rate of reaction

105) Increasing the compressibility of a gas (Z) decreases its
a) Pressure
b) Volume
c) Temperature
d) Concentration

106) In the IUPAC system carboxylic acid is also called
a) Alkionic acid
b) Alkanoic acids
c) Alkenoic acid
d) Alkyl alkanote

107) In presence of which of the following wolf-kishner reduction of aldehydes is carried out?
a) Glycol with KOH
b) H_2 with Pd
c) LiAiH_4 *in water*
d) Zn-Hg with HCI

108) In following molecules which one has shortest C-C bond length
a) C_3H_8
b) C_2H_8
c) C_2H_4
d) C_2H_2

109) In crystalline structure, when length of all axes and angels are unequal then crystal will be
a) Cubic
b) Monocline
c) Orthorhombic
d) Triclinic

110) In a rate equation, rate = k[A][B], the reaction is
a) Zero order
b) First order
c) Second order
d) Third order

111) If the work is done by the system on the surroundings and heat is absorbed by the system from the surroundings the change in internal energy ΔE will be
a) $\Delta E = q + w$
b) $\Delta E = Q + (-w)$
c) $\Delta E = (-q) + (-w)$
d) $\Delta E = (-q) + w$

112) Humans are unable to digest:
a) Starch
b) Denatured protein
c) Cellulose
d) Fructose

113) H_2O has geometry
a) regular tetrahedrom
b) Linear
c) Distorted tetrahedral
d) Pyramidal

114) Greater the resonance energy of a molecule
a) Higher will be its reactivity
b) Lower will be its stability
c) Higher will be its stability
d) Higher will be its density

115) For an endothermic reaction H represents the enthalpy of reaction. The minimum value for the energy for activation will?
a) Equal to delta H
b) More than delta H
c) Less than delta H
d) Zero

116) Flame tests identify alkali metals when they are burnt. Which of the combination given is the correct one?
a) Li : red
b) Na : lilac
c) K: red
d) Cs: yellow

117) Enantiomers are examples of
a) Cis isomers
b) Trans isomers
c) Optical isomers
d) Geometric isomers

118) Compound X reacts with Grignard's reagent to produce tertiary alcohols. Which is the compound?
a) Aldehyde
b) Ketone
c) Acid halide
d) Carboxylic acid

119) Brass is an alloy of
a) Copper and iron
b) Copper and magnesium

c) Copper and zinc
d) Copper and silver

120) An unknown element having electronic configuration (Na) 5s2, 5p5. Will be
a) Metal of II-A group
b) Metalloid of V-A group
c) Non-metal of VII-A group
d) Non-metal of V-A group

121) Amount of heat absorbed, when one mole of liquid changes to gas at its boiling point is called
a) Molar heat of sublimation
b) Heat of vaporization
c) Latent heat of fusion
d) Heat capacity

122) A well-known physical change is melting of ice. The melting of ice is favored by
a) Lower P, high T
b) Low T, high P
c) High T, high P
d) Low T, low P

123) PHYSICS

_____ law states that the magnitude of the force between 2-pint charges is directly proportional to the product of the magnitudes of the charges and inversely proportional to the square of the distance between them
a) Ohm's law
b) Gauss law
c) Coulomb's law
d) Len's law

124) A ball thrown vertically upwards will have constant _____ and a varying _____.
a) Velocity and acceleration
b) Kinetic energy, velocity
c) Acceleration, velocity
d) Kinetic energy and acceleration

125) A boy raises an object of mass 10Kg vertically above his head through a height of 5m. the potential energy stored in the body is
a) 49j b) 98j
c) 490j d) 980j

126) A magnetic is suspended from a spring and its oscillates in and out of a coil placed vertically below it. A galvanometer is connected to the coil and it shows?
a) No deflection
b) Deflection on one side only
c) Deflection to the left and right with constant amplitude
d) Reflection to the left and right with decreasing amplitude

127) A man standing in an elevator at the third floor of a building what is the primary factor that determines the man's kinetic energy?
a) High height above the ground
b) His mass
c) Elevator's speed
d) Elevator's direction of movement

128) A resister has a resistance of 200 ohms. If a current of 0.5 amperes flows through it, what is the voltage drop across the resistor?
a) 400 volts b) 110 volts
c) 120 volts d) 0.002 volts

129) A three-dimensional image of remarkable quality can be achieved by modern version of microscope called:
a) Compound microscope
b) Simple microscope
c) Transmission electron microscope
d) Scanning electrons microscope

