Komal Yaqoob

KIPS ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT-1)

TOPICS:-

✓ **Cell Biology**

Q.1 **The cells of plants and animals can be distinguished by the presence or absence of:**
A) Nucleus
B) Mitochondria
C) Cell wall
D) Vacuole

Q.2 **Most of the plant cells do not have:**
A) Cell wall, nucleus & vacuole
B) Lysosome, peroxisome & glyoxysome
C) Centriole, cytoskeleton & peroxisomes
D) Flagellum, centriole & lysosome

Q.3 **Mature plant cells have:**
A) Single small vacuole
B) Single large vacuole
C) Many small vacuoles
D) Many large vacuoles

Q.4 **Phagocytosis is the common character of:**
A) Plant cell
B) Animal cell
C) Bacterial cell
D) All A, B, C

Q.5 **Cytoskeleton is present in all of the following except:**
A) Plant cells
B) Animal cells
C) Fungal cells
D) Bacterial cells

Q.6 **Genetic material of a prokaryotic cell is found in:**
A) Nucleus
B) Cytoplasm
C) Mitochondria
D) Chloroplast

Q.7 **A prokaryotic cell divides by:**
A) Mitosis
B) Meiosis
C) Binary fission
D) Multiple fission

Q.8 **Prokaryotic cell wall does not contain:**
A) Peptidoglycan
B) Murein
C) Long polysaccharide chains
D) Long amino acid chains

Q.9 **Which of the following structures are chemically same in bacterial and eukaryotic cells?**
A) Cell membrane
B) Cell wall
C) Flagella
D) Ribosomes

Q.10 **Which of the following proteins are absent in prokaryotic cells?**
A) Histone
B) Tubulin
C) Histone & tubulin
D) Flagellin & pilin

Q.11 **Most abundant components of plasma membrane are:**
A) Lipids
B) Carbohydrates
C) Proteins
D) Nucleic acids

Q.12 **Lipid bilayer in cell membrane is made from:**
A) Acylglycerols
B) Phospholipids
C) Sterols
D) Cholesterol

Q.13 **According to unit membrane model, which parts are directed towards each other?**
A) Hydrophobic zone of lipid
B) Hydrophilic zone of lipid
C) Hydrophobic zone of protein
D) Hydrophilic zone of protein

Q.14 **According to fluid mosaic model of plasma membrane, protein molecules are:**
A) Sandwiched between lipid layers
B) Layered around lipids
C) Embedded like mosaic
D) Present only on surface of lipids

Q.15 **Transport of materials through charged pores of plasma membrane occurs by:**
A) Active transport
B) Passive transport
C) Carrier mediated transport
D) Both active & passive transport

Q.16 **Which of the following forms extracellular matrix of a cell?**
A) Phospholipids
B) Integral proteins
C) Cytoskeleton
D) Glycoproteins

Q.17 Plasma membrane is:
A) Impermeable to all substances
B) Permeable to all substances
C) Selectively permeable to substances
D) Impermeable in most of cells

Q.18 Movement of water molecules from high water potential to low water potential across membrane is:
A) Diffusion
B) Facilitated diffusion
C) Osmosis
D) Active transport

Q.19 Na^+ influx through neuronal membrane is an example of:
A) Diffusion
B) Osmosis
C) Active transport
D) Facilitated diffusion

Q.20 Gases move across the cell membrane through:
A) Diffusion
B) Osmosis
C) Active transport
D) Facilitated diffusion

Q.21 Intake of solid substance by infolding of cell membrane is called:
A) Endocytosis
B) Exocytosis
C) Pinocytosis
D) Phagocytosis

Q.22 Transfer of molecules from higher concentration to lower concentration through carrier proteins is called:
A) Diffusion
B) Facilitated diffusion
C) Active transport
D) Endocytosis

Q.23 These are non-membranous organelles of cell:
A) Vacuole & lysosome
B) Ribosomes & centrioles
C) Endoplasmic reticulum & Golgi apparatus
D) Mitochondria & chloroplast

Q.24 Channels of endoplasmic reticulum are often continuous with:
A) Nucleus & Golgi apparatus
B) Nucleus & Plasma membrane
C) Plasma membrane & Golgi apparatus
D) Plasma membrane & Mitochondria

Q.25 Cisternae are the membranes associated with all of the following except:
A) Golgi apparatus
B) Lysosome
C) Peroxisome
D) Ribosome

Q.26 Which of the following function is performed both by RER & SER?
A) Synthesis of proteins
B) Detoxification of drugs
C) Transmission of impulses
D) Mechanical support to cell

Q.27 Proteins synthesized on ribosomes of RER are:
A) Released into cytoplasm
B) Pushed into RER
C) Transferred into nucleus
D) Attached with ribosome

Q.28 Eukaryotic ribosomes are composed of RNA and protein in:
A) 1:1
B) 1:2
C) 2:1
D) 3:1

Q.29 The ribosomes are attached to messenger RNA through:
A) Ca^{+2}
B) Mg^{+2}
C) Smaller subunit
D) Larger subunit

Q.30 A polysome contains:

	Ribosome	mRNA
A)	One	One
B)	Many	Many
C)	One	Many
D)	Many	One

Q.31 Stack of cisternae sacs with associated vesicles form a complex system of interconnected tubules called:
A) Endoplasmic reticulum
B) Golgi apparatus
C) Golgi complex
D) Cisternae vesicles

Q.32 Which of the following correctly represents surfaces of Golgi apparatus?

	Inner	Outer
A)	Concave, Forming	Convex, Maturing
B)	Convex, Forming	Concave, Maturing
C)	Concave, Maturing	Convex, Forming
D)	Convex, Maturing	Concave, Forming

Q.33 Proteins synthesized on ribosomes are converted into glycoproteins in:
A) Rough endoplasmic reticulum
B) Smooth endoplasmic reticulum
C) Golgi complex
D) Mitochondria

Q.34 Secretions are the products formed within the cell and pass out. Sequence followed by them is:
A) Ribosome > Lysosome > ER > Golgi apparatus
B) Ribosome > ER > Lysosome > Golgi apparatus
C) ER > Ribosome > Golgi apparatus > Lysosome
D) Ribosome > ER > Golgi apparatus > Lysosome

Q.35 Most important function of Golgi apparatus is synthesis of:
A) Proteins
B) Carbohydrates
C) Lipids
D) Glycoproteins

Q.36 Any food particle that is engulfed by cell is transformed into:
A) Food vacuole
B) Contractile vacuole
C) Lysosome
D) Peroxisome

Q.37 Lysosomal enzymes are synthesized by:
A) Free ribosomes
B) RER
C) SER
D) Golgi apparatus

Q.38 It is an example of secondary lysosome:
A) Food vacuole
B) Phagocytic vacuole
C) Digestive vacuole
D) Contractile vacuole

Q.39 Lysosomal enzymes play an important role in:
A) Oxidation
B) Reduction
C) Hydrolysis
D) Anabolism

Q.40 Which of the following organelle plays an important role in anabolism of lipids?
A) RER
B) SER
C) Mitochondria
D) Lysosome

Q.41 Accumulation of lipids in brain cells lead to mental retardation and even death. This is about:
A) Glycogenosis type II disease
B) Tay-Sach's disease
C) Madcow infection
D) Mysterious brain infection

Q.42 Which of the following type of WBCs depend upon lysosomes for killing of foreign agents?
A) Neutrophils
B) Eosinophils
C) B lymphocytes
D) T lymphocytes

