

# SKN PMC PAID

## PRACTICE PAPER-11

### CHEMISTRY

- Q.1 Methanol is prepared by compressing water gas mixture at pressure  
A. 3 atm  
B. 2 atm  
C. 45 atm  
D. 25 atm
- Q.2 The phenomenon in which compounds have same molecular formula but different structural formula is called as \_\_\_?  
A. Reforming  
B. Isomerism  
C. Polymorphism  
D. Hybridization
- Q.3 Liquids have \_\_\_\_\_?  
A. Definite shape  
B. Indefinite shape  
C. Definite volume  
D. None of these
- Q.4 Which of the statement is incorrect for  $\text{XeO}_4$ ?  
A. Four  $p\pi-d\pi$  bonds are present  
B. Four  $sp^3 - p \sigma$  bonds are present  
C. It has a tetrahedral shape  
D. It has a square planar shape
- Q.5 After digestion proteins change into:  
A. Amino acids  
B. Starch  
C. Glycogen  
D. Lipids
- Q.6 The reactions that release heat are called as \_\_\_\_\_?  
A. Endothermic reactions  
B. Exothermic reactions  
C. Endergonic reactions  
D. Heat gaining reactions
- Q.7 Which of the following reactions are not given by benzene?  
A. Elimination  
B. Addition  
C. Substitution  
D. Dehydration
- Q.8 A \_\_\_ bond may be polar or nonpolar  
A. Ionic bond  
B. Covalent bond  
C. Metallic bond  
D. Co-ordinate bond
- Q.9 The number of neutrons in  $\text{H}_2\text{SO}_4$  are  
A. 5  
B. 49  
C. 48  
D. 44
- Q.10 Specific Rate constant changes its value with  
A. Time Constant  
B. Change in Temperature  
C. Change in Concentration  
D. Change in Pressure
- Q.11 What is the hybridization of carbon in  $-\text{COOH}$  group?  
A.  $sp^2$   
B.  $sp^3$   
C.  $sp$   
D. None of these
- Q.12 \_\_\_\_\_ cathode is used in discharge tube experiment for discovery of protons  
A. Flat  
B. Round  
C. Perforated  
D. Oval
- Q.13 Joule-Thomson effect is used to \_\_\_\_\_ the temperature of a gas to liquefy it  
A. Raise  
B. Higher  
C. Equalize  
D. Lower
- Q.14 Electrolysis of bauxite is done by  
A. Haber's Process  
B. Born Haber cycle  
C. Ion Exchange Method  
D. Hall-Heroult Process
- Q.15 In oxidation number method of Balancing the first step is to write  
A. Oxidation number on Reactants  
B. Oxidation number on products  
C. Oxidation number for both reactants & Products  
D. None of these
- Q.16 Charles's law is not being obeyed when temperature is measured on Celsius scale. That's why new scale called \_\_\_\_\_ has been developed  
A. Zero Fahrenheit  
B. Zero Kelvin  
C. Absolute Fahrenheit  
D. All of these

- Q.17 Which of following has higher boiling and melting point  
 A. Acetone  
 B. 2 - butanol  
 C. Propane  
 D. 2 - methylpropene
- Q.18 Shielding Effect increases \_\_\_\_\_?  
 A. Down the Group  
 B. Along period  
 C. Diagonally  
 D. Only along d -block
- Q.19 Which of the following does not show metamerism?  
 A. Ethers  
 B. Secondary amines  
 C. Ketones  
 D. Aldehydes
- Q.20 Which one of the following is formula of Iodoform?  
 A. CHI  
 B. CHI<sub>3</sub>  
 C. CHI<sub>2</sub>  
 D. CI<sub>3</sub>
- Q.21 What pressure of Oxygen is maintained inside the bomb calorimeter?  
 A. 200 atm  
 B. 25 atm  
 C. 20 atm  
 D. 75 atm
- Q.22 The ionic radius is always \_\_\_\_\_ than the atomic radius from which it is derived  
 A. Higher  
 B. Larger  
 C. Moderate  
 D. Smaller
- Q.23 When we calculate radii of Hydrogen atom by this equation  $r = .529A (n^2)$  where  $n = 1, 2, 3, 4$ , the distance between orbits of hydrogen atom will  
 A. Decrease  
 B. Increase  
 C. Remains same  
 D. Be constant
- Q.24 Heat of combustion is always a \_\_\_\_\_?  
 A. Exothermic reaction  
 B. Endothermic reaction  
 C. Spontaneous reaction  
 D. Nonspontaneous reaction
- Q.25 Which of the following is an example of Tricarboxylic acids?  
 A. Maleic acid  
 B. Citric acid  
 C. Butyric acid  
 D. None of these
- Q.26 The rate of reaction between two specific time intervals is  
 A. Instantaneous rate  
 B. Constant rate  
 C. Average Rate  
 D. All of these
- Q.27 As the time interval approaches Zero the average and instantaneous rate become  
 A. Negative  
 B. Zero  
 C. Negligible  
 D. Positive
- Q.28 Those elements, with electronic configuration of valence shell  $ns^2np^6$  show little tendency to react chemically, are called  
 A. Lanthanides  
 B. Actinides  
 C. Alkali metals  
 D. Noble gases
- Q.29 The rate of  $SN_1$  reaction become doubled if \_\_\_\_\_?  
 A. Concentration of Nucleophile doubled  
 B. Concentration of Substrate doubled  
 C. Concentration of Substrate Tripled  
 D. Concentration of substrate remain same
- Q.30 Which of the following test is not given by Aldehyde?  
 A. Benedict test  
 B. Tollen's test  
 C. Nitroprusside test  
 D. Fehling's test
- Q.31 Which one can form complex?  
 A. Na  
 B. Cr  
 C. Li  
 D. K
- Q.32 In this compound  $[Pt Cl NO_2 (NH_3)_4]^{2+}$  the coordination number of transition element is  
 A. 6  
 B. 2  
 C. 8  
 D. 4
- Q.33 The method which is used on industrial scale for production of alcohol from alkene?  
 A. Hydrohalogenation of alkenes  
 B. Dehydration of alkenes  
 C. Hydration of alkenes  
 D. Hydroxylation of alkenes
- Q.34 When product formed act as a catalyst phenomenon is called:  
 A. Biocatalyst  
 B. Autocatalysis  
 C. Heterocatalysis  
 D. Homocatalysis

