

# University of Health Sciences, Lahore

Total MCQs: 200



Max. Marks: 200

**MDCAT - 2019**  
Time Allowed: 150 Minutes

**Instructions:**

1. Read the instructions and the MCQ Response Form carefully.
2. Choose the **Single Best Answer** for each question.
3. Candidates are strictly prohibited from giving any identification marks except Roll No. & Signature in the specified columns only.

## FILL YOUR PAPER ID IN THE RESPONSE FORM

1. The Question paper ID of each candidate is printed on the first page of his/her Question Paper Booklet.
2. The candidates are only required to fill the correct circle in the Response Form against the first row of circle marked as ID as indicated in the figure.
3. Failure to fill the ID properly as per the instruction shall lead to incorrect evaluation of the Response Form for which the University shall not be responsible.

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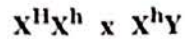
## BIOLOGY

- Q.1** Sara is a chemistry student who is carrying out an experiment between an alcohol and acetic acid in the laboratory. The product formed at the end of the experiment will be:
- A) Glycogen and water molecule  
B) Glucose and oxygen  
C) An ester and water molecule  
D) Glycerol and Sulfuric acid
- Q.2** The finger like infoldings which are formed by inner membrane of mitochondria are called:
- A) Ribosomes  
B) Matrix  
C) Porin  
D) Cristae
- Q.3** The main neurotransmitter for synapses is \_\_\_\_\_ which lie outside the central nervous system.
- A) Acetylcholine  
B) Acetaldehyde  
C) Choline  
D) Phosphatidylcholine
- Q.4** The structure present in a eukaryotic cell but absent in prokaryotic cells is
- A) DNA  
B) Ribosomes  
C) Cell surface membrane  
D) Nucleus
- Q.5** If water has high latent heat of vapourisation, how this property of water could be helpful to plants and animals?
- A) With the release of large amount of water vapours, a small amount of heat loss can take place.  
B) With the release of small amount of water vapours, a great amount of heat loss can take place.  
C) It will keep their temperature very high.  
D) No cooling effect with the release of even large amount of water vapours.

- Q.6** Which cell organelle is responsible for cell secretion?  
 A) Chloroplast  
 B) Golgi body  
 C) Ribosome  
 D) Mitochondrion
- Q.7** Now-a-days every new born gets regular shots of vaccine for polio. It contains \_\_\_\_\_ for polio to make a child immune against this disease.  
 A) Antibiotics  
 B) Antibodies  
 C) Antigens  
 D) Antisera
- Q.8** Change in frequency of alleles that occurs by chance is called as:  
 A) Genetic drift  
 B) Mutation  
 C) Migration  
 D) Natural selection
- Q.9** Lipids contain double amount of energy as compared to the same amount of carbohydrates due to the presence of:  
 A) Higher proportion of C-H bonds  
 B) Higher proportion of C-O bonds  
 C) Higher proportion of Oxygen  
 D) Lower proportion of C-H bonds
- Q.10** The phase of mitosis in which sister chromatids move towards opposite poles:  
 A) Anaphase  
 B) Metaphase  
 C) Prophase  
 D) Telophase
- Q.11** Starch is present in tubers, fruits and grains but absent in animal cells, instead animals have a substance stored in liver and muscles known as:  
 A) galactose  
 B) glucagon  
 C) glycogen  
 D) glucose
- Q.12** Thin filaments of muscles contain \_\_\_\_\_ chains of actin molecules.  
 A) Two  
 B) One  
 C) Three  
 D) Four
- Q.13** The reflex action is the phenomena which only involves:  
 A) receptors and effectors  
 B) receptors, effectors and spinal cord  
 C) brain, receptors, spinal cord  
 D) receptors, neurons, brain
- Q.14** Complementary DNA molecule is  
 A) DNA from mRNA  
 B) an artificial DNA  
 C) single stranded DNA  
 D) a small segment of chromosomal DNA
- Q.15** What is common in both Competitive and Non- Competitive Inhibition ?  
 A) Feedback Inhibition  
 B) Irreversible Inhibition  
 C) Non- Reversible Inhibition  
 D) Reversible Inhibition
- Q.16** Meselson and Stahl transferred few bacteria grown in  $N^{15}$  medium to  $N^{14}$  medium for replicating their DNA. What would be the result after two rounds of replication?  
 A) 100% heavy duplex  
 B) 100% hybrid duplex  
 C) 50% hybrid duplex and 50% heavy duplex  
 D) 50% hybrid duplex and 50% light duplex
- Q.17** In an action potential, the permeability of sodium ions in the neurons increases due to:  
 A) Repolarization  
 B) Sodium ions forming an ionic bonding  
 C) The opening of sodium channels/gates  
 D) The action of the acetylcholinesterase enzyme
- Q.18** In which situation, Genes are not assorted independently during Meiosis in a chromosome?  
 A) When genes are linked and their loci are close to each other.  
 B) When some genes have mutated on the chromosome.  
 C) When there are too many Genes on a chromosome.  
 D) When genes are not linked and their loci are far apart.

- Q.19** During spermatogenesis, the \_\_\_\_\_, which are haploid cells eventually mature into spermatozoa/mature sperms:
- A) Spermatogonia  
B) Primary spermatocytes  
C) Spermatids  
D) Secondary spermatocytes
- Q.20** Site of protein synthesis is:
- A) Lysosomes  
B) Ribosomes  
C) Cisternae  
D) Golgi body
- Q.21** The photosynthetic pigments of plants are arranged as clusters in thylakoid membranes. The reaction centers of these clusters consist of \_\_\_\_\_ molecules
- A) Chlorophyll  
B) ATP  
C) Carotenoids  
D) Glucose
- Q.22** Acetylcholine and Noradrenaline are two types of \_\_\_\_\_ used in our nervous system.
- A) Enzymes  
B) Channel and carrier proteins in the cell membrane of a Neurone.  
C) Neurotransmitters  
D) Hormones
- Q.23** The type of energy reduced by the enzymes for biological reactions to occur is called the:
- A) Light Energy  
B) Heat energy  
C) Active energy  
D) Activation energy
- Q.24** The prokaryotes possess small ribosome of size:
- A) 70S  
B) 65S  
C) 60S  
D) 40S
- Q.25** Homozygous means:
- A) alleles in an organism  
B) two different alleles of a gene.  
C) having two identical genes  
D) having two identical alleles of a gene.
- Q.26** Most proteins are made up of:
- A) 10 types of Amino acids  
B) 20 types of Amino acids  
C) 170 types of Amino acids  
D) 16 types of Amino acids
- Q.27** The route of urine excretion from kidney to outside of body is:
- A) Kidney→ureter→urinary bladder→urethra  
B) Urinary bladder→ kidney→ureter→urethra  
C) Kidney→urethra→urinary bladder→ureter  
D) Kidney→ureter→urethra→urinary bladder
- Q.28** In genetics, the term locus refers to the \_\_\_\_\_ of the gene on the chromosome.
- A) Position  
B) Frequency  
C) Copy  
D) Inversion
- Q.29** Glycolysis takes place in the \_\_\_\_\_ of cell.
- A) Nucleus  
B) Mitochondria  
C) Golgi complex  
D) Cytoplasm

- Q.30** If a carrier haemophilic female ( $X^H X^h$ ) is married to a haemophilic male ( $X^h Y$ ). What will be the ratio of presence of haemophilia in the children. Select best answer from given condition.