Q.43 Organelles that are specifically involved in formation and decomposition of hydrogen peroxide in cell are:
A) Ribosome
B) Lysosome
C) Peroxysome
D) Glyoxysome

Q.44 Peroxisomes are not found in _____ cells.
A) Animal
B) Plant
C) Yeast
D) Bacterial

Q.45 Which of the following enzyme found in peroxisomes is involved in breakdown of H_2O_2?
A) Oxidase
B) Catalase
C) Peroxidase
D) Glycolic acid oxidase

Q.46 Glyoxisomes are most abundant in:
A) Animals
B) Protozoans
C) Mature plants
D) Plant seedlings

Q.47 In lipid rich seeds, glyoxisomes are the sites for breakdown of fatty acids into:
A) Acetate
B) Succinate
C) Fumarate
D) Malate

Q.48 The movement of cyclosis and amoeboid movements are because of:
A) Microtubules
B) Microfilaments
C) Intermediate filaments
D) All A, B, C

Q.49 Intermediate filaments play an important role in:
A) Internal cell motion
B) Disassembly of spindles
C) Maintenance of cell shape
D) Involved in locomotion

Q.50 Cytoskeletal fibers having maximum diameter are:
A) Microtubules
B) Actin filaments
C) Myosin filaments
D) Intermediate filaments

Q.51 Centrioles are absent in:
A) Animals & protozoans
B) Fungi & fungi-like protists
C) Animals & plants
D) Plants & fungi

Q.52 An animal cell that is undergoing through metaphase will have:
A) 1 centrosome & 2 centrioles
B) 1 centrosome & 4 centrioles
C) 2 centrosomes & 2 centrioles
D) 2 centrosomes & 4 centrioles

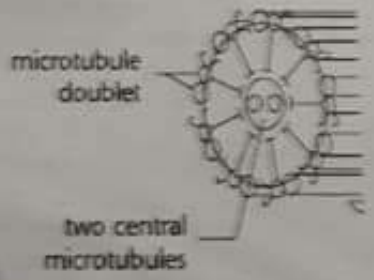
Q.53 Duplication of centrioles occurs during _____ of cell cycle:
A) G1 phase
B) S phase
C) G2 phase
D) M phase

Q.54 A function that is not attributed to centrioles:
A) Spindle formation
B) Cilia formation
C) Cytokinesis in plant cell
D) Cytokinesis in animal cell

Q.55 Ribosomes found in a eukaryotic cell are:
A) 30S & 50S
B) 40S & 60S
C) 70S & 80S
D) 80S & 100S

Q.56 In peptidoglycan cell wall of a bacterial cell, polysaccharide chains are bound to short chains of amino acids through:
A) Ionic bond
B) Covalent bond
C) Hydrogen bond
D) Peptide bond

Q.57 Identify the structure given below:



A) Basal body
B) Flagella
C) Pili
D) Centriole

Q.58 Reactions of Krebs cycle occur in/at _____ of mitochondria:
A) Outer membrane
B) Inner membrane
C) Outer compartment
D) Inner compartment

Q.59 Nuclear pores regulate transport of substances between nucleoplasm and cytoplasm. Substances that enter in nucleus are:
A) mRNA &tRNA
B) Ribosomal subunits
C) ATP & enzymes
D) DNA & RNA

Q.60 Outer nuclear membrane is directly in contact with:
A) Nucleoplasm
B) Nucleoli
C) RER
D) SER

KIPS | ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT-2)

TOPICS: .

✓ **Biological Molecules**

Q.1 **It is the medium of life:**
A) Alcohol
B) Water
C) Plasma
D) Fluid

Q.2 **In human body, maximum water is found in _____ cells.**
A) Bone
B) Brain
C) Muscle
D) Cartilage

Q.3 **Water is an excellent solvent due to its:**
A) Heat capacity
B) Melting point
C) Polarity
D) Ionization

Q.4 **Water has great ability of absorbing heat with minimum change in its own temperature. This is its:**
A) Heat of vaporization
B) Specific heat capacity
C) Heat of melting
D) Latent heat of water

Q.5 **The process by which plants get evaporative cooling is:**
A) Radiation
B) Perspiration
C) Transpiration
D) Photosynthesis

Q.6 **Which of the following explains role of water to act as cushion and providing protection from trauma?**
A) Cerebrospinal fluid
B) Pericardial fluid
C) Synovial fluid
D) Pleural fluid

Q.7 **General formula of carbohydrates is $C_x(H_2O)_y$, where x and y are same in:**
A) Monosaccharides
B) Oligosaccharides
C) Disaccharides
D) Polysaccharides

Q.8 **Which of the following are true about oligosaccharides?**

	Solubility	Hydrolysis
A)	×	×
B)	√	√
C)	√	×
D)	×	√

Q.9 **These are most common monosaccharides:**
A) Trioses & tetroses
B) Tetroses & pentoses
C) Pentoses & hexoses
D) Hexoses & heptoses

Q.10 **How many carbons are found outside ring of fructose (fructofuranose)?**
A) 1
B) 2
C) 3
D) 5

Q.11 **Formation of sucrose is an example of:**
A) Hydrolysis
B) Hydration
C) Condensation
D) Oxidation

Q.12 **During formation of sucrose, one water molecule is released. This water takes OH from:**
A) Glucose
B) Fructose
C) Galactose
D) Maltose

.13 **It is a nitrogen containing polysaccharide:**
A) Starch
B) Glycogen
C) Cellulose
D) Chitin

Q.14 Which of the following is true about branching nature and solubility of amylose and amylopectin in hot water?

	Amylose	Amylopectin
A)	Branched, Soluble	Unbranched, Soluble
B)	Unbranched, Soluble	Branched, Insoluble
C)	Unbranched, Insoluble	Branched, Soluble
D)	Branched, Insoluble	Unbranched, Soluble

Q.15 It is an example of storage polysaccharide:
A) Amylose C) Pectin
B) Cellulose D) Hemicellulose

Q.16 Type of glycosidic linkage present in cellulose is:
A) α 1,4 C) α 1,4 and α 1,6
B) β 1,4 D) β 1,4 and β 1,6

Q.17 These are the group of lipids which are specialized for energy storage:
A) Acylglycerols C) Waxes
B) Phospholipids D) Terpenoids

Q.18 Fatty acids are found in all of the following except:
A) Acylglycerols C) Waxes
B) Phospholipids D) Terpenoids

Q.19 Variability among different types of acylglycerols is due to:
A) Glycerols C) Ketones
B) Fatty acids D) Isoprenoid

Q.20 Which of the following fatty acid is naturally obtained from animal source?
A) Acetic acid C) Palmitic acid
B) Butyric acid D) Oleic acid

Q.21 It is not a component of phosphatidic acid:
A) Glycerol C) Phosphoric acid
B) Fatty acid D) Nitrogenous base

Q.22 Number of fatty acid/s present in a phospholipid molecule is/are:
A) 1 C) 3
B) 2 D) 4

Q.23 Polarity in head of phospholipid molecule is made possible due to:
A) Glycerol C) Fatty acid
B) Phosphoric acid D) Nitrogenous base

Q.24 Proteins control whole metabolism of the cell in form of:
A) Hormones C) Antibodies
B) Enzymes D) Co-factors

Q.25 All of the following elements are essential for all amino acids except:
A) Carbon C) Nitrogen
B) Sulphur D) Oxygen