- Q.35 Who proved that no Vital Force theory is involved in synthesis of organic compounds?  
 A. Lewis  
 B. Wohler  
 C. Greek Philosophers  
 D. Berzilius
- Q.36 Regular coiling & twisting of polypeptide chain caused by H-bonding in between NH & CO occurs in \_\_\_\_\_.  
 A. Primary structure  
 B. Secondary structure  
 C. Tertiary structure  
 D. Quaternary structure
- Q.37 On reacting with which of the following carboxylic acids produce CO<sub>2</sub>?  
 A. Carbonate  
 B. Bicarbonate  
 C. Bisulphites  
 D. Both a and b
- Q.38 Which forces makes the liquefaction of He possible?  
 A. London Dispersion forces  
 B. Debye forces  
 C. Dipole-dipole force  
 D. H-bonding
- Q.39 when water freezes to ice, it occupies \_\_\_\_\_ more space  
 A. 0.9 g/cm<sup>3</sup>  
 B. 0.1 g/cm<sup>3</sup>  
 C. 0.12 g/cm<sup>3</sup>  
 D. 0.13 g/cm<sup>3</sup>
- Q.40 The relative abundance of isotopes of elements is measured by  
 A. Atomic spectroscopy  
 B. Ionic spectroscopy  
 C. Mass spectroscopy  
 D. Mass spectrometry
- Q.41 What is optimum temperature for the process of fermentation?  
 A. 10-15 degrees  
 B. 25-30 degrees  
 C. 25-35 degrees  
 D. 25-40 degrees
- Q.42 Which of the following has least polarizability?  
 A. NH<sub>3</sub>  
 B. H<sub>2</sub>O  
 C. HF  
 D. CH<sub>4</sub>
- Q.43 Plasma includes ions  
 A. Protons  
 B. Electrons  
 C. Neutrons  
 D. All of these
- Q.44 Catalytic activity of enzyme is enhanced by:  
 A. Activator  
 B. Coenzyme  
 C. Co-factor  
 D. Both A and B
- Q.45 What is the reason for the reactivity of Grignard reagent?  
 A. Presence of Mg atom  
 B. Polarity of C-H bond  
 C. Polarity of C-Mg bond  
 D. Presence of electrophilic carbon
- Q.46 The product of active masses of reactant is related to  
 A. Equilibrium constant  
 B. Rate of reaction  
 C. Direction of reaction  
 D. Temperature of reaction
- Q.47 The least value of Van der Waals constant is of  
 A. H<sub>2</sub>  
 B. N<sub>2</sub>  
 C. CO<sub>2</sub>  
 D. Cl
- Q.48 Tertiary alcohols upon reaction with oxidizing agents give \_\_\_\_\_ as major product?  
 A. Carboxylic acids  
 B. Alkene  
 C. Alkyne  
 D. Ester
- Q.49 The lattice energy of KBr is \_\_\_\_\_ KJ/mol  
 A. -833  
 B. -665  
 C. -895  
 D. -728
- Q.50 Enzymes that catalyze the addition of ammonia, water or carbon dioxide to double bond or their removal are called \_\_\_\_\_.  
 A. Lyases  
 B. Hydrolases  
 C. Ligases  
 D. Transferases
- Q.51 If any two sub shells have same (n+l) values, the sub shells of \_\_\_\_\_ value will be placed first  
 A. Higher  
 B. Smaller  
 C. Equal  
 D. Moderate
- Q.52 \_\_\_\_\_ conducts nerve impulse in brain  
 A. Serotonin  
 B. Aspartame  
 C. Ascorbic acid  
 D. Hydrazine