- A) 100% all females and males will be haemophilic  
 B) females have 50% chances of getting haemophilia and males will be 100% haemophilic  
 C) carrier female 25%, haemophilic female 25%, 25% normal male and 25% haemophilic male.  
 D) females and males both have 50% chances of getting haemophilia
- Q.31** A disease caused by gradual breakdown of the thin walls of alveoli is \_\_\_\_.
- A) Tuberculosis  
 B) Asthma  
 C) Emphysema  
 D) Bronchitis
- Q.32** Substances responsible for increasing the set point of the hypothalamus are called:
- A) Androgens  
 B) Pyrogens  
 C) Pepsin  
 D) Prions
- Q.33** DNA polymerase enzyme for PCR is isolated from bacteria *Thermus aquaticus* because
- A) It can work at high speed  
 B) It can withstand high denaturation temperature.  
 C) It can withstand low denaturation temperature.  
 D) It can be used again and again.
- Q.34** Which of the following photosystem is involved in cyclic photophosphorylation?
- A) PS II  
 B) PS I  
 C) PS I and PS II  
 D) PS III
- Q.35** Which hormonal pair would maintain the endometrium and make it receptive for implantation of embryo?
- A) Luteinising Hormone and Progesterone  
 B) Estrogen and Progesterone  
 C) Estrogen and Follicle Stimulating Hormone  
 D) Luteinising Hormone and Follicle Stimulating Hormone
- Q.36** The thick filaments in a myofibril of muscles are made of \_\_\_\_\_.
- A) Myoglobin  
 B) Myosin  
 C) Actin  
 D) Haemoglobin
- Q.37** If sequence in DNA is CCCTAGAG, then what would be the sequence in messenger RNA after transcription ?
- A) GGAUCUC  
 B) GGGATCTC  
 C) GGAAUCUC  
 D) GGGTCTC
- Q.38** In chemiosmosis the proton ( $H^+$ ) pumps moves from \_\_\_\_.
- A) Stroma to Lumen  
 B) Cytoplasm to Stroma  
 C) Lumen to Stroma  
 D) Stroma to cytoplasm
- Q.39** Microtubule subunits (for spindle fibers) are synthesized in \_\_\_\_\_ phase.
- A) G<sub>1</sub>  
 B) M  
 C) G<sub>2</sub>  
 D) S
- Q.40** How many molecules of ATP would be utilized for phosphorylation of one glucose molecule during glycolysis?
- A) Three  
 B) Two  
 C) Four  
 D) One
- Q.41** The function of calcium ions in muscle contraction is to:
- A) Polarize visible light  
 B) Aid in the transmission of nerve impulse  
 C) Bind to troponin molecule and cause them to move  
 D) Bind to tropomyosin molecule and cause them to form cross bridges

**Q.42** According to the theory of natural selection, organisms produce:

- A) Offspring according to the resources available  
 B) Less offspring than supported  
 C) Offspring to create resources  
 D) More offspring than supported

**Q.43** A person was married to his cousin and both are heterozygous for sickle cell anemia. Among their four kids, what will be proportion of affected homozygotes?

- A) 75%  
 B) 50%  
 C) 100%  
 D) 25%

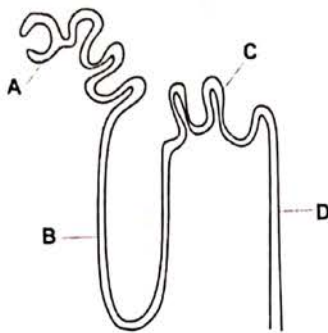
**Q.44** The major function of Basophils is to:

- A) Destroy small particles by phagocytosis  
 B) Release heparin to prevent blood clotting  
 C) Transport oxygen  
 D) Inactivate inflammation producing substances

**Q.45** Which enzyme is administered to the patients of Severe Combined Immunodeficiency Disease (SCID) ?

- A) Adenosine Deaminase (ADA)  
 B) Pancreatic Enzyme  
 C)  $\beta$ -galactosidase  
 D)  $\beta$ -lactamase

**Q.46** Given below is the diagram of nephron without vascular supply.



What is name of Part C ?

- A) Collecting tubule  
 B) Proximal tubule  
 C) Distal tubule  
 D) Loope of Henle

**Q.47** Inside ovary, primary oocyte divides through first meiotic division forming two haploid cells, secondary oocyte and:

- A) Ovum  
 B) Oogonium  
 C) Follicle cell  
 D) Polar body

**Q.48** Transgenic mice have been used to produce:

- A) Extra hair  
 B) A growth hormone  
 C) Protein rich milk  
 D) Protein rich meat

**Q.49** In plants, which sugar is transported from source to sink through sieve tubes?

- A) Glucose  
 B) Sucrose  
 C) Fructose  
 D) Starch

**Q.50** Which of the following hormone stimulates the ovulation from the follicle into oviduct?

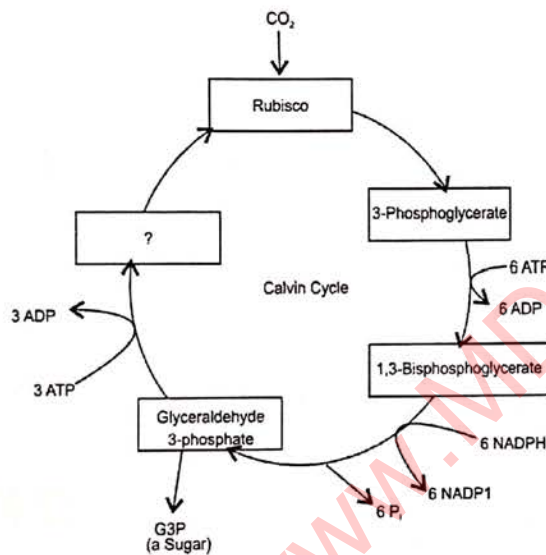
- A) Estrogen  
 B) Progesterone  
 C) Luteinizing hormone  
 D) Follicle stimulating hormone

**Q.51** Which one is an example of a Nucleotide?

- A) Adenosine  
 B) NAD  
 C) ATP  
 D) Guanine

- Q.52** Four plants are present in different environmental conditions. Plant A is present in warm climate with continuous rainfall, plant B is present in a cool forest, plant C is present in warm climate with little breeze while plant D is present in warm climate with high wind speed. Which one of the above plants will have highest rate of transpiration?
- A) Plant B  
B) Plant D  
C) Plant A  
D) Plant C
- Q.53** Capsid, the protective coat of a virus is made up of \_\_\_\_\_ subunits known as capsomeres.
- A) DNA  
B) RNA  
C) Protein  
D) Lipid
- Q.54** If stimulation is above \_\_\_\_\_, impulses travel to the brain along the sensory neuron.
- A) Recovery Period  
B) Resting Potential  
C) Action Potential  
D) Threshold
- Q.55** The covalent bond or bridge between two monosaccharides to form a disaccharide is called a:
- A) Hydroxyl bond  
B) Hydrogen bond  
C) Carboxyl bond  
D) Glycosidic bond
- Q.56** The structure of a fibrous protein comprises of polypeptide chains in the form of:
- A) Cluster  
B) Spherical or curled up ball  
C) Long strands or fibrils  
D) Flat uncoiled chains
- Q.57** Taxonomy includes the arrangement of organisms into different taxa. Which of the following represents the correct hierarchy of various taxa of classification?
- A) Species, genus, family, order, class, phylum  
B) Order, family, class, phylum, kingdom  
C) Species, genus, family, class, order, phylum  
D) Species, genus, order, family, class, phylum
- Q.58** The Plasmid pBR322 has antibiotic resistance genes for:
- A) Streptomycin  
B) Ampicillin and Tetracycline  
C) Tetracycline and Doxycycline  
D) Doxycycline and Ampicillin
- Q.59** Which of the following blood vessels contain semilunar valves?
- A) Arteries  
B) Capillaries  
C) Veins  
D) Arterioles
- Q.60** The main nitrogenous excretory product of humans is:
- A) Ammonia  
B) Urea  
C) Ammonium  
D) Uric acid
- Q.61** Water and Minerals move down their concentration gradient through plasmodesmata, to cells of cortex, endodermis, pericycle and then to sap in the xylem cells. This is also known as the
- A) Vacuolar pathway  
B) Apoplastic pathway  
C) Symplastic Pathway  
D) Mineral absorption Pathway
- Q.62** If 15  $\mu\text{m}$  size object is observed under light microscope using 5X eyepieces and 10X objective, its magnified image size will be:
- A) 750  $\mu\text{m}$   
B) 500  $\mu\text{m}$   
C) 50  $\mu\text{m}$   
D) 250  $\mu\text{m}$

- Q.63** A person got an infection, he became ill but then he survived. What do you think which type of immunity he would have developed?
- A) Active immunity  
B) Artificially induced active immunity  
C) Passive immunity  
D) Naturally induced active immunity
- Q.64** The nitrogen containing bases in nucleotide are of two types; Purines and Pyrimidines; the purines bases are:
- A) Adenine, Guanine and Cytosine  
B) Guanine and Cytosine  
C) Adenine and Guanine  
D) Adenine and Thymine
- Q.65** The process in which a complementary copy of the code from a gene is produced by RNA Polymerase in the nucleus:
- A) Transcription  
B) Translation  
C) Proof reading  
D) DNA Replication
- Q.66** Among followings which cellular organelle contains circular DNA similar to those found in bacteria?
- A) Lysosome  
B) Nucleus  
C) Chloroplast  
D) Ribosome
- Q.67** The following flowchart depicts the steps of the Calvin Cycle. Which option according to you fits in as the correct answer of the missing step?