Q.26 The smallest R group in any amino acid is:
A) S C) H
B) NH_2 D) CH_3

Q.27 During formation of a dipeptide, a water molecule is released. This water take hydrogen from:
A) NH_2 group of 1st amino acid C) NH_2 group of 2nd amino acid
B) COOH group of 1st amino acid D) COOH group of 2nd amino acid

.28 Primary structure of a protein molecule does not comprise:
A) Number of amino acids C) Size of protein molecule
B) Sequence of amino acids D) Shape of protein molecule

29 Each beta chain of a hemoglobin molecule contains:
A) 21 amino acids C) 141 amino acids
B) 30 amino acids D) 146 amino acids

Q.30 All proteins in living organism always show following structural levels:
A) Primary & secondary structure
B) Secondary & tertiary structure
C) Tertiary & quaternary structure
D) Secondary & quaternary structure

Q.31 Structural level that is essential for formation of globular shape of a protein molecule is:
A) Primary structure
B) Secondary structure
C) Tertiary structure
D) Quaternary structure

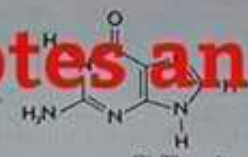
Q.32 In quaternary structure, polypeptide chains are aggregated and held together by all of the following except:
A) Hydrophobic interactions
B) Disulphide linkages
C) Hydrogen bond
D) Ionic bond

Q.33 All of the following are true bout fibrous proteins except:
A) Secondary structure
B) Insoluble in water
C) Inelastic in nature
D) Form structures

Q.34 It is an example of globular protein:
A) Myosin
B) Fibroin
C) Fibrinogen
D) Keratin

Q.35 In a typical nucleotide, phosphoric acid is attached to pentose sugar at carbon number:
A) 1
B) 2
C) 3
D) 5

Q.36 Identify the structure:



A) Guanine
B) Uracil
C) Thymine
D) Cytosine

Q.37 Which of the following nucleotide is not found in DNA?
A) d-AMP
B) d-GMP
C) d-UMP
D) d-CMP

Q.38 Which of the following represent high energy bonds in ATP?
A) Ribose – Adenine
B) Ribose – Phosphate
C) Phosphate – Adenine
D) Phosphate – Phosphate

Q.39 Link formed between nitrogenous base and pentose sugar is:
A) C-C link
B) C-O link
C) C-N link
D C-O-P link

Q.40 Which of the following does not employ to Erwin Chargaff rule?
A) Purines = Pyrimidines
B) Adenine = Thymine
C) Adenine + Thymine = Guanine + Cytosine
D) Adenine + Guanine = Thymine + Cytosine

Q.41 X-Ray diffraction analysis of DNA was first carried out by:
A) Fredrick Miescher
B) Maurice Wilkins
C) Rosalind Franklin
D) James Watson

Q.42 Diameter of DNA double helix is about:
A) 3.4 nm
B) 2.0 nm .
C) 34 nm
D) 34 pm

Q.43 Which of the following correctly represent sites for synthesis and functioning of RNAs in a eukaryotic cell?

	SYNTHESIS	FUNCTION
A)	Nucleus	Nucleus
B)	Cytoplasm	Cytoplasm
C)	Nucleus	Cytoplasm
D)	Cytoplasm	Nucleus

Q.44 It is the major proportion of RNA in the cell:
A) mRNA
B) tRNA
C) rRNA
D) rDNA

Q.45 Types of tRNA molecules that participate in protein formation are at least:
A) 20
B) 25
C) 45
D) 64

Q.46 These are the most important group of proteins which are biologically active:
A) Ribozymes
B) Enzymes
C) Hormones
D) Coenzymes

Q.47 A character that is applied to all co-factors for enzymes:
A) Organic
B) Inorganic
C) Protein
D) Non-protein

Q.48 Prosthetic group is such a non-protein co-factor that is commonly attached to enzyme through:
A) Hydrogen bond
B) Ionic bond
C) Covalent bond
D) Peptide bond

Q.49 An enzyme with its co-factor removed is designated as:
A) Proenzyme
B) Coenzyme
C) Apoenzyme
D) Holoenzyme

Q.50 Enzymes which are involved in aerobic respiration in plant cell are found in:
A) Chloroplast
B) Mitochondria
C) Cytosol
D) Ribosome

Q.51 In an enzyme controlled chain reaction, if concentration of initial substrate is increased then it will cause:
A) Feedback inhibition
B) Precursor activation
C) End product inhibition
D) Enzyme to enzyme association

Q.52 Activated catalytic site of an enzyme is involved in:
A) Recognition of proper substrate
B) Binding of proper substrate
C) Formation of ES complex
D) Transformation of ES complex

Q.53 This is the core of Induce Fit Model which distinguishes it from Lock and Key model:
A) Catalytic nature of enzyme
B) Specificity of enzyme
C) Change in enzyme
D) Change in substrate

Q.54 At low concentration of substrate, the reaction rate is directly proportional to available:
A) Enzyme
B) Active sites
C) Substrate
D) Product

Q.55 At freezing point, enzymes of human body may be:
A) Inhibited
B) Saturated
C) Denatured
D) Inactivated

Q.56 Extreme changes in pH cause denaturation of enzyme by breaking:
A) Peptide bond
B) Hydrogen bond
C) Ionic bond
D) Ester bond

Q.57 An enzyme that requires highly alkaline medium for its proper functioning is:
A) Salivary amylase
B) Catalase
C) Chymotrypsin
D) Pancreatic lipase

Q.58 They occupy the active sites and block enzyme activity by forming weak linkages:
A) Irreversible competitive
B) Irreversible non-competitive
C) Reversible competitive
D) Reversible non-competitive

Q.59 Allosteric inhibitors are examples of:
A) Irreversible inhibitors
B) Reversible inhibitors
C) Competitive inhibitors
D) Non-competitive inhibitors

Q.60 It is not true about enzymes:
A) They increase rate of reaction without being used
B) They can change nature of end products
C) They are required in small amount
D) They lower activation energy of reactions

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT–3)

TOPICS: -

- ✓ **Microbiology**
- ✓ **Kingdom Animalia**

Q.1 **First infectious disease against which method of prevention was developed:**
A) Viral disease
B) Bacterial disease
C) Fungal disease
D) Parasitic infestation

Q.2 **Who discovered that the agents which caused tobacco mosaic disease was filterable?**
A) Louis Pasteur
B) Charles Chamberland
C) Ivanowski
D) Stanley

Q.3 **Viruses cannot be grown on artificial culture media because they are:**
A) Facultative parasites
B) Obligate parasites
C) Endoparasites
D) Ectoparasites

Q.4 **In prions, the information for their replication is contained in:**
A) Carbohydrates
B) Proteins
C) RNA
D) DNA

Q.5 **It is present in all the viruses:**
A) DNA
B) RNA
C) Capsid
D) Envelop

Q.6 **Genome of T4 bacteriophage contains:**
A) Single stranded DNA
B) Double stranded DNA
C) Single stranded RNA
D) Double stranded RNA

Q.7 **Lysozyme is released to dissolve a portion of bacterial cell wall during which stage of life cycle of T4 phage?**
A) Landing
B) Attachment
C) Penetration
D) Injection

Q.8 **The process by which lysogenic cycle transforms into lytic cycle is:**
A) Adsorption
B) Lysogeny
C) Induction
D) Virulence