- Q.53** If anyone of the products concentration is plotted against time instead of reactants the curve obtained will be  
 A. Parabolic  
 B. Rising  
 C. Falling  
 D. Elliptical
- Q.54** By accepting an electron Hydronium Ion is converted into  
 A. Hydrogen gas  
 B. Hydrogen Atoms  
 C. Water  
 D. OH<sup>-</sup> ions
- Q.55** The electronegativity difference of the elements can be related to the following property of bonds  
 A. Dipole moment  
 B. Bond energies  
 C. Both A & B  
 D. None of these
- Q.56** When Number of moles of reactants and products are same Equilibrium constant will have  
 A. Negative value  
 B. Large value  
 C. No units  
 D. Units

## BIOLOGY

- Q.57** Rate of photosynthesis does not depend upon:  
 A. Quality of light  
 B. Intensity of Light  
 C. Duration of Light  
 D. Temperature
- Q.58** Which of the following is true about sarcomeres?  
 A. Actin filaments are only found in the I band  
 B. The sarcomeres contribute to the striated appearance of smooth muscle cells  
 C. Sarcomeres are functional units of skeletal and smooth muscle cells  
 D. The A band contains both actin and myosin filaments
- Q.59** The function of spleen is to filter —  
 A. Blood  
 B. Lymph  
 C. Semen  
 D. Amniotic fluid
- Q.60** Paramyxoviruses cause which disease?  
 A. Influenza  
 B. Smallpox  
 C. Mumps and measles  
 D. AIDS
- Q.61** If the gene expresses itself then it's penetrance is?  
 A. 40%  
 B. 50%  
 C. 75%  
 D. 1
- Q.62** What does the size of viruses' range between?  
 A. 100 nm to 150 nm  
 B. 20 nm to 250 nm  
 C. 300 nm to 3000 nm  
 D. 3 nm to 30 nm
- Q.63** First Actions spectrum was obtained by using?  
 A. Algae  
 B. Fungi  
 C. Bacteria  
 D. Spirogyra
- Q.64** The lighter, inner section of the brain is called:  
 A. White matter  
 B. Gray matter  
 C. Reflex arc  
 D. Medulla
- Q.65** Smooth muscles, cardiac muscles and organs are regulated by which of the following?  
 A. Central nervous system  
 B. Parasympathetic nervous system  
 C. Sympathetic nervous system  
 D. Autonomic system
- Q.66** The affect of genetic drift increases as the population size?  
 A. Increases  
 B. Decreased  
 C. Remains same  
 D. None of these
- Q.67** The substrate binds to specific region of enzyme called?  
 A. Key  
 B. Active site  
 C. Hyperactive site  
 D. None of these
- Q.68** The flagella originate from which part of the cell?  
 A. Basal body  
 B. Cell membrane  
 C. Cell wall  
 D. Capsule
- Q.69** Which of the following statement is incorrect about Glyoxysomes?  
 A. They contain enzymes which help in conversion of fatty acids into carbohydrate  
 B. They are abundant in soybeans but absent in pea.  
 C. They are single membranous organelles

D. They are present throughout life of a plant and provide them with energy through Glyoxylate cycle.

- Q.70 What percentage of glucose is normally found in human blood?**  
A. 0.008  
B. 0.0008  
C. 0.018  
D. 0.08
- Q.71 What is located at both sides of the A band?**  
A. Z-line  
B. H zone  
C. I band  
D. Z zone
- Q.72 Which statement correctly describes why enzyme activity increases with increased enzyme concentration?**  
A. Collisions between enzyme and substrate molecules increase because of increased kinetic energy.  
B. Collisions between enzyme and substrate molecules increase because of increased heat energy.  
C. Collisions between enzyme and substrate molecules increase because of more active sites are available.  
D. Collisions between enzyme and substrate molecules increase because more substrate molecules are available.
- Q.73 Baldness is most frequent in which of the following?**  
A. Men  
B. Women  
C. Both A and B  
D. Children
- Q.74 Which of the following statements is not true of viruses?**  
A. Viruses have been successfully grown in pure cultures in test tubes  
B. All viruses are obligate intracellular parasites  
C. All viruses have either DNA or RNA as their genetic material  
D. Viruses probably arose from small fragments of cellular chromosomes
- Q.75 What is the shape of the TMV Virus?**  
A. Rod  
B. Spherical  
C. Tadpole  
D. Helical
- Q.76 These are crystalline, water soluble, forming pyranose rings**  
A. Monosaccharides  
B. Disaccharides  
C. Oligosaccharides  
D. Polysaccharides
- Q.77 Cytochrome a is oxidised by which of the following in ETC?**  
A. Carbon dioxide  
B. Oxygen  
C. ATP  
D. Cytochrome a3
- Q.78 The internal lining of the uterus wall is called:**  
A. Endometrium  
B. Perimetrium  
C. Corpus luteum  
D. None of these
- Q.79 Transverse diffusion (flip-flop) is the movement of which of the following molecules?**  
A. Cholesterol molecule  
B. Amino acid  
C. Protein  
D. Phospholipid
- Q.80 Where can viruses replicate?**  
A. Animals  
B. Plants  
C. Bacteria  
D. All
- Q.81 Between the seminiferous tubules are interstitial cells which secrete which of the following hormone?**  
A. Progesterone  
B. Estrogen  
C. Testosterone  
D. Oxytocin
- Q.82 The simplest form of learning is?**  
A. Latent learning  
B. Imprinting  
C. Insight  
D. Habituation
- Q.83 Most of the fossils are found in which of the following?**  
A. Metamorphic rocks  
B. Soil  
C. Volcanic mountains  
D. Sedimentary rocks
- Q.84 Sperms are produced in the testes and stored in?**  
A. Testes  
B. Scrotal sacs  
C. Seminal vesicle  
D. Prostate gland
- Q.85 Water soluble vitamins contain high proportion of which of the following?**  
A. Electronegative oxygen  
B. Nitrogen atoms  
C. Sulfur  
D. Both a and b