- A) Pyruvate  
B) Hydrogenase  
C) Ribulose biphosphate  
D) Oxaloacetate
- Q.68** Large lymph vessels ultimately form larger lymph duct, which drains its lymph into:
- A) Carotid and Aorta  
B) Subclavian Artery  
C) Vena Cava and Aorta  
D) Subclavian Vein
- Q.69** Xerophytes have small thick leaves to:
- A) Help them float on water  
B) Limit water loss by increasing the surface area  
C) Help them survive in salty environment  
D) Limit water loss by reducing the surface area
- Q.70** Passive processes for the movement of molecules across cell surface membrane are:
- A) osmosis and phagocytosis  
B) pinocytosis and facilitated diffusion  
C) facilitated diffusion and osmosis  
D) diffusion and exocytosis

- Q.71 During the G2 phase:**
- A) Chromosome number is duplicated  
 B) The chromosomes are left with only one chromatid  
 C) Energy is stored for Chromosome movement and mitotic specific proteins( Tubulin) are produced  
 D) Specific enzymes are synthesized and DNA base units are accumulated
- Q.72 During inspiration the space inside the chest cavity is increased due to:**
- A) The relaxation of the muscles of the diaphragm  
 B) Relaxation of the external intercostal muscles  
 C) Increased pressure  
 D) The contraction of the muscles of the diaphragm
- Q.73 A student of chemical engineering mistakenly engulfed the toxic compound "A" which was a potent inhibitor of certain enzyme. He was immediately brought to hospital where Dr. injected intravenously substrate "B" to minimize the toxic effect of compound A. His life was saved from serious damages. The treatment method shows that compound A was a \_\_\_\_\_ inhibitor.**
- A) Non-competitive reversible  
 B) Irreversible  
 C) Temperature sensitive  
 D) Competitive reversible
- Q.74 Which is an example of a Disaccharide :**
- A) Starch  
 B) Lactose  
 C) Fructose  
 D) Glycogen
- Q.75 In glycine R is \_\_\_\_\_.**
- A) ethane  
 B) fatty acid  
 C) hydrogen  
 D) methane
- Q.76 Sequence of amino acids in a polypeptide chain of protein molecule corresponds to the sequence of nucleotides on mRNA for that protein. If reading frame of mRNA for a human protein is 993 nucleotide including a stop codon at the end, how many amino acids would be incorporated in the polypeptide chain?**
- A) 93  
 B) 330  
 C) 331  
 D) 993
- Q.77 Blood group AB is an example of \_\_\_\_\_.**
- A) Complete dominance  
 B) Recessive alleles  
 C) Co-dominance  
 D) Incomplete dominance
- Q.78 As a result of replication, parental DNA would become completely dispersed and that each strand of all the daughter molecules would be a mixture of old and new DNA. This is called as:**
- A) Dispersive idea  
 B) Conservative idea  
 C) Disruptive idea  
 D) Semi-conservative idea
- Q.79 Smooth endoplasmic reticulum is responsible for the metabolism of :**
- A) Nucleic acids  
 B) Proteins  
 C) Carbohydrates  
 D) Lipids
- Q.80 Among followings, \_\_\_\_\_ enzyme is naturally found in human immunodeficiency virus (HIV).**
- A) Ligase  
 B) Reverse transcriptase  
 C) RNA polymerase  
 D) DNA polymerase

## CHEMISTRY

- Q.81 The average atomic mass of Boron is 10.8. It has two isotopes of masses 10 and 11 respectively. What is the percentage of isotope with the average mass of 10?**
- A) 20%  
 B) 60%  
 C) 80%  
 D) 50%



Q.82 Which one the following compound is additional polymer ?

- A) Polyvinyl chloride  
B) Nylon

- C) Carbohydrate  
D) Polyester

Q.83 Which of the following compounds will give a secondary alcohol after reaction with  $\text{NaBH}_4$ ?

- A)  $\text{CH}_3\text{COCH}_3$   
B)  $\text{CH}_3\text{COOCH}_3$

- C)  $\text{CH}_3\text{CH}_2\text{CHO}$   
D)  $\text{CH}_3\text{CH}_2\text{COOH}$

Q.84 Select the reagent X from the following choices for this conversion;



- A) Acidified Potassium hydroxide  
B) Acidified Potassium dichromate (VI)

- C) Acidified Phosphoric acid  
D) Acidified Oxalic acid

Q.85 The pH of  $10^{-2}$  M aqueous solution of sodium hydroxide is

- A) 14  
B) 10

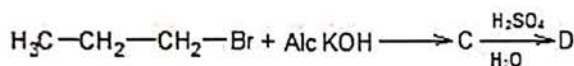
- C) 12  
D) 13

Q.86 Ketones can be made by oxidation of

- A) Aldehydes  
B) Primary Alcohols

- C) Secondary Alcohols  
D) Tertiary Alcohols

Q.87 In the reaction sequence:



Product D will be

- A) 1-propanol  
B) Propanoic acid

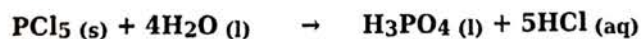
- C) 2-propanol  
D) Mixture of methanol and ethanol

Q.88 Copper is a typical transition metal. Its atomic number is 29. In which oxidation state does it have partially filled orbital in d-subshell?

- A) Cu  
B)  $\text{Cu}^+$

- C)  $\text{Cu}^+$   
D)  $\text{Cu}^{2+}$

Q.89 The decomposition of phosphorus pentachloride in the presence of moisture takes place by the following mechanism:



The rate equation for this reaction will be:

- A) Rate =  $k [\text{POCl}_3][\text{H}_2\text{O}]^3$   
B) Rate =  $k [\text{PCl}_5][\text{H}_2\text{O}]$

- C) Rate =  $k [\text{PCl}_5][\text{H}_2\text{O}]^4$   
D) Rate =  $[\text{PCl}_5][\text{H}_2\text{O}]$

Q.90 Which type of reaction takes place when a carbonyl compound is treated with a mixture of NaCN and an acid?

- A) Electrophilic addition reaction  
B) Substitution reaction

- C) Nucleophilic addition reaction  
D) Displacement reaction

**Q.91** An inter molecular force of attraction X is relatively stronger than the other inter molecular forces, it stabilizes  $\alpha$ -helix and  $\beta$ -pleated sheets of proteins. The double helical structure of DNA is also stabilized by this force of attraction. Identify X.

A) van der Waal's Forces  
B) Hydrogen bonding

C) Ionic interactions  
D) Dipole dipole attraction

**Q.92** Which of the following molecule shows cis- trans isomers ?

A)  $C_2H_4$   
B)  $C_2H_2Cl_4$

C)  $C_2H_2Br_2$   
D)  $C_2HCl_3$

**Q.93** Modern periodic table is arranged in ascending order of ?

A) Nucleon number  
B) Atomic mass

C) Proton number  
D) Mass number

**Q.94** Disposable cups are made of a polymer polystyrene. Polystyrene is:

A) A polyamide  
B) A condensation polymer

C) An addition polymer  
D) A polyester

**Q.95** Which of the following element is not present in halogens?

A) I  
B) Cl

C) Fe  
D) F

**Q.96** Chlorofluorocarbons (CFCs) are important compounds which are used as refrigerants but these are also responsible for Ozone layer depletion. If a Chlorofluorocarbon  $CFCl_3$  is present in stratosphere, which of its reaction intermediates are actually responsible for the breakdown of Ozone molecule?