Q.9 **These have ability to convert normal cells into cancer cells:**
A) Pox viruses
B) Parvoviruses
C) Paramyxoviruses
D) Retroviruses

Q.10 **Most distinctive feature of a retrovirus is:**
A) RNA genome
B) Spherical capsid
C) Reverse transcriptase
D) Envelope spikes

Q.11 **Capsid of HIV is:**
A) Spherical
B) Polyhedral
C) Conical
D) Tubular

Q.12 **During reverse transcription, for synthesis of double stranded DNA, which of the following acts as template?**
A) RNA strand
B) DNA strand
C) Protein molecule
D) Both RNA & DNA strands

Q.13 **It is also called as infusion hepatitis:**
A) Hepatitis A
B) Hepatitis B
C) Hepatitis C
D) Hepatitis D

Q.14 **It is less severe but often leads to chronic liver disease:**
A) Hepatitis A
B) Hepatitis B
C) Hepatitis C
D) Hepatitis E

Q.15 **Genetically engineered vaccine is not available for:**
A) HAV
B) HBV
C) HCV
D) HEV

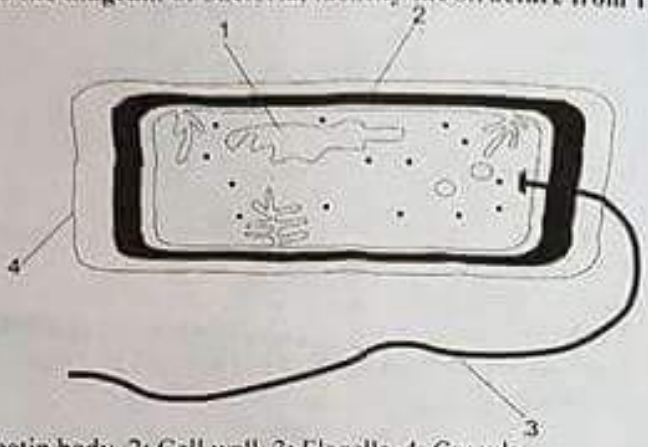
Q.16 It is a cube of eight cocci with three planes of division:
A) Tetrad
B) Sarcina
C) Streptococcus
D) Staphylococcus

Q.17 Such bacteria having tuft of flagella at each of the two poles are:
A) Monotrichous
B) Lophotrichous
C) Amphitrichous
D) Peritrichous

Q.18 These are hollow, nonhelical, filamentous appendages found in bacteria:
A) Cilia
B) Flagella
C) Pili
D) Fimbrae

Q.19 A bacterial cell structure that can be the component of extracellular matrix but not part of cell envelope:
A) Cell wall
B) Capsule
C) Slime
D) Spore

Q.20 Following is the diagram of bacteria, identify the structure from 1 to 4:



A) 1: Chromatin body, 2: Cell wall, 3: Flagella, 4: Capsule
B) 2: Chromatin body, 1: Cell wall, 4: Flagella, 3: Capsule
C) 4: Chromatin body, 2: Cell wall, 1: Flagella, 3: Capsule
D) 1: Chromatin body, 2: Cell wall, 4: Flagella, 3: Capsule

Q.21 Bacteria having more peptidoglycan in their cell wall as compared to others are:
A) Mycoplasma
B) Archaeobacteria
C) Gram positive bacteria
D) Gram negative bacteria

Q.22 A bacterial cell unlike cells of eukaryotic organism lacks all except:
A) True chromosome
B) Mitosis
C) Cytoskeleton
D) Flagella

Q.23 Which of the following correctly represents DNA molecule of chromatin body in bacterial cell?

	Copies	Type	Nature
A)	Single	Circular	Single stranded
B)	Single	Circular	Double stranded
C)	Multiple	Linear	Double stranded
D)	Multiple	Circular	Double stranded

Q.24 These are more resistant to unfavourable environmental conditions as compared to others:
A) Capsule
B) Spore
C) Cyst
D) Plasmid

Q.25 Energy required for synthetic reactions of chemosynthetic bacteria comes from:
A) Solar energy
B) Chemical energy
C) Oxidation of organic substances
D) Oxidation of inorganic substances

Q.26 Bacteria which can grow either in presence or absence of oxygen are called:
A) Aerobic bacteria
B) Anaerobic bacteria
C) Facultative bacteria
D) Microaerophilic bacteria

Q.27 **Which of the following is correct sequence of events of binary fission in bacteria?**
A) Cell enlargement > Chromosome duplication > Plasma membrane invagination
B) Chromosome duplication > Cell enlargement > Plasma membrane invagination
C) Plasma membrane invagination > Cell enlargement > Chromosome duplication
D) Chromosome duplication > Plasma membrane invagination > Cell enlargement

Q.28 **It causes destruction of all life forms:**
A) Sterilization
B) Disinfection
C) Antisepsis
D) Immunization

Q.29 **Chemical substances used on living tissues that inhibit growth of microorganisms are called:**
A) Preservatives
B) Antiseptics
C) Disinfectants
D) Vaccines

Q.30 **Such an antibiotic that inhibits the reproductive capacities of the microbes is called:**
A) Broad spectrum
B) Microbistatic
C) Microbicidal
D) Microbiological

Q.31 **First antibiotic was obtained from:**
A) Bacteria
B) Actinomycete
C) Fungi
D) Algae

Q.32 **Most important decomposers in ecosystem are:**
A) Fungi & algae
B) Bacteria & insects
C) Bacteria & fungi
D) Algae & insects

Q.33 **A character that is found only in fungi:**
A) Hyphae
B) Rhizoids
C) Absorptive heterotroph
D) Nuclear mitosis

Q.34 **Coenocytic hyphae are those hyphae which are:**
A) Septate & uninucleate
B) Septate & multinucleate
C) Aseptate & uninucleate
D) Aseptate & multinucleate

Q.35 **Most common method of reproduction in fungi is:**
A) Spore formation
B) Conidia formation
C) Fragmentation
D) Budding

Q.36 **Karyogamy is immediately followed by plasmogamy in:**
A) Zygomycota
B) Ascomycota
C) Basidiomycota
D) Deuteromycota

Q.37 **All of the following structure in fungi give rise to sexual spores except:**
A) Basidia
B) Asci
C) Zygote
D) Sporangium

Q.38 **All of the following are edible forms of fungi except:**
A) *Agaricus campestris*
B) *Morchella esculenta*
C) *Amanita phalloides*
D) *Tuber gibbosum*

Q.39 **These fungi are used for producing soya sauce, soya paste and citric acid:**
A) *Saccharomyces*
B) *Penicillium*
C) *Aspergillus*
D) *Agaricus*

Q.40 **A drug that is obtained from a soil fungus and used to prevent transplant rejection is:**
A) Lovastatin
B) Griseofulvin
C) Cyclosporin
D) Ergotin

Q.41 **'t is commonly called as brown mold:**
A) *Rhizopus*
B) *Aspergillus*
C) *Penicillium*
D) *Neurospora*

Q.42 **It is a fungal infection of sugarcane:**
A) Powdery mildews
B) Red rot
C) Root rot
D) Brown rot

Q.43 **It is caused by inhaling spores of a fungus which is common in soil contaminated with bird's feces:**
A) Candidiasis
B) Histoplasmosis
C) Aspergillosis
D) Ergotism

Q.44 Nervous spasm, convulsions, psychotic delusions and gangrene are associated with:
A) Histoplasmosis
B) Candidiasis
C) Aspergillosis
D) Ergotism

Q.45 Karyogamy in *Rhizopus* results in formation of:
A) Zygote
B) Zygospore
C) Spore
D) Sporangium

Q.46 Simplest of the eumatozoa having radial symmetry are:
A) Sponges
B) Cnidarians
C) Flat worms
D) Round worms

Q.47 It is a condition or organization in which parts of body are arranged around central axis and two halves are mirror images:
A) Radial symmetry
B) Bilateral symmetry
C) Diploblastic organization
D) Triploblastic organization

Q.48 Which of the following is true about symmetry of echinoderms?