- Q.86 Excretory system of platyhelminthes consists of which of the following?**  
 A. Nephridia  
 B. Flame cells  
 C. Malpighian tubules  
 D. Nephrons
- Q.87 Find out the correct sequence for movement of electrons during the light-dependent reaction**  
 A. p68 , p7 , water, NADP  
 B. Water, p7 , NADP, p68  
 C. p7 , p68 , NADP, water  
 D. Water, p68 , p7 , NADP
- Q.88 The isolation of different cellular components to determine their chemical composition can be achieved by?**  
 A. Cell differentiation  
 B. Chromatography  
 C. Cell fractionation  
 D. All of these
- Q.89 Those bacteria which are fully dependent upon their host for nutrition are called?**  
 A. Heterotrophic bacteria  
 B. Saprotrophic bacteria  
 C. Chemosynthetic bacteria  
 D. Parasitic bacteria
- Q.90 The trait "Kernel colour in corn" is controlled by how many pairs of genes?**  
 A. 1  
 B. 2  
 C. 3  
 D. 4
- Q.91 An egg is fertilized in laboratory and implanted in uterus for development. This is called:**  
 A. Test tube baby  
 B. Cloning  
 C. In vivo fertilization  
 D. Both A and B
- Q.92 The largest organelle in a mature living plant cell is?**  
 A. Chloroplast  
 B. Nucleus  
 C. Central vacuole  
 D. Mitochondria
- Q.93 The nitrifying bacteria are an example of which of the following?**  
 A. Heterotrophic bacteria  
 B. Saprotrophic bacteria  
 C. Chemosynthetic bacteria  
 D. Parasitic bacteria
- Q.94 The Induced fit model was introduced by Koshland in which of the following year?**  
 A. 1960  
 B. 1961  
 C. 1959  
 D. 1966
- Q.95 Distribution of intrinsic proteins in the plasma membrane is?**  
 A. Random  
 B. Symmetrical  
 C. Asymmetrical  
 D. None of these
- Q.96 Auxins are responsible for the promotion and growth of roots from?**  
 A. Layering  
 B. Calluses  
 C. Cutting  
 D. Both a and b
- Q.97 Concept of evolution was first presented by which of the following scientists?**  
 A. Lamarck  
 B. Darwin  
 C. Wallace  
 D. Aristotle
- Q.98 Thymus, spleen, tonsils and adenoids produce:**  
 A. Erythrocytes  
 B. lymphocytes  
 C. Leucocytes  
 D. Thrombocytes
- Q.99 Which of the following constitute large organic molecules?**  
 A. Cellulose  
 B. Glucose  
 C. Amino acids  
 D. All of these
- Q.100 Cytokinins delay the aging of fresh leaf crops such as cabbage and lettuce as well as keeping flowers?**  
 A. Attached  
 B. Open  
 C. Fresh  
 D. Delayed
- Q.101 How many bacteriophages are formed after 25 minutes of initial infection?**  
 A. 250  
 B. 200  
 C. 150  
 D. 100
- Q.102 In alcoholic fermentation Pyruvic acid is broken down into?**  
 A. Acetaldehyde  
 B. Methyl alcohol  
 C. Ethyl alcohol  
 D. Lactic Acid
- Q.103 The process of intake of oxygen and release of carbon dioxide is classified as**  
 A. Respiratory exchange  
 B. Gaseous exchange  
 C. Diffusion  
 D. Osmosis
- Q.104 White matter is primarily composed of:**  
 A. Axons  
 B. Synapse