A)  $CFCl_2\cdot$  and  $Cl\cdot$   
B)  $Cl\cdot$  and  $ClO\cdot$

C)  $CFCl_2\cdot$  and  $ClO\cdot$   
D)  $CFCl_2\cdot$  and  $CFCl_3$

**Q.97** Which of the equations shows the same "twice" the enthalpy change of neutralization as the following equation



A)  $MgCO_3 + 2HCl \rightarrow MgCl_2 + CO_2 + H_2O$   
B)  $KOH + HCl \rightarrow KCl + H_2O$

C)  $NH_4Cl + NaOH \rightarrow NaCl + H_2O + NH_3$   
D)  $H_2SO_4 + Mg(OH)_2 \rightarrow MgSO_4 + 2H_2O$

**Q.98** Which two elements are isotopes?

A)  ${}^{16}_8X$  and  ${}^{16}_8Y$

C)  ${}^{18}_9X$  and  ${}^{20}_{10}Y$

B)  ${}^{14}_8X$  and  ${}^{15}_8Y$

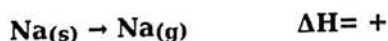
D)  ${}^{12}_6X$  and  ${}^{12}_7Y$

**Q.99** Carboxylic acids can be reduced into corresponding alcohols. Which of the following reagent can be used for this purpose?

A)  $KMnO_4$   
B)  $LiAlH_4$

C)  $K_2Cr_2O_4$   
D)  $H_2SO_4$

**Q.100** Which enthalpy change is relevant in the following process



A) Enthalpy of atomization  
B) Enthalpy of fusion

C) Enthalpy of vaporization  
D) Enthalpy of formation

**Q.101** Ionization energy decreases down the group from top to bottom due to:

A) Increase in atomic mass  
B) Increase in shielding effect of the intervening electrons

C) Increase in proton number  
D) Decrease in atomic size

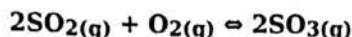
**Q.102** The  $K_a$  values of HCl,  $\text{CH}_3\text{COOH}$ , HF and  $\text{H}_2\text{SO}_4$  are  $10^{+7}$ ,  $1.85 \times 10^{-5}$ ,  $6.7 \times 10^{-5}$  and  $10^{+2}$  respectively. The decreasing order of acidic strength is:

- A)  $\text{CH}_3\text{COOH} > \text{HF} > \text{H}_2\text{SO}_4 > \text{HCl}$   
 B)  $\text{HCl} > \text{H}_2\text{SO}_4 > \text{HF} > \text{CH}_3\text{COOH}$   
 C)  $\text{HCl} > \text{CH}_3\text{COOH} > \text{HF} > \text{H}_2\text{SO}_4$   
 D)  $\text{HCl} > \text{HF} > \text{H}_2\text{SO}_4 > \text{CH}_3\text{COOH}$

**Q.103** In contact process, to which substance adequate quantities of water is added to convert it to sulphuric acid?

- A)  $\text{H}_2\text{S}_2\text{O}_7$   
 B)  $\text{HSO}_4^-$   
 C)  $\text{SO}_2$   
 D)  $\text{SO}_3$

**Q.104** For an equilibrium reaction;



the forward reaction is exothermic, increase in temperature shifts the equilibrium position towards left because,

- A) the concentrations of  $\text{SO}_2$  and  $\text{O}_2$  increase and concentration of  $\text{SO}_3$  stays same as the temperature increases  
 B) the concentrations of  $\text{SO}_3$ ,  $\text{SO}_2$  and  $\text{O}_2$  increase as the temperature increases  
 C) the concentrations of  $\text{SO}_2$  and  $\text{O}_2$  decrease and concentration of  $\text{SO}_3$  increases as the temperature increases  
 D) the concentrations of  $\text{SO}_2$  and  $\text{O}_2$  increase and concentration of  $\text{SO}_3$  decreases as the temperature increases

**Q.105** Which one of the following molecules has  $\text{SP}^3$  hybridization?

- A)  $\text{CH}_4$   
 B)  $\text{C}_2\text{H}_4$   
 C)  $\text{CO}_2$   
 D)  $\text{C}_2\text{H}_2$

**Q.106** During stoichiometric calculations, which of the following laws must be followed?

- A) Dalton's law  
 B) Avogadro's law  
 C) Law of conservation of mass  
 D) Law of conservation of energy

**Q.107** Nitriles (RCN) on hydrolysis in the presence of a mineral acid yield:

- A) Ethers  
 B) Carboxylic acids  
 C) Aldehydes  
 D) Alcohols

**Q.108** Alkenes undergo:

- A) Electrophilic Addition  
 B) Electrophilic substitution  
 C) Nucleophilic substitution  
 D) Nucleophilic addition

**Q.109** Treatment of ethene with cold sulphuric acid followed by reaction with boiling water yields:

- A) Ethane  
 B) Ethanal  
 C) Ethanol  
 D) Ethyne

**Q.110** How many moles of calcium carbonate are present in 1.75 kg of calcium carbonate? ( $A_r$  of Ca = 40,  $A_r$  of C = 12,  $A_r$  of O = 16)

- A) 1.75 mol  
 B) 1750 mol  
 C) 0.0175 mol  
 D) 17.5 mol

**Q.111** Which balanced chemical equation show the formation of ethanoyl chloride using thionyl chloride?

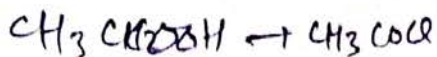
- A)  $\text{HCOOH} + \text{SOCl}_2 \rightarrow \text{HCOCl} + \text{SO}_2 + \text{HCl}$   
 B)  $\text{CH}_3\text{CH}_2\text{COOH} + 2\text{SOCl}_2 \rightarrow \text{CH}_3\text{CH}_2\text{COCl} + \text{SO}_2 + \text{HCl}$   
 C)  $\text{CH}_3\text{CH}_2\text{COOH} + 2\text{SOCl}_2 \rightarrow \text{CH}_3\text{CH}_2\text{COCl} + \text{SO}_3 + \text{HCl}$   
 D)  $\text{CH}_3\text{COOH} + \text{SOCl}_2 \rightarrow \text{CH}_3\text{COCl} + \text{SO}_2 + \text{HCl}$

**Q.112** All the collisions between the particles of gases are elastic in nature. What is meant by "Elastic Collisions"?

- A) No change in the kinetic energy  
 B) The velocity of the molecules changes  
 C) No change in potential energy during the collisions  
 D) No change in mass during the collisions

**Q.113** Which of the following reagent is required for preparation of acyl chloride ( $\text{CH}_3\text{COCl}$ ) from ethanoic acid?

- A)  $\text{PCl}_5$   
B)  $\text{POCl}_3$



- C)  $\text{CH}_3\text{Cl}$   
D)  $\text{HCl}$

**Q.114** Identification tests for functional groups of organic compounds are associated with specific observations. Tollen's reagent is ammonical silver nitrate solution, which is used for the identification of a functional group X with an observation O. Identify X and O.

- A) X=Aldehyde O= Silver mirror  
B) X= Ketone O= grey precipitate

- C) X= Ketone O= Silver mirror  
D) X= Aldehyde O= red precipitate

**Q.115** Free Nitrogen and oxygen are present in atmosphere but they do not react with each other under normal conditions, because:

- A) Nitrogen requires a catalyst.  
B) Oxygen is very inactive.

- C) Oxygen is found in less concentration.  
D) Nitrogen is highly inactive gas.

**Q.116** CFC's are organic compounds, which are derivatives of saturated hydrocarbons. They have high bond dissociation values therefore they are inert and non toxic for the living organisms.