130) A train travels on a straight track passing signal A at 20 m/s. it accelerates uniformly at 2 m/s^2 and reaches signal 100m further than A, at B the velocity of the train in m/s is
a) 10 b) 20 c) 28 d) 56

131) A wave is characterized by three physical parameters
a) Amplitude, wavelength and acceleration
b) Frequency, wavelength and acceleration
c) Wavelength, frequency and speed of wave
d) Displacement, wavelength and speed of wave

132) Accelerating electromagnetic charges radiate electromagnetic waves which propagate at the
a) Speed of electromagnetic waves
b) Frequency of light
c) Speed of light
d) Frequency of electromagnetic waves

133) K-a rays are generated when transition of an electron occurs from:
a) K to M shell
b) L to M shell
c) L to K shell
d) M to L shell

134) The decay constant of sodium (Na) is 0.000128 /s. the half-life of sodium is
a) 15 hours
b) 5 hours
c) 900 s
d) 3600 s

135) At the end of 14 min, 1/16 of a sample of radioactive polonium remains. The corresponding half-life is
a) (7/8) min b) (8/7) min
c) (7/4) min d) (7/2) min

136) According to Bohr's model of the hydrogen atom, electrons move in specific orbit around the nucleus called
a) Quanta b) Shell
c) Clouds d) Wavelength

137) According to first law of thermodynamics. What is the relationship between the change in the internal energy of a closed system ΔU, the heat added to the system (Q) and the work done by the system (W)
a) $\Delta U = Q + W$ b) $\Delta U = Q - W$
c) $\Delta U = QxW$ d) $\Delta U = Q/W$

138) Angular displacement is measured in
a) Degrees b) Revolution
c) Radius d) All of these

139) Centrifugal force
a) mv^2/r b) m^2v/r
c) mv/r^2 d) mv2/r

140) circular periodic waves can be generated
a) in a ripple tank using spherical dippers
b) using electromagnetic vibrator
c) by giving sudden up and down movement to a rope with one fixed end
d) all of the above

141) if a moving object has no force acting on it
a) it will decelerate and eventually stop
b) continue to move in a straight line at constant velocity
c) it will stop immediately
d) its velocity will increase while moving in a straight line

142) if the acceleration of a body in one inertial frame is zero, its acceleration in any other inertial frame is
a) increased
b) also zero
c) is decreased
d) increased and then decreased

143) if the amount of work W is required to move a charge Q from one point to another then the potential difference between the two points is given by
a) v = W/Q
b) V=Q/W
c) Q=W/V
d) Q=V/W

144) In a magnetic field, a photon passing through it are deflected towards
a) North pole
b) South pole
c) Opposite pole
d) None of these

145) In special theory of relativity, the law of conservation of energy and law of conservation of mass have been replaced with
a) The law of conservation of mass only
b) Law of conservation of mass-energy
c) Law of conservation of energy only
d) All of the above

146) In three dimensional Cartesian Coordinate system (x,y,z), you have two vectors A and B.vectors has components Ax=4, Ay=-3 and Az=2, while vector B has component Bx=1, By=5 and Bz=-2. What is the dot (scalar product) of vectors A and B?
a) -23
b) 23
c) 0
d) -19

147) In case of Doppler effect, the apparent frequency will be _____ the actual frequency when the source move towards

the stationary observer.
a) Less than
b) More than
c) Equal to
d) None of these

148) Magnetic flux is maximum when the angle between the magnetic field and the normal to the plane of finite area is
a) Zero degree
b) 90 degree
c) 60 degree
d) 30 degree

149) Measure of displacement covered with passage of time is called
a) Acceleration
b) Speed
c) Velocity
d) Deceleration

150) Newton's 3rd law of motion is correlated with
a) Law of conservation of energy
b) Law of conservation of momentum
c) Law of conservation of velocity
d) All of these

151) Ohm's law states that the current is directly proportional to _____ and inversely proportional to _____
a) Resistance, current
b) Resistance, voltage
c) Voltage, current
d) Voltage, resistance

152) The ability to produce an electromotive force by changing the magnetic field inside a coil is used to generate.
a) Mechanical energy
b) Electricity
c) Electromagnetic force
d) Magnetic energy only

153) The absolute potential energy of a spaceship on the surface of the earth is
a) $GmMe/Re^2$
b) GmMe/Re
c) GmMe/2Re
d) – Gme/Re