- C. Neuron somas  
D. None of these
- Q.105 In the intestine, the branches of lymph capillaries, within villi, are called:**  
A. Lacteals  
B. Lymph  
C. Lymphatic vessels  
D. Lymph nodes
- Q.106 What was the source of hydrogen for first photosynthetic organisms?**  
A. Water  
B. Hydrogen present in soil  
C. Hydrogen sulphate  
D. Hydrogen sulphide
- Q.107 A behaviour of the direct and move in response to chemical signals is termed as**  
A. Chemotaxis  
B. Chemolysis  
C. Chemography  
D. Chemospytheses
- Q.108 Haemophilia B is due to abnormality of factor?**  
A. VIII  
B. X  
C. IX  
D. XI
- Q.109 Fatty acids containing 18 C atoms and a single double bond are?**  
A. Saturated  
B. Unsaturated  
C. Oleic acid  
D. Palmitic acid
- Q.110 What is the approximate ratio of RNA and protein in a ribosome?**  
A. 1:1  
B. 2:1  
C. 1:2  
D. 1:3
- Q.111 The location of virion assembly**  
A. Nucleus  
B. Plasma Membrane  
C. Golgi complex  
D. All of these
- Q.112 The oldest mineral discovered so far is which of the following, which dates back to 4.4 billion years.**  
A. Iron  
B. Zircon  
C. Diamond  
D. Cadmium
- Q.113 Which of the following molecules binds to troponin during muscle contraction, triggering tropomyosin to move away from the actin binding sites and allowing the myosin head to form a cross bridge?**  
A. ATP  
B. ADP  
C. Calcium  
D. Sodium
- Q.114 Which of the following animals is NOT a protostome?**  
A. Earthworm  
B. Cockroach  
C. Butterfly  
D. Sting ray
- Q.115 The point at which there is no net exchange of gases between leaves and atmosphere is known as?**  
A. Neutral point  
B. Compensation point  
C. Parallel point  
D. Competitive point
- Q.116 Porphyromonas gingival is a Gram-negative bacterium, found in the oral cavity, is negatively affected by the presence of oxygen. What term best describes this bacteria?**  
A. Facultative anaerobe  
B. Aerotolerant anaerobe  
C. Obligate aerobe  
D. Obligate anaerobe
- Q.117 The function of coelom is best characterized as?**  
A. To increase the size of the animals  
B. To help in the functioning of the reproductive system  
C. To provide space for the development of organs and systems  
D. None of these
- Q.118 Reversible inhibitors form Weak linkages with which of the following?**  
A. Enzyme  
B. Reactant  
C. Product  
D. Substrate
- Q.119 What is the phenotypic ratio for a cross between a plant with blue flowers BB and a plant with white flowers bb?**  
A. 25% blue, 75% white  
B. 75% blue, 25% white  
C. All white  
D. All blue
- Q.120 The left side of the body is controlled by:**  
A. Left cerebral hemisphere  
B. Right cerebral hemisphere  
C. Hippocampus  
D. Corpus callosum
- Q.121 What type of inhibition effects both the Michaelis constant and the maximum reaction rate of an enzyme?**  
A. Non-competitive inhibition  
B. Competitive inhibition

- C. Uncompetitive inhibition  
D. All of these
- Q.122** Van Niel hypothesis about the production of oxygen during photosynthesis was based on the study and investigations on?  
A. Bacteria  
B. Algae  
C. Protonema  
D. Cyanobacteria
- Q.123** A human cell from the ovary has 22 chromosomes and an X chromosome. It is which of the following?  
A. Egg  
B. Sperm  
C. Somatic cell  
D. Gamete
- Q.124** The carbon dioxide transported in the form of carbonate ions is:  
A. 30%  
B. 50%  
C. 70%  
D. 95%

## PHYSICS

- Q.125** Find the current if power given is 5 Watts and voltage is 0.5 volts.  
A. 10 Amp  
B. 20 Amp  
C. 30 Amp  
D. 50 Amp
- Q.126** Magnetic flux density is a  
A. Scalar quantity  
B. Vector quantity  
C. Sometimes scalar sometimes vector  
D. None of these
- Q.127** Which of the following is not a type of rectifier?  
A. Phase wave rectifier  
B. Full wave  
C. Half wave  
D. None of them
- Q.128** SI Unit of voltage is?  
A. Coulomb  
B. Volts  
C. Ampere  
D. Newton's Meter
- Q.129** In a periodic wave, the distance between two consecutive crests is known as:  
A. Wave length  
B. Amplitude  
C. Displacement  
D. None of these
- Q.130** What is the formula for Coulomb's law?  
A.  $F = Kq_1q_2/r^2$   
B.  $F = 2Kq_1q_2/r^3$   
C.  $F = Kq_1/r$   
D.  $F = Kq_1/q_2$
- Q.131** What will be the product after alpha decay of U-238?  
A. Th-234  
B. Po-234  
C. Rn-234  
D. None of these
- Q.132** Speed is a  
A. Tensor  
B. Vector  
C. Scalar  
D. None of these
- Q.133** The distance between two consecutive crests of a travelling wave is 10 cm. If the speed of the wave 50 cm/s, then its frequency would be:  
A. 40 Hz  
B. 1/5 Hz  
C. 5 Hz  
D. 500 Hz
- Q.134** Two waves interfere constructively, if the path difference between them is  
A.  $(2n + 1) \lambda$   
B.  $(2n + 1) \lambda/2$   
C.  $(2n + 1) \lambda/3$   
D. None of these
- Q.135** Which surface will reflect more light?  
A. Silver painted  
B. Black painted  
C. Brown painted  
D. Black painted
- Q.136** A man standing in a bus and pushing the wall of the bus in direction of motion work done by the man is  
A. Positive  
B. Zero  
C. Negative  
D. None of these
- Q.137** If the system goes from two different paths to same final state, then change in internal energy for both systems is \_\_\_\_\_  
A. Same  
B. Different  
C. May be same  
D. Not enough information
- Q.138** Peak voltage in the output of half wave rectifier is 10V so dc component of output voltage is  
A.  $10\sqrt{2}$   
B.  $\frac{10}{\sqrt{2}}$   
C.  $10/\pi$   
D.  $10\pi$