The word CFC's stands for;

- A) Chlorofluorocarbons  
B) Carboflourochlorines

- C) Chlorofluorcarbides  
D) Chlorofluoridecarbons

**Q.117** According to Watson and Crick's model of DNA, the DNA molecule consists of a double helix. What type of forces are responsible to keep two strands of DNA together?

- A) van der Waal's forces  
B) Ionic bonding

- C) Hydrogen bonding  
D) Dipole-induces dipole forces

**Q.118** Nitrogen has the atomic mass of 7.

Which of the following electronic configurations is of a Nitrogen atom in ground state?

- A)  $1s^2, 2s^2, 2p_x^1, 2p_y^1, 2p_z^1$   
B)  $1s^2, 2s^2, 2p_x^2, 2p_z^1$

- C)  $1s^2, 2s^2, 2p_x^2, 2p_y^1$   
D)  $1s^2, 2s^2, 2p_y^2, 2p_z^1$

**Q.119** Which of the following substances exhibits hydrogen bonding?

- A)  $\text{H}_2\text{S}$   
B)  $\text{SiH}_4$

- C)  $\text{NH}_3$   
D)  $\text{HI}$

**Q.120** Aqueous solutions of Iodine and Sodium hydroxide were mixed in a round bottom flask at  $70^\circ\text{C}$ . Following chemical reaction was carried out.



This reaction is termed as

- A) Redox reaction  
B) Precipitation reaction

- C) Substitution reaction  
D) Free radical reaction

**Q.121** Which of the following bond is responsible for joining the amino acids in proteins?

- A) Peptide Bond  
B) Ionic Bond

- C) Metallic Bond  
D) Di sulfide bond

**Q.122** Which of the following is the electronic configuration of Cr?

- A)  $[\text{Ar}] 3d^5 4s^2$   
B)  $[\text{Ar}] 3d^5 4s^1$

- C)  $[\text{Ar}] 3d^4 4s^2$   
D)  $[\text{Ar}] 3d^6 4s^0$

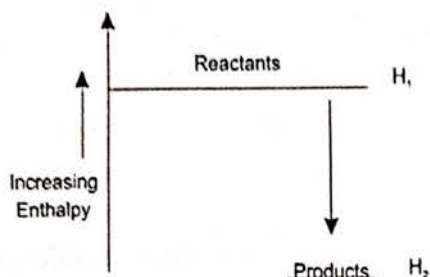
**Q.123** The number of moles of water in 1Kg ice are

- A) 50 moles  
B) 1000 moles  
C) 100 moles  
D) 55.5 moles

**Q.124** Which of the following sets constitutes of all the molecules and ions of non-planar geometry?

- A)  $\text{PH}_4^+$ ,  $\text{NH}_3$ ,  $\text{SO}_3$ , Benzene  
B)  $\text{CH}_4$ ,  $\text{NH}_4^+$ ,  $\text{MnO}_4^-$ ,  $\text{NF}_3$   
C)  $\text{CH} \equiv \text{CH}$ ,  $\text{H}_2\text{O}$ ,  $\text{BeCl}_2$ ,  $\text{H}_2\text{S}$   
D)  $\text{SO}_2$ ,  $\text{C}_2\text{H}_4$ ,  $\text{BF}_3$ ,  $\text{NO}_3^-$

**Q.125** The given diagram shows the enthalpy changes during a chemical reaction.



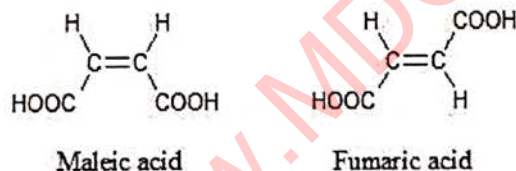
This diagram represents:

- A) An endothermic reaction  
B) An exothermic reaction  
C) An isothermic process  
D) A non-spontaneous process

**Q.126** What is the measure of activation energy in an endothermic reaction?

- A) The energy of activation of backward reaction is less than that of forward reaction.  
B) The energy of activation of backward reaction is more than that of forward reaction.  
C) The energy of activation of forward reaction is less than that of backward reaction.  
D) The energy of activation of forward-backward reaction is same.

**Q.127** Maleic acid and Fumaric acid, both have chemical formula  $\text{C}_4\text{H}_4\text{O}_4$ . The structure of these acids is shown below.



Maleic acid and Fumaric acid are:

- A) Cis-trans isomers  
B) Structural isomers  
C) Metamers  
D) Position isomers

**Q.128** Amino acids are bi-functional compounds, with a general formula  $\text{NH}_2\text{CH}(\text{R})\text{CO}_2\text{H}$ . A tripeptide is formed between Alanine (ala), Glycine (gly) and lysine (lys). There is no repetition of amino acid in this tri-peptide, suggest how many tri-peptides are possible?

- A) 9  
B) 6  
C) 3  
D) 12

**Q.129** If the energy of activation of a chemical reaction is very low, the rate of that chemical reaction is observed to be very high because ?

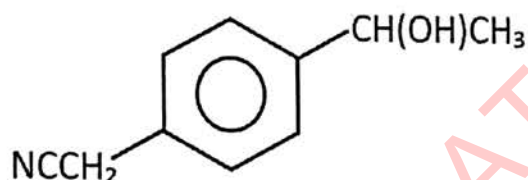
- A) Concentration of the reactants becomes irrelevant  
B) Reaction proceeds without any transition state  
C) Number of efficient or fruitful collisions increase  
D) Molecules of the reactants move slowly

**Q.130** which of following compounds is responsible for the depletion of ozone layer?

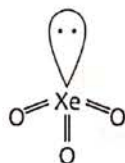
- A) Chlorofluorocarbons  
B) Carbon tetrachloride  
C) Methane  
D) Hydrofluorocarbons

- Q.131** Which product is obtained by the hydrolysis of 1- chlorobutane with the aqueous sodium hydroxide ?
- A) 1- butanal  
B) 1-butanol  
C) 1- butene  
D) Butanone
- Q.132** Oxidation number of particular element can be directly or indirectly inferred from its:
- A) Group number  
B) Atomic size  
C) Atomic mass  
D) Physical state
- Q.133** Which of the following reactions is used for the production of alcohols on industrial scale?
- A) Hydrogenation of alkenes  
B) Hydration of alkenes  
C) Hydrohalogenation of alkenes  
D) Hydroxylation of alkenes
- Q.134** Solution contains 85.5 g of sucrose ( $C_{12}H_{22}O_{11}$ ) in  $250\text{ cm}^3$ . What is its molarity?
- A) 1 M  
B) 0.5 M  
C) 0.25 M  
D) 2 M
- Q.135** Which derivative of benzene shows maximum reactivity in electrophilic substitution reactions?
- A) Benzoic acid  
B) Methyl benzene  
C) Benzaldehyde  
D) Nitrobenzene

- Q.136** The names of functional groups in the following compound X are;

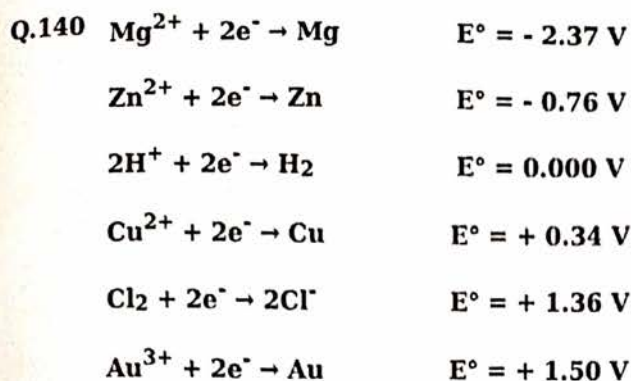


- A) Secondary alcohol, nitrile and phenol ring  
B) Secondary alcohol, amine and benzene ring  
C) Secondary alcohol, nitrile and aryl ring  
D) Primary alcohol, nitrile and benzene ring
- Q.137** In the second period of elements, although oxygen lies next to nitrogen yet its ionization first energy is lower than that of nitrogen because?
- A) Oxygen is paramagnetic in character.  
B) Nuclear charge of oxygen is greater than nitrogen.  
C) Oxygen has higher electron affinity.  
D) In oxygen, there exists repulsion between pair of electrons present in the same orbital of valence shell.
- Q.138** The structure of Xenon trioxide is shown below,



With reference to the Valence shell electron pair repulsion theory, (VSEPR), the shape of  $XeO_3$  is;

- A) Trigonal planar  
B) Tetrahedral  
C) Bent (or angular)  
D) Trigonal pyramidal
- Q.139** Which of the following will give a positive test with Tollen's reagent?
- A) Tertiary Alcohols  
B) Carboxylic Acids  
C) Aldehydes  
D) Ketones



Keeping in view the values of standard reduction potential given above, which one of the following would you select as a feasible redox chemical reaction?