[redacted]
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154) The bird perching on a high-power line does not get electric chock. This is because
a) The whole body of the bird sitting on the live wire is at the same potential and hence no current flows through the body
b) The whole body of the bird sitting on the live wire is a zero potential and hence no current flows through the body
c) Because the air medium between the live wire and the earth contains large number of charge particles
d) Because the air medium between the live wire and the earth contains large number of electrons

155) The capacitance of capacitor depends upon
a) Area of the plates
b) Distance between the palates
c) Dielectric between them
d) All of these

156) The compton's effect is the phenomenon that describes
a) The scattering of the light by prism
b) The bending of light when it passes from one medium to another
c) The change in the wavelength of x-rays when the interact with matter
d) The creation of interference patterns in a double-slit experiment

157) The current produced by a generator is called
a) Direct current
b) Pulsating current
c) Alternating current
d) Variable current

158) The device used to adjust voltage levels in an electrical circuit is called
a) Voltage regulator
b) Circuit breaker
c) Capacitor
d) Transformer

159) The distance covered by sound wave per unit time is called
a) Speed of sound wave
b) Velocity of sound wave
c) Wavelength of sound wave

d) Amplitude of sound wave

160) The domestic electricity supply has a frequency of
a) 150Hz b) 50Hz
c) 100hz d) 300hz

161) The instantaneous power supplied to a circuit is a product of the _____ and _____
a) Instantaneous current, instantaneous voltage
b) Instantaneous power, instantaneous voltage
c) Instantaneous voltage, instantaneous conductance
d) Instantaneous current, instantaneous power

162) The number of wave passing through a certain point in unit time is called
a) Wave speed
b) Time period of wave
c) Wavelength
d) Frequency of waves

163) The primary purpose of rectification in an electrical circuit is to
a) Convert direct current (DC) into alternating current (AC)
b) Smooth out voltage fluctuations
c) Convert AC to DC by allowing current to flow in one direction
d) Amplify electrical signals

164) The radial acceleration is also considered as
a) Angular acceleration
b) Centripetal acceleration
c) Tangential acceleration
d) Translatory acceleration

165) The resistance of the conducting material depends upon
a) The nature of the conductor
b) Dimension of the conductor
c) Physical state of the conductor
d) All of these

166) The SI unit of capacitance is
a) Watts
b) Henry
c) Farad
d) Joules

167) The SI unit of electric potential is
a) Volt
b) Coulomb
c) Ampere
d) Ohm

168) The thermal energy required to cause a unit temperature rise is called
a) Heat capacity
b) Heat volume
c) Heat conductance
d) Heat energy / unit volume

169) The wave in which the particles of the medium vibrate about their mean position along the direction of propagation of the waves are called
a) Longitudinal waves
b) Transverse waves
c) Mechanical waves
d) Electromagnetic waves

170) There are 2 pianos playing the same note, however the vibration from one piano is 223.20 Hz and that of the other is 223.50 Hz. The beat frequency between the two tones will be?
a) 0.30 Hz
b) -0.30 Hz
c) 0Hz
d) 223.35 Hz

171) Weber is the unit of
a) Electric potential
b) Electric intensity
c) Magnetic intensity
d) Magnetic flux

172) What happens to a football which is inflated in a warm room, is used to play outside in cold weather?
a) It will expand due to expansion of the air molecules
b) It will deflate due to contraction of the air molecules
c) Its size will not be affected by the change in temperature
d) It will brust.

173) What is the rest mass of a photon?
a) Zero
b) Equal to the mass of electron
c) Equal to the mass of proton
d) Infinite

174) Which of the following best describes inertia?
a) The force of gravity acting on an object

b) The resistance of an object to a change in its state of motion
c) The weight of an object
d) The acceleration of an object due to applied force

175) Which of the following material have negative temperatures coefficient?
a) Germanium and silicon
b) Germanium and iron
c) Iron and silicon
d) Iron and copper

176) Which of the following quantities is correctly matched to its unit?
a) Electric charge : ampere (A)
b) Current :volt (V)
c) Electric power: watt (W)
d) Resistance : coulomb

177) ENGLISH
_____going to sleep, I like to read for half an hour.
a) After
b) Before
c) As soon as
d) While

178) We are all looking forward ____ the announcement of election soon.
a) For
b) To
c) About
d) On

179) The dogs _____ escaped.
a) Did
b) Has
c) Had
d) Will

180) Maria _____ that she could not attend classes next week.
a) Told to her professors
b) Said her professor
c) Told her professors
d) Is telling her professors

181) _____ you like to cup of coffee?
a) May
b) Shall
c) Can
d) Would

182) The synonyms for promptly is
a) Slovenly
b) Instantly
c) Diligently
d) Intelligently