- Q.139** In single slit diffraction, when wavelength  $\lambda$  increases:
- Width of central maxima increases
  - Width of central maxima does not change
  - Central maxima becomes brighter
  - Width of central maxima decreases
- Q.140** Ohm's law is true for
- Metallic conductors at low temperature
  - Metallic conductors at high temperature
  - For electrolytes, when current passes through them
  - For diode when current flows
- Q.141** The distance between two consecutive nodes in a stationary wave is equal to:
- One wavelength
  - 2.5 wavelength
  - 3 wavelength
  - Half wavelength
- Q.142** An ideal gas is compressed to half of its initial volume. Which of these processes would result in maximum work done?
- Adiabatic
  - Isobaric
  - Isochoric
  - Isothermal
- Q.143** Which of the following is an example of isothermal process?
- The rapid escape of air from a burst tyre
  - The rapid expansion and compression of air through which a sound wave is passing
  - Cloud formation in the atmosphere
  - Slow compression or expansion of gas
- Q.144** A half wave rectifier is equivalent to
- Clamper
  - Clipper
  - Clamper circuit with negative bias
  - Clamper circuit with positive bias
- Q.145** The minute hand of a large clock is 3.0 m long. What is its mean angular speed?
- $1.4 \times 10^{-4} \text{ rad s}^{-1}$
  - $1.0 \times 10^{-3} \text{ rad s}^{-1}$
  - $5.2 \times 10^{-3} \text{ rad s}^{-1}$
  - $1.7 \times 10^{-3} \text{ rad s}^{-1}$
- Q.146** A sample of radioactive element has a mass of 10 gm at an instant  $t = 0$ . The approximate mass of this element in the sample after two mean lives is
- 3.70 gm
  - 6.30 gm
  - 2.50 gm
  - 1.35 gm
- Q.147** When a particle is launched at angle 90 degree with respect to horizontal then vertical acceleration is
- $-9.8 \text{ m/s}^2$
  - $9.8 \text{ m/s}^2$
  - 0
  - $5 \text{ m/s}^2$
- Q.148** People sitting in a moving bus experience a jerk when the bus stops. This is due to \_\_\_\_
- Inertia of motion
  - Inertia of rest
  - Inertia of turning
  - Inertia of acceleration
- Q.149** Two spherical nuclei have mass number 216 and 64 with radius  $R_1$  and  $R_2$  respectively. The ratio of  $R_2/R_1$  is
- 1.5
  - 2
  - 2.5
  - 3
- Q.150** 1 barn is a unit of area having the magnitude of:
- $10^{-24} \text{ cm}^2$
  - $10^{-28} \text{ m}^2$
  - $10^{-24} \text{ m}^2$
  - None of these
- Q.151** Principle of electric generator is based on
- Biot savart's law
  - Ampere's law
  - Newton's law
  - Faraday law
- Q.152** Which rays need medium to travel
- X-rays
  - Beta rays
  - Gamma rays
  - No radiation need medium to travel
- Q.153** A device that consumes electrical energy in the external circuit of generator is known as
- Appliances
  - Machines
  - Motors
  - Load
- Q.154** Range of wavelength of visible light is:
- $700 \text{ \AA} - 1000 \text{ \AA}$
  - $1 \text{ nm} - 100 \text{ nm}$
  - $0.1 \text{ nm} - 1 \text{ nm}$
  - $4000 \text{ \AA} - 7000 \text{ \AA}$