	Larva	Adult
A)	Radial	Radial
B)	Bilateral	Bilateral
C)	Radial	Bilateral
D)	Bilateral	Radial

Q.49 In aschelminthes, the space between the body wall and the digestive tract is called:
A) Gastrocoel
B) Blastocoel
C) Pseudocoelom
D) Coelom

Q.50 All of the following animals are coelomates except:
A) Annelids
B) Nematodes
C) Arthropods
D) Molluscs

Q.51 *Fasciola hepatica* is found in _____ of primary host:
A) Gut
B) Liver
C) Bile duct
D) Intestine

Q.52 The intermediate host of tapeworm is:
A) Sheep
B) Pig
C) Human
D) Snail

Q.53 _____ system of parasitic forms of flat worms is complicated.
A) Muscular
B) Nervous
C) Digestive
D) Reproductive

Q.54 These are the parasites of human large intestine:
A) *Ascaris lumbricoides*
B) *Enterobius vermicularis*
C) *Ancylostoma duodenale*
D) *Taenia solium*

Q.55 All of the following are endoparasites except:
A) *Ascaris lumbricoides*
B) *Enterobius vermicularis*
C) *Ancylostoma duodenale*
D) *Hirudo medicinalis*

Q.56 _____ are the first group of invertebrates which have developed a closed circulatory system:
A) Nematodes
B) Annelids
C) Arthropods
D) Molluscs

Q.57 The organs of locomotion in annelids are chitinous chaetae. These are absent in:
A) *Nereis*
B) *Chaetopterus*
C) Earthworm
D) Leech

Q 58 This is the largest phylum of animal kingdom:
A) Annelida
B) Arthropoda
C) Mollusca
D) Chordata

Q.59 Common house fly can be the source of spread of all of the following diseases except:
A) Cholera
B) Dengue
C) Typhoid
D) Hepatitis

Q.60 Land snail belong to which group of phylum Mollusca:
A) Gastropoda
B) Bivalvia
C) Pelecypoda
D) Cephalopoda

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 1-3)

TOPICS:

- ✓ **Cell Biology**
- ✓ **Biological Molecules**
- ✓ **Microbiology**
- ✓ **Kingdom Animalia**

Q.1 **A structure that is absent in plant cells but present in animal cells is:**

A) Centrioles
B) Vacuoles
C) Glyoxysomes
D) Peroxisomes

Q.2 **Difference between prokaryotic and eukaryotic cell is mainly based upon the structure of their:**

A) Cell wall
B) Nucleus
C) Ribosome
D) Chromosome

Q.3 **A chemical substance that is found in eukaryotic cell membrane but absent in prokaryotic cell membrane:**

A) Phospholipid
B) Cholesterol
C) Globular protein
D) Polysaccharide

Q.4 **Which of the following correctly represents composition of plasma membrane?**

	Lipids	Proteins
A)	60-80%	20-40%
B)	20-60%	40-80%
C)	40-80%	20-60%
D)	20-40%	60-80%

Q.5 **According to fluid mosaic model, fluid consistency of plasma membrane is due to:**

A) Fibrous proteins
B) Globular proteins
C) Phospholipids
D) Polysaccharides

Q.6 **Diffusion and osmosis are examples of:**

A) Active transport
B) Passive transport
C) Carrier mediated transport
D) Endocytosis

Q.7 **It is a single membranous organelle that plays an important role in modification of molecules:**

A) Ribosome
B) ER
C) Golgi apparatus
D) Mitochondria

Q.8 **The materials present in channels of ER are separated from cytoplasmic materials by membranes called:**

A) Cristae
B) Cisternae
C) Tonoplast
D) Unit membrane

Q.9 **The larger subunit of a eukaryotic ribosome sediments at:**

A) 40S
B) 60S
C) 70S
D) 80S

Q.10 **Attachment of larger subunit of ribosome with smaller subunit is controlled by:**

A) Ca^{+2}
B) Mg^{+2}
C) Na^{+}
D) Cl^{-}

Q.11 **_____ is the factory for ribosome synthesis while _____ is for protein synthesis:**

A) Nucleus, mRNA
B) RER, Ribosome
C) Nucleolus, Ribosome
D) Mitochondria, SER

Q.12 **Golgi vesicles that are budded off from maturing face containing hydrolytic enzymes are called as:**

A) Primary lysosomes
B) Secondary lysosomes
C) Peroxisomes
D) Glyoxysomes

Q.13 _____ is because of absence of an enzyme that is involved in catabolism of lipids:
A) Glycogenosis type I disease
B) Glycogenosis type II disease
C) Mysterious brain infection
D) Tay-Sach's disease

Q.14 Peroxisomes contain all of the following enzymes except:
A) Peroxidase
B) Catalase
C) Hydrolase
D) Glycolic acid oxidase

Q.15 Glyoxisomes are involved in glyoxylate cycle which involves conversion of:
A) Carbohydrates into fatty acids
B) Fatty acids into carbohydrates
C) Fatty acids into amino acids
D) Amino acids into fatty acids

Q.16 It is not true about microtubules:
A) Long and unbranched
B) Slender structures
C) Involved in spindle formation
D) Made of tubulin, actin & myosin

Q.17 In cross section, each centriole has following arrangement of microtubules:
A) 9 x 3
B) 9 + 3
C) 8 + 2
D) 16 +2

Q.18 Total number of microtubules in centrosome of a non-dividing animal cell are:
A) 9
B) 18
C) 27
D) 54

Q.19 Mitochondria are associated with:
A) Aerobic respiration
B) Anaerobic respiration
C) Alcoholic fermentation
D) Lactate fermentation

Q.20 Outer and inner nuclear membranes become continuous with each other to form:
A) Nucleoplasm
B) Nuclear pore
C) RER
D) SER

Q.21 Water is an excellent solvent for:
A) Polar & non-polar substances
B) Ionic & polar substances
C) Ionic & non-polar substances
D) Ionic, polar & non-polar substances

Q.22 In straight chain structure of glucose, all carbons contain hydroxyl group except carbon number:
A) 1
B) 3
C) 5
D) 6

Q.23 All of the following monosaccharides can form ring structures except:
A) Trioses
B) Tetroses
C) Pentoses
D) Hexoses

Q.24 Which of the following is non-reducing disaccharide?
A) Maltose
B) Lactose
C) Sucrose
D) Cellobiose

Q.25 It is found in fruits, grains, seeds and tubers:
A) Glucose
B) Sucrose
C) Starch
D) Glycogen

Q.26 Chemically these are mixtures of alkanes, alcohols, ketones and esters:
A) Acylglycerols
B) Phospholipids
C) Waxes
D) Terpenoids

Q.27 An example of fatty acid having highest melting point:
A) Acetic acid
B) Butyric acid
C) Palmitic acid
D) Oleic acid