183) The police _____ arrest the suspect.
a) Has
b) Have
c) Be
d) Been

184) How much spoonfuls of sugar would you like in your tea? Identify the part of the sentence that carries error:
a) Much
b) Sugar
c) Like
d) In

185) The phrase "spiffed up' stands for
a) Dressed up
b) Cleaned up
c) Upset
d) Fade

186) In prolonged space flight, besides the obvious hazards of meteors, rocky debris, and radiation, astronauts will have to deal with nuscle atrophy brought on by weightlessness; therefore. When they return to Earth, they face a protracted period of weight traning to rebuild their strength. What is the most likely meaning of the word 'debris' as it is used in this passage?
a) Fragments
b) Decay
c) Bacteria
d) Alien life

187) The money, property, etc that is used to start or operate a business is called
a) Cost
b) Asset
c) Capital investment
d) Fiscal status

188) The queen of English bestowed' a little upon the man who saved her life from a fatal accident. What does the word EBSTWED means?

a) Conferred
b) Discard
c) Withdrawn
d) Retailed

189) Correct the given sentence: I like cats, I hate dogs.
a) I like cats; I hate dogs
b) I like cats I hate dogs
c) I like cats' I hate dogs
d) I like cats but I hate dogs

190) Add suitable conjunction in the given sentence. Your ice cream will melt, you should eat it quickly
a) Your ice cream will melt so you should eat it quickly
b) Your ice cream will melt however you should eat it quickly
c) Your ice cream will melt so that you should eat it quickly
d) Your ice cream will melt, however you should eat it quickly

191) Chose the correct sentence
a) These scissors are very sharp
b) This scissors is very sharp
c) This scissor is very sharp.
d) These scissor are very sharp

192) Choose the sentence with correct word order.
a) Sue took from the window the cover
b) Sue cover from the window took the cover
c) Sue took the cover from the window
d) Sue the cover took from the window

193) To cut off the heat". Idiom means:
a) Defrock
b) Decapitate
c) Impaled
d) Urbanite

194) 171. Choose the correct option. We must _____ the tickets for the movie in advance.
a) Remove
b) Take
c) Draw
d) Buy

195) LOGICAL REASONING
Read the paragraph carefully and answer the question given.
"over the past century the businessman has helped build civilization's great cities, provide people with luxuries and lift his fellow citizens to certain. Standard of living. Further seeding the industrial revolution around the world.
The passage best supports the statement that the businessman.
a) Is accountable to the society
b) Provides seeds to agricultural sector
c) Is the beneficiary of the industrial revolution
d) Has contributed to the growth of civilization.

196) Some months have 31 days, how many have 28?
a) One month and that is February
b) February, every 4 years
c) All months have 28 days.
d) None of the above

197) Read the following and choose the correct answer. (Mice are to cats as goat are to.)
a) Snakes
b) Hippos
c) Horses
d) Lions

198) Read the following statements and identify the best cause and effect relation.
i. For the past four years, the district's literacy rate has been rising.
ii. The district administration organized a through training program for the volunteers working o on the literacy campaign
a) II is the cause and I is its effect.
b) I is the cause and II is its effect.
c) I and II are effects of some common cause
d) I and II are both effects of independent causes.

199) Observer the pattern and select the next term in the sequence:
$P_2QR, P_4QS, P_2QT,$ _____, P_1QV
a) P_2QU
b) PQ_1U_2
c) P_2QU
d) PQ_2U

200) Statement: due to increasing pollution, the government bans the use of all single-use plastic products from next year
Courses of action:

i. An awareness campaign is introduced by the government to encourage people to use eco-friendly products.
ii. Subsidies to be provided to companies that manufacture eco-friendly products.

a) Only I follows
b) Only II follows
c) Neither I nor II follows
d) Both I and II follows

KMU-MDCAT 2023 ANSWER KEY 26TH Nov, 2023

	CODE A	CODE B	CODE C	CODE D
1	d	b	d	c
2	a	a	a	d
3	d	b	d	a
4	d	a	b	d
5	a	b	c	b
6	b	b	c	c
7	a	c	a	c
8	a	b	b	a
9	d	c	b	b
10	c	a	c	d
11	d	a	d	a
12	a	a	a	d
13	d	a	d	d
14	b	d	d	a
15	c	d	a	b
16	c	d	b	a
17	a	a	a	a
18	b	a	a	d
19	b	b	d	b
20	c	d	c	b
21	a	a	a	b
22	c	d	c	a
23	a	d	a	b
24	a	a	a	b
25	b	b	b	c
26	d	a	d	a
27	c	a	c	c
28	a	d	a	a
29	d	c	d	a
30	b	d	b	b
31	b	a	b	d
32	a	d	a	c
33	b	b	b	a
34	b	c	b	d
35	d	c	d	a
36	c	a	c	a
37	d	b	d	a
38	c	b	c	d
39	c	c	c	d
40	a	a	a	d
41	b	c	b	a
42	d	a	d	a
43	c	a	c	b
44	b	b	b	a