- A)  $2\text{Cl}^- + \text{I}_2 \rightarrow \text{Cl}_2 + 2\text{I}^-$  C)  $\text{Mg} + 2\text{H}^+ \rightarrow \text{Mg}^{2+} + \text{H}_2$   
 B)  $\text{Cu} + \text{Zn}^{2+} \rightarrow \text{Cu}^{2+} + \text{Zn}$  D)  $2\text{Au} + 6\text{H}^+ \rightarrow 2\text{Au}^{3+} + 3\text{H}_2$

## PHYSICS

Q.141 The range of the projectile depends upon the velocity of the projection and the angle of the projection i.e  $45^\circ$ . For a fixed velocity, when the angle of projection is larger than  $45^\circ$ . Which of the following is correct?

- A) The height attained by the projectile will be more but the range is less. C) The height attained by the projectile will be less but the range is more.  
 B) Both the height and the range attained by the projectile will be more. D) Both the height and the range attained by the projectile will be less.

Q.142 The wavelength of the electromagnetic wave having frequency of 3 kHz will be?

- A) 120 km C) 80 km  
 B) 100 km D) 140 km

Q.143 An automobile is moving forwards with uniform velocity due to the force exerted by its engine. If that force is double with the velocity remaining constant what happens to its total power?

- A) It is squared C) It is doubled  
 B) It is halved D) It does not change

Q.144 Which of the following is statement shows that no work is done?

- A) Pushing a car to start it moving C) The moon orbiting the earth.  
 B) Lifting the weights. D) Writing an essay on a page.

Q.145 If two objects of equal masses 'm' are moving towards each other with the same speeds 'v' then what will be the total final momentum after elastic head-on collision?

- A) mv kg m/s C) 2 mv kg/s  
 B) - mv kg/s D) 0 kg m/s

Q.146 In Double Slit experiment, the fringe spacing of the diffracted rays increases when:

- A) the wavelength of the diffracted rays increases C) the distance from mid points of the slits to the central point of the fringe on the screen increases  
 B) the distance between the slits increases D) the distance between the screen and the slits decreases

Q.147 What is the quark composition of a Proton?

- A) Two up quarks and one down quark C) One up quark and two strange quarks  
 B) Two up quarks and one strange quark D) Two down quarks and one up quark

$$\Delta y = \frac{\lambda L}{d} \quad \Delta y = \frac{yL}{d}$$

$$\Delta L = \frac{yL}{d}$$

- Q.148** The sum of all forms of molecular energies (Kinetic and Potential) of a substance is termed as ?
- A) Elastic energy  
B) Absolute energy  
C) Internal energy  
D) Heat energy
- Q.149** Molecules of a gas at constant pressure for a fixed amount of gas have average kinetic energy X. Increasing temperature from  $27^{\circ}\text{C}$  to  $327^{\circ}\text{C}$ , average K.E. of molecules will become:
- A) 20X  
B) 300X  
C) 200X  
D) 2X
- Q.150** Kirchoff's first law/rule corresponds to:
- A) Law of conservation of energy  
B) Law of conservation of momentum  
C) Law of conservation of charge  
D) Law of conservation of mass
- Q.151** Minimum energy required to eject an electron from metal surface is called:
- A) Stopping potential  
B) Electromotive force  
C) Work function  
D) Threshold frequency
- Q.152** If we change the magnetic flux linking a coil by rotating the coil in a constant magnetic field, the rate of change of this flux is:
- A) Proportional to the emf produced in it  
B) Proportional to the material of the coil  
C) Proportional to the resistance of the coil  
D) Proportional to the change in magnetic field
- Q.153** The area under the extension-load graph of an elastic material whose elastic limit has not been exceeded gives its:
- A) Stress  
B) Strain energy  
C) Strain  
D) Young modulus
- Q.154** What will be the expression for the observed frequency, if the source is moving towards the observer?
- A)  $f = \left(\frac{v}{v - u_s}\right) f_o$   
B)  $f_o = \left(\frac{v}{v \pm u_s}\right) f$   
C)  $f_o = \left(\frac{v}{v + u_s}\right) f$   
D)  $f_o = \left(\frac{v}{v - u_s}\right) f$
- Q.155** The direction of current through the load resistance of a full-wave rectification circuit:
- A) remains constant  
B) inverts for positive cycle  
C) changes for every cycle  
D) inverts for negative cycle
- Q.156** A negligible small current between input terminals of the operational amplifier is because of:
- A) High output resistance  
B) Low output resistance  
C) High input resistance  
D) Low input resistance
- Q.157** Heavy nucleus of atoms go through fission so that they can:
- A) absorb low amount of energy  
B) absorb high amount of energy  
C) reduce their binding energy per nucleon  
D) increase their binding energy per nucleon
- Q.158** A wire has a spring constant of  $5 \times 10^4 \text{ N m}^{-1}$ . It is stretched by a force to extension of 1.4 mm. Calculate the strain energy stored in the wire.
- A)  $4.9 \times 10^{-5} \text{ J}$   
B)  $4.9 \times 10^{-2} \text{ J}$   
C) 4.9 J  
D)  $4.9 \times 10^{-5} \text{ J}$

$$\begin{aligned}
 K &= 5 \times 10^4 \\
 \Delta l &= 1.4 \text{ mm} \rightarrow \\
 &= 1.4 \times 10^{-3} \text{ m} \\
 F &= \frac{5 \times 10^4}{1.4 \times 10^{-3}} = 3 \times 10^7
 \end{aligned}$$

$$\begin{aligned}
 W &= \frac{1}{2} \times 3 \times 10^7 \times 1.4 \times 10^{-3} \\
 &= 4.9 \times 10^{-2} \text{ J}
 \end{aligned}$$



**Q.159** An object is moving along a circular path of radius 4m. What will be its angular displacement if it moves 14m on this circular path?

- A) 5.0 radians  
B) 3.5 radians  
C) 4.5 radians  
D) 5.5 radians

$$r = 4 \quad s = 14 \quad \theta = \frac{s}{r} = \frac{14}{4} = 3.5$$

**Q.160** A copper wire has length L and cross-sectional A. Its resistance is R. If we halved the length and halved the diameter of wire then what will be the resistance of this wire?

- A) 4R  
B) 3R  
C) 2R  
D) R

$$R = \rho \frac{L}{A} = \rho \frac{L}{\pi d^2}$$

$$R = \rho \frac{L}{\pi \left(\frac{d}{2}\right)^2}$$

**Q.161** If a conductor of length 7m is placed in a magnetic field of strength

0.3T carrying current 1A, parallel to the field. What will be the force acting on it due to this magnetic field?

- A) 7 N  
B) 0 N  
C) 3.1 N  
D) 2.1 N

$$F = ILB$$

**Q.162** In relation  $\lambda T_{1/2} = 0.693$ , which quantity is represented by  $\lambda$ ?

- A) decay constant  
B) half life  
C) activity  
D) wavelength

**Q.163** Work done due to centripetal force for circular motion will be:

- A) Reduced  
B) Zero  
C) Maximum  
D) Half

**Q.164** Electric field strength of a point charge is E and electric potential is V at a distance r from the point charge. What is the electric potential at a point for the same point charge where electric field strength is E/4?