- Q.155** The successive distance between two crests is called?  
 A. Time period  
 B. Wavelength  
 C. Wave speed  
 D. Frequency
- Q.156** Static charge always creates  
 A. Electric field and magnetic field  
 B. Electromagnetic wave  
 C. Electric field  
 D. Both A and B
- Q.157** EMF stands for  
 A. Electromotive force  
 B. Electrical momentum force  
 C. Electric Magnetic force  
 D. None of them
- Q.158** In ground state, high energy photons will be  
 A. Reflected  
 B. Absorbed  
 C. Transmitted  
 D. Any of these
- Q.159** Wave theory of light is unable to prove  
 A. Black body radiation  
 B. Photoelectric effect  
 C. Compton effect  
 D. All of them
- Q.160** The condition for the validity under Ohm's law is that  
 A. Resistance must be uniform  
 B. Current should be proportional to the size of the resistance  
 C. Resistance must be wire wound type  
 D. Temperature at positive end should be more than the temperature at negative end
- Q.161** Excited atoms return to ground state in \_\_\_\_\_ time  
 A. 1 ns  
 B. 2ns  
 C. 3ns  
 D. All of these
- Q.162** Radiation can cause  
 A. Burning  
 B. Cancer  
 C. Flu  
 D. All of these
- Q.163** The angular speed of the wheels of a bicycle is  $8\pi$  radian/sec there period of rotation is:  
 A. 25 sec  
 B. 4 sec  
 C.  $\pi/4$  sec  
 D. 4 sec
- Q.164** A force of  $F = 1 + y$  N is acting in y direction, work done by this force to move the particle from  $y=0$  to  $y = 1$  m  
 A. 0.5 J  
 B. 1 J  
 C. 2 J  
 D. 1.5 J
- Q.165** A simple pendulum has mass M, length L and time period T. What is the period of oscillation of the pendulum with mass 4M and length 0.36L?  
 A. 0.6T  
 B. T  
 C. 2T  
 D. 3T
- Q.166** The attraction capacity of electromagnet will increase if the  
 A. Core length increases  
 B. Core area increases  
 C. Flux density decreases  
 D. Flux density increases
- Q.167** Let L be the light source. Its intensity at the distance of 3x from L is I. What is its intensity of light at the distance of 2x from the source of light?  
 A.  $9I/4$   
 B.  $3I/2$   
 C.  $4I/9$   
 D.  $2I/3$
- Q.168** What is the energy of a photon in a beam of infrared radiation of wavelength 1240 nm? Give your answer in eV.  
 A. 1  
 B.  $6.25 \times 10^{18}$   
 C.  $1.6 \times 10^{-19}$   
 D.  $3.6 \times 10^6$
- Q.169** Value of current in a short circuit is \_\_\_\_\_  
 A. Infinite  
 B. Zero  
 C. Minimum  
 D. Maximum
- Q.170** For a half-wave rectifier having diode voltage  $V_D$  and supply input of V, the diode conducts for  $\pi - 2\theta$ , where  $\theta$  is given by  
 A.  $\tan^{-1} V_D/V$   
 B.  $\sin^{-1} V_D/V$   
 C.  $\cos^{-1} V_D/V$   
 D.  $\cot^{-1} V_D/V$
- Q.171** A positive point charge  $q_1$  creates an electric field of magnitude  $E_1$  at a spot located at a distance  $r_1$  from the charge. The charge is replaced by another positive point charge  $q_2$ , which creates a field of magnitude  $E_2 = E_1$  at a distance of  $r_2 = 2r_1$ . How is  $q_1$  related to  $q_2$ ?  
 A.  $q_2 = 4 q_1$   
 B.  $q_2 = 2 q_1$

- C.  $q_2 = 0.5 q_1$   
Q.172 The units for absorption power is  
A. Meter  
C. Henry
- D.  $q_2 = 0.25 q_1$   
B. Second  
D. None of these
- Q.173 Electrical power is given by  $P =$   
A.  $VI$   
C.  $V^2 / R$
- B.  $I^2 R$   
D. All
- Q.174 For a metal rod of length  $L$  and moving with speed  $v$  in perpendicular to magnetic field then motional emf at its end is  
A.  $lvB$   
C.  $lv^2B$
- B.  $lvB^2$   
D. None of these
- Q.175 Displacement of object with respect a constant moving( $v$ ) frame in same direction is  
A.  $x - vt$   
C.  $x$
- B.  $x + vt$   
D.  $x + vt + at^2$
- Q.176 The reason that white light is not harmful radiation is that  
A. Its speed is less than other radiations  
B. It is composed of different lights  
C. It is originated from non-radioactive element  
D. None of these
- Q.177 If radius is four times angular velocity is two times the linear velocity becomes  
A. 4  
C. 8
- B. 6  
D. None of these
- Q.178 The deuterium atom has \_\_\_\_\_ quarks  
A. 3  
C. 9
- B. 6  
D. 12
- Q.179 Lorentz force in electric and magnetic field is  
A.  $F = qv[E+B]$   
C.  $qvB$
- B.  $qE[v+B]$   
D.  $q[E+vB]$
- Q.180 In which process the net work done is zero?  
A. Cyclic  
C. Isochoric
- B. Free expansion  
D. Adiabatic

## ENGLISH

- Q.181 The earth \_\_\_\_\_ (seem) to be moving.  
A. Seem  
C. Seeming
- B. Seemed  
D. Seems
- Q.182 She returned after \_\_\_\_\_ hour.  
A. a  
C. the
- B. an  
D. no article
- Q.183 Choose the correct sentence.  
A. Myra and her family are spending the summer at attabad lake.  
B. Myra and her family are spending the summer at attabad lake!  
C. Myra and her family are spending the summer at Attabad lake.  
D. Myra and her family are spending the summer at Attabad Lake.
- Q.184 Overcast  
A. Rainy  
C. Windy
- B. Cloudy  
D. Clear
- Q.185 God \_\_\_\_\_ those who help themselves.  
A. Help  
C. Has helped
- B. Helps  
D. Is helping
- Q.186 My friend has been living \_\_\_\_\_ Karachi for two years.  
A. On  
C. In
- B. At  
D. Across
- Q.187 How beautiful she is!  
A. Declarative  
C. Interrogative
- B. Imperative  
D. Exclamatory
- Q.188 Choose the correct spelling of the word  
A. Except  
C. Excipit
- B. Excapt  
D. Eccept