Q.28 All of the following nitrogenous bases are found in phospholipids except:
A) Choline
B) Cytosine
C) Ethanolamine
D) Serine

Q.29 Which of the following is true about formation of pentapeptide?
A) 5 amino acids involved
B) 5 peptide bond formed
C) 5 water molecule released
D) 5 hydrogen bonds formed

Q.30 Which structural level of proteins is directly determined by sequence of nucleotides in DNA?
A) Primary structure
B) Secondary structure
C) Tertiary structure
D) Quaternary structure

Q.31 **It involves a spiral formation of the basic polypeptide chain:**
A) Primary structure
B) Secondary structure
C) Tertiary structure
D) Quaternary structure

Q.32 **Fibrous proteins can proceed upto:**
A) Primary level
B) Secondary level
C) Tertiary level
D) Quaternary level

Q.33 **A nucleoside may contain all of the following except:**
A) Pentose sugar
B) Phosphoric acid
C) Adenine base
D) Cytosine base

Q.34 **How many water molecules are released during formation of an ATP molecule?**
A) 1
B) 2
C) 3
D) 4

Q.35 **If amount of DNA in a cell of chicken is 2.4 picogram, then the amount in sperm cell will be:**
A) 2.4 picogram
B) 1.2 picogram
C) 0.6 picogram
D) 4.8 picogram

Q.36 **Messenger RNA carries the genetic information from:**
A) Nucleus to nucleolus
B) Nucleolus to ribosome
C) DNA to tRNA
D) DNA to ribosome

Q.37 **Such detachable co-factor that is inorganic in nature is:**
A) Catalyst
B) Activator
C) Coenzyme
D) Prosthetic group

Q.38 **It is an activated/ functional enzyme:**
A) Proenzyme
B) Coenzyme
C) Apoenzyme
D) Holoenzyme

Q.39 **All enzymes work best in:**
A) Aqueous medium
B) Non-aqueous medium
C) Alcoholic medium
D) Acidic medium

Q.40 **If amount of substrate is increased in an enzyme controlled reaction, a point is reached where further increase has no effect. This point is:**
A) Inhibition
B) Saturation
C) Denaturation
D) Inactivation

Q.41 **It gives definite shape to the virion:**
A) DNA
B) RNA
C) Capsid
D) Envelope

Q.42 **Viruses reproduce by:**
A) Binary fission
B) Replication
C) Conjugation
D) Transduction

Q.43 **Which of the following part in T4 phage contains contractile proteins:**
A) Capsid
B) Tail fibers
C) Tail core
D) Tail sheath

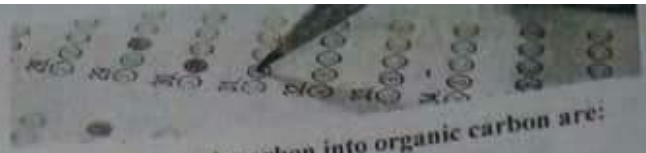
Q.44 **Influenza viruses are:**
A) DNA enveloped
B) DNA non-enveloped
C) RNA enveloped
D) RNA non-enveloped

Q.45 **The major cell infected by HIV is:**
A) Cytotoxic T lymphocyte
B) Helper T lymphocyte
C) Neuron cell
D) Glial cell

Q.46 **It is a part of intracellular matrix of bacterial cell:**
A) Cell membrane
B) Cell wall
C) Basal body
D) Flagella

Q.47 **Number of major layers in cell wall of Gram negative bacteria is/are:**
A) 1
B) 2
C) 3
D) 4

Q.48 **Feulgen stain is used to dye bacterial:**
A) Cell wall
B) Cell membrane
C) Chromatin body
D) Plasmid



Q.49 Bacteria which have ability to convert inorganic carbon into organic carbon are:

A) Heterotrophic bacteria
B) Autotrophic bacteria
C) Pathogenic bacteria
D) Saprotrophic bacteria

Q.50 Dry heat causes killing of germs by:

A) Coagulation of their proteins
B) Neutralization of their toxins
C) Oxidation of their chemicals
D) Inhibition of their enzymes

Q.51 Nuclei of all fungal cells are haploid except nucleus of:

A) Spore
B) Gamete
C) Zygote
D) Rhizoid

Q.52 Sexual reproduction is found in all groups of fungi except:

A) Zygomycota
B) Ascomycota
C) Basidiomycota
D) Deuteromycota

Q.53 These are the fungi having underground fruiting bodies:

A) *Agaricus campestris*
B) *Morchella esculenta*
C) *Amanita phalloides*
D) *Tuber gibbosum*

Q.54 It is a fungal infection caused by a yeast:

A) Athlete's foot
B) Candidiasis
C) Histoplasmosis
D) Aspergillosis

Q.55 Short dikaryotic phase in life cycle of *Rhizopus* is formed as a result of:

A) Conjugation
B) Plasmogamy
C) Karyogamy
D) Meiosis

Q.56 Symptoms that are associated with *Ancylostoma duodenale* are:

A) Itching of anus
B) Insomnia
C) Loss of appetite
D) Severe anemia

Q.57 Segments of tape worm that mainly contain sex organs are called:

A) Head
B) Scolex
C) Proglottids
D) Strobila

Q.58 Cavity between the parietal and visceral mesoderm is:

A) Gastrovascular cavity
B) Digestive cavity
C) Psudocoelom
D) Coelom

Q.59 In members of phylum platyhelminthes, mesoderm forms:

A) Mesoglea
B) Coelom
C) Mesenchyme
D) Parenchyma

Q.60 An animal where right side is approximately same as left side and there is distinct anterior end is said to have:

A) Radial symmetry
B) Bilateral symmetry
C) Diploblastic organization
D) Triploblastic organization

KIPS ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 4)

TOPICS: -

- ✓ Digestive System
- ✓ Gas Exchange

Q.1 All of the following nutrients are source of energy for body except:
A) Carbohydrates C) Proteins
B) Lipids D) Vitamins

Q.2 The digestive system of man consists of a long coiled tube that extends from:
A) Nostrils to alveoli C) Mouth to anus
B) Oesophagus to intestine D) Pharynx to rectum

Q.3 Chemical digestion of proteins in human alimentary canal starts from:
A) Oral cavity C) Small intestine
B) Stomach D) Large intestine

Q.4 All of the following are associated glands of human alimentary canal except:
A) Salivary glands C) Gall bladder
B) Liver D) Pancreas

Q.5 All of the following are true about tongue except:
A) Sensory organ C) Voluntary organ
B) Muscular organ D) Respiratory organ

Q.6 Main functions of oral cavity accomplished by saliva are:
A) Selection & swallowing C) Grinding & mastication
B) Lubrication & digestion D) Selection & detoxification

Q.7 Main function of sodium bicarbonate and other salts in saliva is to:
A) Help in digestion C) Act as antiseptic
B) Increase surface area D) Stabilize pH

Q.8 Ptyalin is a carbohydrate digesting enzyme that digests:
A) Starch into glycogen C) Maltose into glycogen
B) Glycogen into starch D) Starch into maltose

Q.9 All of the following structure move upward during swallowing except:
A) Tongue C) Epiglottis
B) Soft palate D) Larynx

Q.10 The food is forced down the esophagus through:
A) Swallowing C) Peristalsis
B) Deglutition D) Antiperistalsis