- A) 4V  
B) 2V  
C) V/2  
D) V/4

$$E = \frac{V}{d} \quad V = E d$$

$$V = \frac{E d}{4}$$

**Q.165** If a light is emitted by a single source passes through two narrow slits 1.00 mm apart. The interference pattern is observed on a screen 200 cm away and the separation between the centres of adjacent bright fringes is 2.00 mm. What would be the wavelength of the light?

- A) 2  $\mu$ m  
B) 1  $\mu$ m  
C) 2  $\mu$ m  
D) 1 nm

$$d \sin \theta = m \lambda$$

$$2 \times 10^{-2} \times 2 = \frac{d}{m} \frac{1 \times 10^{-2}}{2 \times 10^{-2}}$$

$$\frac{200 \times 10^{-2}}{2 \times 10^{-2}} = \frac{20.5 \times 10^{-2}}{5 \times 10^{-2}}$$

$$\frac{2 \times 10^{-2}}{2 \times 10^{-2}}$$

**Q.166** Calculate the energy of a photon of frequency  $3.0 \times 10^{18}$  Hz.

( $h = 6.63 \times 10^{-34}$ )

- A)  $19.89 \times 10^{-16}$  J  
B)  $11.89 \times 10^{-16}$  J  
C)  $1.89 \times 10^{-16}$  J  
D)  $19.89 \times 10^{-18}$  J

$$E = (6.63 \times 10^{-34}) (3 \times 10^{18})$$

$$E = 1.8 \times 10^{-15}$$

**Q.167** Path difference for the destructive interference can be written as:

- A)  $\Delta s = n \lambda$   
B)  $\Delta s = (n + 1/3) \lambda / 2$   
C)  $\Delta s = (2n + 1) \lambda / 2$   
D)  $\Delta s = 2n (\lambda)$

**Q.168** Calculate the rate at which energy is transferred by 220 V mains supply which provides a current of 0.1 A to a LED?

- A) 2.2 W  
B) 22 kW  
C) 2.2 kW  
D) 22 W

$$P = \frac{U^2}{R} = \frac{48400}{0.1} = 484000$$

$$P = UI$$

$$220 \times 0.1$$

$$22$$

Q.169 An alternation voltage V (in volts) is represented by the equation:

$V = 300 \sin(100\pi t)$

What is the value of "f" for this voltage?

- A) 100 Hz
- B) 50 Hz

- C) 25 Hz
- D) 200 Hz

$V = V_0 \sin \omega t$   
 $\omega = 2\pi f$   
 $100\pi = 2\pi f$   
 $f =$

Q.170 A particle carrying a charge of  $5e$  falls through a potential difference of 25V. What would be energy acquired by the particle in 'J'.

- A)  $1.6 \times 10^{-19}$  J
- B) 125 J

- C)  $125 \times 10^{-19}$  J
- D)  $125 \times 1.6 \times 10^{-19}$  J

$(1.6 \times 5 \times 10^{-19}) (25)$   
 $125 \times$

Q.171 The unit of magnetic flux density is the tesla, 'T', it can also be expressed as

- A)  $1 \text{ N A}^{-1} \text{ m}$
- B)  $1 \text{ N}^{-1} \text{ A}^{-1} \text{ m}$

- C)  $1 \text{ N}^{-1} \text{ A}^{-1} \text{ m}^{-1}$
- D)  $1 \text{ N A}^{-1} \text{ m}^{-1}$

Q.172 If we give a direct current to the transformer's primary coil, then there will be:

- A) No emf produced in the secondary
- B) More emf produced in the secondary

- C) Equal emf produced in the secondary
- D) Less emf produced in the secondary

Q.173 Percentage un-certainty in length and width of a rectangle is 2% and 3%. The total un-certainty in area of that rectangle is?

- A) 1.5%
- B) 5%

- C) 1%
- D) 6%

Q.174 Electric field strength at a point between oppositely charged plates is E. If the distance between plates is reduced to half, what will be the new value of electric intensity?

- A) 4E
- B) E/2

- C) E/4
- D) 2E

$E = \frac{V}{d}$

Q.175 The horizontal component of Earth magnetic flux density is  $1.8 \times 10^{-6}$  T. The current in a horizontal cable is 160A. Calculate the maximum force per unit length?

- A)  $2.88 \times 10^{-6}$  N/m
- B)  $2.88 \times 10^{-4}$  N/m

- C)  $2.88 \times 10^{-2}$  N/m
- D)  $2.88 \times 10^{-8}$  N/m

$B = 1.8 \times 10^{-6}$   
 $I = 160 \text{ A}$

$F = IB =$   
 $1.8 \times 1.6 \times 10^{-4}$

Q.176 The value and units of the Plank constant 'h' can be expressed as:

- A)  $3.63 \times 10^{-34}$  Js
- B)  $6.63 \times 10^{-34}$  Js<sup>-1</sup>

- C)  $6.63 \times 10^{-34}$  Js
- D)  $6.63 \times 10^{-43}$  Js

$E = hf$   
 $h = \frac{E}{f}$

Q.177 The diameter of a wire is measured by using a micrometer screw gauge with least count of 0.01 mm, then which of the following readings will be correct?

- A) 6.70 cm
- B) 0.0067 mm

- C) 0.67 cm
- D) 0.067 cm

$0.67 \text{ cm}$   
 $0.067 \text{ cm}$

Q.178 When the length of simple pendulum is doubled, then ratio of its new time period to old time period is:

- A)  $\sqrt{2}$
- B)  $1/\sqrt{2}$

- C)  $2\sqrt{2}$
- D)  $-\sqrt{2}$

$T = 2\pi \sqrt{\frac{l}{g}}$   
 $\frac{T_2}{T_1} = \sqrt{\frac{2l}{l}} = \sqrt{2}$

Q.179 For projectile motion in the absence of air resistance:

- A) horizontal acceleration is zero
- B) vertical acceleration is zero

- C) horizontal force is constant
- D) vertical speed is constant

**Q.180 In simple harmonic motion , acceleration will be maximum, when object is at:**

A) maximum displacement from the mean position  
B) center position

C) half of the maximum displacement from mean position  
D) mean position

$$a = -\omega^2 x$$

$$a = -\omega^2$$

## ENGLISH

**Part - I : Choose THE BEST Option.**

**Q.181 The culpable child ----- some words to her mother for pardoning his delinquency.**

A) Mumbled  
B) Showy

C) Rude  
D) Crazy

**Q.182 She was feeling ----- even after five hours of the surgery.**

A) Groggy  
B) Haggard

C) Pally  
D) Grope

**Q.183 The parents were stunned when they saw that children had created complete-----in the bedroom:**

A) Knack  
B) Groggy

C) Dank  
D) Mayhem

**Q.184 I ----- caution in interpreting these results.**

A) Urge  
B) Usher

C) Usurp  
D) Uproot

**Q.185 They sometimes feel a ----- for the mountains and the sea.**

A) Yearning  
B) Yapping

C) Yelling  
D) Yielding

**Q.186 The new teacher showed no ----- about hitting the students.**

A) Quakes  
B) Qualms

C) Quarrel  
D) Quotation

**Q.187 The accident happened due to the driver's -----.**

A) Negligence  
B) Reluctance

C) Regret  
D) Nuisance

**Part - II: In each of the following question, four alternative sentences are given. Choose the CORRECT one and fill the Circle corresponding to that letter in the MCQ Response Form.**

**Q.188 A. I was been to America for medical check up.**

**B. I had being to America for medical check up.**

**C. I have been to America for medical check up.**

**D. I has been to America for medical check up .**

**Q.189 A. After breaking the glass, Ruby said "Please don't tell on me."**

**B. After breaking the glass Ruby said: "Please don't tell on me."**

**C. After breaking the glass, Ruby said: "Please don't tell on me."**

**D. After breaking the glass Ruby said: please don't tell on me.**

- Q.190 A. It is healthful to eat a variety of food.  
 B. It were healthful to eat a variety of food.  
 C. It is healthful to ate a variety of food.  
 D. It were healthful to ate a variety of food.
- Q.191 A. We use to play football when we lived abroad.  
 B. We are used to play football when we lived abroad.  
 C. We used to play football when we lived abroad.  
 D. We have use to play football when we lived abroad.
- Q.192 A. He asked, "Is your brother home?"  
 B. He asked "Is your brother home?"  
 C. He asked, "Is your brother home"?"  
 D. He asked "Is your brother home?".
- Q.193 A. We hadn't the foggy notion of the worker who tried to spoil the company's reputation.  
 B. We hadn't the foggiest notion of the worker who tries to spoil the company's reputation.  
 C. We hadn't the foggiest notion of the worker whom tried to spoil the company's reputation.  
 D. We hadn't the foggiest notion of the worker who tried to spoil the company's reputation.