45	a	d	a	b
46	b	c	b	b
47	b	a	b	c
48	a	d	a	b
49	b	b	b	a
50	b	b	a	b
51	a	a	a	b
52	b	b	b	b
53	a	b	b	a
54	b	d	a	b
55	b	c	b	b
56	c	d	a	d
57	b	c	b	c
58	c	c	b	d
59	a	a	c	c
60	a	b	b	c
61	a	d	c	a
62	a	c	a	b
63	d	b	a	d
64	d	a	d	c
65	d	b	d	a
66	a	b	d	c
67	a	a	a	b
68	b	b	a	a
69	c	a	a	c
70	b	a	d	c
71	c	d	b	c
72	c	a	d	a
73	b	c	d	b
74	c	b	a	d
75	a	b	a	a
76	b	c	c	c
77	c	d	a	d
78	c	b	b	d
79	c	a	b	d
80	b	a	a	c
81	c	d	*	b
82	d	*	a	a
83	d	b	d	a
84	a	b	b	*
85	b	a	b	b
86	c	*	d	d
87	d	d	c	d
88	c	b	a	a
89	d	*	b	a
90	a	b	c	c
91	d	a	c	b

92	d	b	a	a
93	c	a	*	c
94	c	b	b	b
95	a	b	c	b
96	b	a	b	b
97	b	c	d	c
98	a	c	b	c
99	b	d	b	c
100	a	d	c	c
101	b	a	d	d
102	*	d	a	b
103	b	c	c	d
104	d	d	*	c
105	*	c	a	a
106	a	b	c	c
107	b	a	b	a
108	b	d	b	b
109	*	d	c	b
110	d	c	d	b
111	a	a	c	*
112	a	c	b	a
113	b	c	c	b
114	d	c	a	b
115	c	b	a	*
116	b	a	c	b
117	b	c	d	d
118	c	b	d	b
119	a	c	b	c
120	d	c	b	d
121	a	b	d	a
122	a	c	c	a
123	c	c	c	c
124	b	c	a	a
125	a	c	b	b
126	a	d	a	*
127	a	b	b	*
128	d	*	d	c
129	a	d	a	c
130	b	c	a	c
131	d	c	a	b
132	a	c	a	d
133	b	c	c	d
134	c	a	d	c
135	b	d	b	d
136	c	b	c	c
137	b	b	d	c
138	c	d	a	d

139	b	a	b	a
140	a	a	a	b
141	b	b	d	a
142	a	b	c	b
143	b	a	c	a
144	d	d	a	b
145	a	b	d	a
146	c	*	c	b
147	b	b	d	b
148	a	a	a	b
149	c	c	b	b
150	a	b	b	a
151	d	d	d	b
152	c	b	b	a
153	d	b	c	c
154	a	a	a	a
155	*	d	b	d
156	d	c	*	d
157	c	c	b	d
158	d	d	d	c
159	c	a	a	b
160	b	b	b	d
161	c	a	b	c
162	b	d	a	b
163	a & d	c	a	b
164	*	b	d	b
165	b	d	b	d
166	d	c	b	c
167	a	a	c	a
168	c	a	c	a
169	b	a	c	c
170	d	a	d	a
171	c	d	*	d
172	d	b	b	c
173	b	a	d	d
174	c	b	c	a
175	a	a	c	a
176	d	c	c	b
177	b	b	c	c
178	b	b	a	a
179	a	c	d	d
180	a	c	a	a
181	a	d	a	c
182	c	b	c	c
183	a	b	b	d
184	d	a	d	b
185	a	a	b	b

186	a	a	b	a
187	c	c	c	a
188	b	a	c	a
189	d	d	d	a
190	b	a	b	c
191	b	a	b	b
192	c	b	a	d
193	c	b	a	b
194	d	d	a	b
195	a	d	d	d
196	b	c	a	c
197	b	d	c	d
198	a	a	d	d
199	d	c	c	a
200	c	d	d	c

*** One mark awarded after subject expert validation**