Q.11 Low blood glucose level results in an uncomfortable sensation called:
A) Antiperistalsis C) Nausea
B) Hunger pangs D) Vomiting

Q.12 A part of alimentary canal that completes digestion of food:
A) Buccal cavity C) Small intestine
B) Stomach D) Large intestine

Q.13 It is the glandular layer of stomach:
A) Mucosa C) Muscularis
B) Submucosa D) Serosa

Q.14 It is an antiseptic that provides protection to our body by killing microorganisms
A) Salivary amylase C) HCl
B) Mucus D) Pepsinogen

Q.15 Stomach empties into the duodenum through:
A) Contracted cardiac sphincter C) Contracted pyloric sphincter
B) Relaxed cardiac sphincter D) Relaxed pyloric sphincter

Q.16 Hepatic and pancreatic secretions are stimulated by a hormone called:
A) Gastrin C) Vasopressin
B) Secretin D) Oxytocin

Q.17 It is an enzyme secreted by duodenum:
A) Amylopsin
B) Secretin
C) Trypsin
D) Enterokinase

Q.18 These are the components of bile formed by the breakdown of hemoglobin:
A) Ammonia
B) Urea
C) Bile salts
D) Bile pigments

Q.19 First step of fat digestion in our alimentary canal is:
A) Hydrolysis
B) Emulsification
C) Hydration
D) Dehydration

Q.20 Jejunum comprises about _____ of small intestine:
A) $1/5^{th}$
B) $2/5^{th}$
C) $3/5^{th}$
D) $4/5^{th}$

Q.21 It is an enzyme that produces monosaccharides after hydrolysis:
A) Amylase
B) Pepsin
C) Lipase
D) Maltase

Q.22 A large proportion of fatty acids and glycerol recombine into fats in:
A) Epithelial cells of villi
B) Lumen of villus
C) Plasma in capillaries
D) Lymph in lacteals

Q.23 It is a blind sac that projects from the large intestine between ileum and colon:
A) Appendix
B) Caecum
C) Rectum
D) Pylorus

Q.24 Large intestine is involved in absorption of all of the following except:
A) Water
B) Salts
C) Vitamin K
D) Vitamin B12

Q.25 Defecation reflex can be consciously inhibited in:
A) Infants only
B) Adults only
C) Males only
D) Females only

Q.26 Salivary glands which pour their secretions in posterior portions of oral cavity are:
A) Parotid glands
B) Sublingual glands
C) Submaxillary glands
D) Submandibular glands

Q.27 Cells that decrease stomach pH are:
A) Mucous cells
B) Parietal cells
C) Zymogen cells
D) Endocrine cells

Q.28 Obesity can be the cause of all of the following except:
A) Blood pressure
B) Heart disease
C) Diabetes type I
D) Diabetes type II

Q.29 This term is employed to the loss of appetite:
A) Anoxia
B) Hypoxia
C) Anorexia
D) Bulimia

Q.30 The only sphincter in human alimentary canal that is controlled by somatic nervo system:
A) Cardiac sphincter
B) Pyloric sphincter
C) Ileocolic sphincter
D) Anal sphincter

Q.31 Air passage way consists of all of the following except:
A) Pharynx
B) Larynx
C) Alveolar duct
D) Pleura

Q.32 It is a muscular passage lined with mucous membrane and channelizes air:
A) Nostrils
B) Nasal cavities
C) Pharynx
D) Larynx

Q.33 Epiglottis covers opening of larynx during:
A) Inspiration
B) Expiration
C) Swallowing
D) Voice production

Q.34 Trachea is a tubular structure lying immediately:
A) Ventral to esophagus
B) Dorsal to esophagus
C) Ventral to vertebral column
D) Dorsal to vertebral column

Q.35 Each bronchus on entering the lung divides to form:
A) Bronchi
B) Bronchioles
C) Air sacs
D) Alveolar sacs

Q.36 Bronchioles are mainly made up of:
A) Cartilage rings
B) Cartilage plates
C) Circular smooth muscles
D) Longitudinal smooth muscles

Q.37 The floor of the chest is called:
A) Pleural space
B) Rib cage
C) Intercostal space
D) Diaphragm

Q.38 In expiration, air with _____ content moves out of the lungs:
A) Low O_2 & low CO_2
B) High O_2 & high CO_2
C) High O_2 & low CO_2
D) Low O_2 & high CO_2

Q.39 During inspiration, there is _____ of lungs:
A) Passive contraction
B) Passive expansion
C) Active contraction
D) Active expansion

Q.40 All of the following are true for expiration except:
A) Diaphragm is relaxed
B) Rib cage is lowered
C) Lung volume decreases
D) Pressure on lungs decreases

Q.41 Surfactant is produced by the epithelium of:
A) Bronchiole
B) Bronchi
C) Alveoli
D) Capillaries

Q.42 In human beings, the main respiratory pigment is:
A) Cytochrome
B) Hemoglobin
C) Hemocyanin
D) Myoglobin

Q.43 At oxygen tension of 115 mmHg, hemoglobin is _____ saturated:
A) 100%
B) 98%
C) 96%
D) 90%

Q.44 Oxygen-carrying capacity of blood decreases with rise in:
A) Oxygen pressure
B) Temperature
C) pH
D) All A, B, C

Q.45 Carbaminohemoglobin is formed when carbon dioxide combines with:
A) Heme portion of hemoglobin
B) Globin portion of hemoglobin
C) Amino group of hemoglobin
D) Carboxyl group of hemoglobin

Q.46 About 70% carbon dioxide is carried as bicarbonate ions combined with:
A) Sodium in corpuscles
B) Sodium in plasma
C) Potassium in corpuscles
D) Potassium in plasma

Q.47 Bicarbonate ions combine with hydrogen ions to form carbonic acid at:
A) Muscles
B) Heart
C) Lungs
D) Liver

Q.48 Each 100 ml of blood takes up _____ ml of carbon dioxide as it passes t
tissues:
A) 4 ml
B) 20 ml
C) 50 ml
D) 54 ml

Q.49 It is an iron-containing protein pigment occurring in muscle fibres:
A) Hemoglobin
B) Myoglobin
C) Creatine
D) Creatinine

Q.50 Myoglobin can bind with _____ molecules of oxygen:
A) 1
B) 2
C) 3
D) 4

Q.51 Normally when we are at rest or asleep, the exchange of gases is abo
A) 0.5 litre
B) 1.5 litre
C) 3.5 litre
D) 5.0 litre

Q.52 Air that cannot be expelled out of lungs even during exercise is:
A) Inspiratory volume
B) Tidal volume
C) Residual volume
D) Forced expiratory vol

Q.53 Most abundant component of inhaled air is:

A) Nitrogen
B) Oxygen
C) Carbon dioxide
D) Water vapours

Q.54 It is a contagious disease:

A) Cancer
B) Tuberculosis
C) Asthma
D) Emphysema

Q.55 Lung cancer is an example of:

A) Benign tumor with no growth
B) Benign tumor with limited growth
C) Malignant tumor with limited growth
D) Malignant tumor with unlimited growth

Q.56 Which of the following changes occur in alveoli of patients who suffer from emphysema?