Part - III: SPOT THE ERROR: *In the following sentences some segments of each sentence are underlined. Your task is to identify that underlined segment of the sentence, which contains the mistake that needs to be corrected. Fill the Circle corresponding to that letter under the segment in the MCQ Response Form.*

- Q.194 She had one of those picture children often reproduced  
 A B  
 in advertising leaflets and the photogravure sections of the  
 C  
Sunday papers.  
 D

Q.195 Education and economic progress along with good

A

governance is the factor that take a country towards quick

B

C

D

development.

Q.196 When the mother threatened to lock Aslam in the attic,

A

B

C

the mere thought for being confined made him breathless.

D

Q.197 Let's hurry. The bus is leaving to the last stop.

A

B

C

D

Q.198 Ali and Irfan have to receive the guests at the reception of the

A

B

hotel, while Amir have to bring their bags from the cars.

C

D

Q.199 Ruth was wondering what she could do for help but she did not

A

B

C

know what to do.

D

Q.200 Despite all my enthusiastic chain of effort, I could not attained the

A

B

C

desired results to be crowned with brilliant success.

D

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# University of Health Sciences, Lahore



MDCAT-2019 held on August 25, 2019

For Admissions to Medical / Dental Institutions of the Punjab

## Answer Key

The answer key to the questions of Medical & Dental college Admission Test (MDCAT) 2019, held on Sunday, 25th August, 2019 is being released. Candidates can calculate their scores with the help of carbon copy of their response forms. **Each correct answer carries one (01) mark. Un-attempted question carries no mark.** There is no negative marking in the test. Pass marks of the test are 120/200 (i.e. 60%). Complaints / queries will only be dealt after the declaration of official result of the Test by the University. No request in this regard will be entertained before that.

Question	A	B	C	D	Question	A	B	C	D	Question	A	B	C	D
1	C	C	A	B	71	C	C	C	B	141	C	A	C	D
2	A	D	C	D	72	C	D	A	B	142	C	B	D	B
3	B	A	B	B	73	B	D	B	C	143	D	C	A	B
4	B	D	D	D	74	D	B	A	C	144	C	C	A	A
5	D	B	D	B	75	C	C	C	D	145	C	D	C	D
6	A	B	C	C	76	C	B	C	B	146	A	A	D	A
7	D	C	A	C	77	D	C	A	C	147	D	A	A	B
8	A	A	A	A	78	A	A	B	C	148	C	C	B	C
9	A	A	A	D	79	B	D	B	A	149	D	D	C	C
10	C	A	B/C	D	80	D	B	D	D	150	D	C	A	A
11	C	C	D	B	81	A	A	A	A	151	D	C	A	B
12	C	A	C	C	82	D	A	B	D	152	D	A	A	D
13	B	B	A	C	83	A	A	D	C	153	D	B	C	D
14	A	A	D	A	84	B	B	C	A	154	B	D	D	D
15	B	D	B	B	85	D	C	B	A	155	B	A	D	A
16	D	D	B	C	86	A	C	B	C	156	A	C	A	A
17	C	C	B	D	87	D	C	B	B	157	D	D	C	A
18	C	A	D	C	88	B	D	A	D	158	B	B	D	D
19	A	C	B	D	89	B	B	D	A	159	A	B	D	A
20	B	B	A	A	90	A	C	C	A	160	A	C	C	A
21	A	A	C	B	91	C	B	D	D	161	D	B	B	C
22	C	C	C	B	92	D	C	C	B	162	B	A	C	B
23	A	D	C	D	93	C	C	C	B	163	C	B	B	C
24	A	A	A	D	94	C	C	C	D	164	D	D	D	B
25	D	D	D	A	95	D	C	D	D	165	B	B	C	B
26	B	B	A	A	96	D	B	B	D	166	A	A	A	B
27	D	A	B	D	97	A	D	C	D	167	A	C	D	C
28	B	A	B	A	98	A	B	B	D	168	A	D	C	A
29	B	D	B	D	99	C	B	A	D	169	A	B	B	B
30	D	C/D	A	B	100	D	A	B	C	170	D	D	C	C
31	B	C	C	C	101	C	B	A	B	171	D	D	D	D
32	A	B	B	B	102	B	B	A	B	172	D	A	A	A
33	C	B	C	B	103	C	A	C	A	173	B	B	A	A
34	C	B	B	D	104	A	D	C	D	174	A	D	B	C
35	C	B	B	A	105	D	A	D	B	175	C	B	D	A
36	C	B	A	D	106	B	C	D	C	176	C	C	B	B
37	B	A	C	B	107	B	B	D	A	177	C	D	D	A
38	D	C	B	B	108	A	A	C	C	178	B	A	D	B
39	C	C	B	D	109	D	C	B	C	179	D	A	B	A
40	C	B	C	D	110	C	D	D	C	180	B	A	D	D
41	C	C	B	A	111	A	D	A	B	181	B	A	B	D
42	D	D	A	D	112	B	A	A	A	182	A	A	A	C
43	B	D	B	B	113	A	A	B	C	183	D	D	A	C
44	D	B	A	B	114	A	A	A	D	184	A	A	B	A
45	A	A	A	A	115	A	D	B	A	185	B	A	D	C
46	D	C	A	D	116	C	A	B	A	186	B	B	D	D
47	B	D	C	A	117	D	C	A	D	187	B	A	D	D
48	A	B	C	A	118	C	A	B	D	188	A	C	D	A
49	B	B	C	C	119	D	C	C	B	189	C	C	A	C
50	A	C	D	A/C	120	C	A	A	C	190	C	A	C	C
51	B	C	B	A	121	C	A	B	D	191	A	C	C	D
52	D	B	B	A	122	C	B	A	B	192	D	A	C	A
53	D	C	C	B	123	B	D	D	C	193	C	D	A	C
54	D	D	A	D	124	D	B	A	D	194	X	X	X	D
55	D	D	C	A	125	A	B	D	D	195	D	B	B	B
56	C	C	C	C	126	D	A	A	A	196	D	D	D	X
57	A	A	B	C	127	A	A	D	A	197	B/C	D	B/C	D
58	A	B	B	B	128	D	B	B	A	198	B	C	B	B/C
59	C	C	A	A	129	B	C	B	B	199	C	B	C	B
60	B	B	C	B	130	A	A	C	B	200	B	B/C	D	C
61	B	C	D	D	131	B	B	C	D					
62	B/C	A	D	C	132	B	A	B	D					
63	B	D	D	A	133	B	B	B	B					
64	B	C	D	A	134	D	A	A	C					
65	B	A	A	A	135	D	B	C	B					
66	D	C	A	A	136	C	C	C	D					
67	B	C	A	D	137	A	D	B	C					
68	C	D	C	D	138	A	D	C	A					
69	D	D	B	C	139	C	C	B	D					
70	A	C	A	D	140	D	C	C	A					

Note: Each correct answer carries 01 marks. Un attempted question carries zero marks.

Note: One question has been deleted from assessment and one (01) mark shall be added to the final score of each candidate in MDCAT-2019 only. The Question appears at Question Number 194 in Paper ID 'X', 'Y', and 'Z', and at 196 in Paper ID 'W'.

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