- Q.189** hunch  
 A. hump  
 C. straighten  
 B. stretch  
 D. curiosity
- Q.190** Choose the correct sentence.  
 A. My g.p. is called Dr. Sajjad.  
 C. My G.P. is called Dr. Sajjad.  
 B. My g.p. is called Dr. sajjad.  
 D. My G.P, is called Dr. Sajjad.
- Q.191** With this \_\_\_\_\_ I can get to the roof of he house.  
 A. Index  
 C. Ladder  
 B. Lager  
 D. Step
- Q.192** he is  
 A. hes  
 C. he's  
 B. hes'  
 D. heis
- Q.193** I \_\_\_\_\_ Karachi by the next week.  
 A. shall have visited  
 C. shall has visit  
 B. shall be visited  
 D. none
- Q.194** Rahul and his friends \_\_\_\_\_ also Invited to the party.  
 A. is  
 C. had  
 B. was  
 D. were
- Q.195** Choose the correct sentence.  
 A. I can't see Tims car, there must have been an accident.  
 B. I can't see Tim's car, there must have been an accident.  
 C. I can't see Tims car there must have been an accident.  
 D. I can't see Tims car; there must have been an accident.
- Q.196** He is a scientist but out of his three sons neither have become scientists.  
 A B C D  
 A. He is a scientist  
 C. his three sons  
 B. but out of  
 D. neither have become scientists.
- Q.197** Will you have \_\_\_\_\_ apple, \_\_\_\_\_ pear or \_\_\_\_\_ orange?  
 A. an..a...a  
 C. an..a...the  
 B. an..a..an  
 D. the... the.. the
- Q.198** Zohalb \_\_\_\_\_ (throw) the bag out of the window.  
 A. throw  
 C. throwing  
 B. threw  
 D. was throwing
- Q.199** Nelther my sisters nor my mother \_\_\_\_\_ going to sell the house.  
 A. is  
 C. are  
 B. am  
 D. had
- Q.200** luminary  
 A. Bright  
 C. Famous  
 B. Lightening  
 D. Dashing

## LOGICAL REASONING

- Q.201** Fact 1: All hats have brims  
 Fact 2: there are black hats and blue hats  
 Fact 3: Baseball caps are hats  
 If the above three statements are facts than which of the following statement will also be a fact  
 I. All caps have brims  
 II. Some baseball caps are blue  
 III. Baseball caps have no brims  
 A. I only  
 C. III only  
 B. II only  
 D. None of them is a fact
- Q.202** Statement: - The Management of School M has decided to give free breakfast from next academic year to all the students in its primary section through its canteen even though they will not get any government grant.  
 Courses of Action  
 I. The school will have to admit many poor students who will seek admission for the next academic year.  
 II. The canteen facilities and utensils have to be checked and new purchases to be made to equip it properly.  
 III. Funds will have to be raised to support the scheme for years to come.

- A. Only II and III follows  
C. Only I and II follow

- B. Only III and I follow  
D. Only I follows

**Q.203 Statement:-** The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased.

**COURSE OF ACTION: -**

- I.** To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality.  
**II.** The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

- A. Both of them follows  
C. Only I follows

- B. None of them follows  
D. Only II follows

**Q.204 Who is the father of Computer?**

- A. Alan Turing  
C. Simur Cray

- B. Charles Babbage  
D. Both A and B

**Q.205 look at this series 7,10,8,11,9,12. Which number you think will be next?**

- A. 10  
C. 7

- B. 13  
D. 12

**Q.206 I.** The new program has been introduced with ordeal.

**II.** The government has announced a plan on the creation of the TV programs.

- A. Statement I is the cause and statement II is its effect.  
B. Statement II is the cause and statement I is its effect.  
C. Both statements I and II are independent causes  
D. Both statements I and II are the effects of independent cause.

**Q.207 At what time between 4 and 5 o'clock will the hands of a watch point in opposite directions?**

- A.  $(54 + 6/11)$  past 4  
C.  $(53 + 7/11)$  past

- B.  $(54 + 8/11)$  past 4  
D. Both A and B

**Q.208 Aware is to alert as prompus is to**

- A. Scarcely  
C. Bragging

- B. Impolitely  
D. Quietly

**Q.209 Statement:**

**I.** There has been a high increase in the incidents of atrocities against women in the city during the past few months.

**II.** The police authority has been unable to nab the culprits who are committing crime against women.

- A. Statement I is the cause and statement II is its effect.  
B. Statement II is the cause and statement I is its effect  
C. Both the statements I and II are independent causes  
D. Both the statements I and II are effects of independent causes

**Q.210 Quote and Poet have \_\_\_\_\_ number of same letters**

- A. 5  
C. 3

- B. 4  
D. 2