	Volume of alveoli	Surface area for exchange
A)	Increases	Increases
B)	Increases	Decreases
C)	Decreases	Increases
D)	Decreases	Decreases

Q.57 Filtration in air passage way is carried out by:

A) Hair only
B) Mucus only
C) Both hair & mucus
D) Hair, mucus & cilia

Q.58 Ciliated epithelium is present in all of the following except:

A) Nasal cavities
B) Trachea
C) Bronchioles
D) Alveoli

Q.59 One molecule of hemoglobin can bind with _____ molecules of oxygen:

A) 1
B) 2
C) 3
D) 4

Q.60 Carbonic anhydrase plays important role in formation of:

A) Oxyhemoglobin
B) Carboxyhemoglobin
C) Carbonic acid
D) Carbaminohemoglobin

KIPS | ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 5)

TOPICS: -

- ✓ **Transport**
- ✓ **Homeostasis**

Q.1 **Major constituent of human blood by volume is:**
A) Plasma
B) Blood cells
C) Serum
D) Anti-serum

Q.2 **Most of the plasma proteins are synthesized in:**
A) Liver
B) Kidneys
C) Bone marrow
D) Thymus

Q.3 **_____ is a protein that acts as a catalyst in blood clotting process:**
A) Antithrombin
B) Prothrombin
C) Fibrinogen
D) Fibrin

Q.4 **These are most numerous of the cells in the blood:**
A) Erythrocytes
B) Neutrophils
C) Lymphocytes
D) Thrombocytes

Q.5 **These are the largest in size:**
A) Erythrocytes
B) Macrophages
C) Lymphocytes
D) Thrombocytes

Q.6 **These act as phagocytes:**
A) Eosinophils & basophils
B) Neutrophils & macrophages
C) Granulocytes & agranulocytes
D) Monocytes & eosinophils

Q.7 **It acts as anticoagulant:**
A) Thrombin
B) Prothrombin
C) Histamine
D) Heparin

Q.8 **Plasma proteins that play main role in maintenance of colloid osmotic pressure are:**
A) Prothrombin
B) Albumin
C) Globulins
D) Fibrinogen

Q.9 **Pulmonary artery carries:**
A) Oxygenated blood to lungs
B) Deoxygenated blood to lungs
C) Oxygenated blood from lungs
D) Deoxygenated blood from lungs

Q.10 **Human heart functions as:**
A) Pulmonary pump
B) Systemic pump
C) Dual pump
D) Peripheral pump

Q.11 **Papillary muscles that control tricuspid valve are extensions of the wall of:**
A) Right atrium
B) Right ventricle
C) Left atrium
D) Left ventricle

Q.12 **It is chamber of heart that has thickest walls:**
A) Right atrium
B) Right ventricle
C) Left atrium
D) Left ventricle

Q.13 **Branches that arise from arch of aorta supply blood to all of the following except:**
A) Head
B) Arms
C) Shoulders
D) Heart

Q.14 **How many pulmonary veins carry blood from lungs to heart?**
A) 1
B) 2
C) 3
D) 4

Q.15 **When blood is pumped from atria to ventricles then there is:**
A) Atrial systole & ventricular systole
B) Atrial diastole & ventricular diastole
C) Atrial systole & ventricular diastole
D) Atrial diastole & ventricular systole

Q.16 **Lymph vessels empty in:**
A) Arteries
B) Veins
C) Portal arteries
D) Portal veins

Q.17 **Lymph node is drained by:**
A) Single afferent vessel
B) Many afferent vessels
C) Single efferent vessel
D) Many efferent vessels

Q.18 **Just as the lymph nodes filter lymph, _____ filters blood:**
A) Liver
B) Kidneys
C) Lungs
D) Spleen

Q.19 **In ECG, wave formed when ventricles are recovering from contraction is:**
A) P wave
B) Q wave
C) S wave
D) T wave

Q.20 **It is an organ where every cell is in direct contact with blood capillaries:**
A) Brain
B) Lung
C) Liver
D) Kidney

Q.21 **Highest blood pressure is found in:**
A) Aorta
B) Pulmonary artery
C) Superior vena cava
D) Inferior vena cava

Q.22 **These are the blood vessels having smaller bore and thick walls:**
A) Arteries
B) Veins
C) Blood capillaries
D) Lymph capillaries

Q.23 **Pulsatile nature of arteries is due to presence of:**
A) Epithelial tissue
B) Smooth muscles
C) Elastic tissue
D) Endothelial tissue

Q.24 **Interstitial fluid contains all of the following except:**
A) Proteins
B) Water
C) Red blood cells
D) White blood cells

Q.25 **Heart exerts pressure on the blood in arteries during:**
A) Atrial diastole
B) Atrial systole
C) Ventricular diastole
D) Ventricular systole

Q.26 **The difference between systolic and diastolic pressure become zero in:**
A) Aorta
B) Arteries
C) Arterioles
D) Capillaries

Q.27 **It is a degenerative arterial change associated with advancing age:**
A) Atherosclerosis
B) Arteriosclerosis
C) Hypertension
D) Hypotension

Q.28 **It is a solid mass or plug of blood clot a blood vessel:**
A) Thrombus
B) Embolus
C) Atheroma
D) Hematoma

Q.29 **Damage to portion of heart muscles during myocardial infarction is an example of:**
A) Apoptosis
B) Necrosis
C) Gangrene
D) Embolus

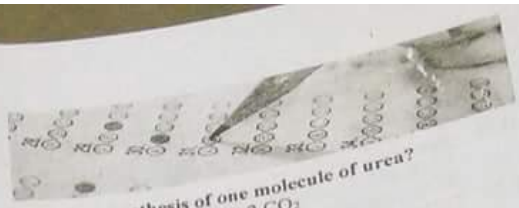
Q.30 **Which of the following are not blind ended structures?**
A) Blood capillaries
B) Lymph capillaries
C) Nephrons
D) Caecum

Q.31 **Temperature regulated animals having set point for temperature are called as:**
A) Ectotherms
B) Endotherms
C) Heterotherms
D) Poikilotherms

Q.32 **Detection of change and signaling for effector's response to control system is:**
A) Homeostatic mechanism
B) Feedback mechanism
C) Precursor mechanism
D) Hormonal mechanism

Q.33 **Uric acid in humans is commonly produced as a waste from metabolism of:**
A) Proteins
B) Fatty acids
C) Nucleic acids
D) Vitamins

Q.34 **An organ that plays a pivotal role to homeostasis and involves interaction with most of body's organ systems:**
A) Skin
B) Kidney
C) Lungs
D) Liver



Q.35 How many molecules are required for synthesis of one molecule of urea?
A) 1 NH_3 & 1 CO_2
B) 2 NH_3 & 2 CO_2
C) 1 NH_3 & 2 CO_2
D) 2 NH_3 & 1 CO_2

Q.36 Urea is the detoxified form of:
A) Amino acid
B) Ammonia
C) Uric acid
D) Fatty acid

Q.37 Urine is collected in central cavity of kidney called:
A) Renal cortex
B) Renal medulla
C) Renal pelvis
D) Renal hilus

Q.38 Distal opening of the ureter is:
A) Pelvis
B) Hilus
C) Uretral orifice
D) Urethral orifice

Q.39 Sphincter muscles that regulate urination, are located near the junction of:
A) Pelvis & ureter
B) Ureter & bladder
C) Bladder & urethra
D) Urethra & vagina

Q.40 Left renal artery arises from:
A) Ascending aorta
B) Arch of aorta
C) Thoracic aorta
D) Abdominal aorta

Q.41 In each nephron, inner end forms a cup-shaped swelling called:
A) Renal corpuscle
B) Bowman's capsule
C) Glomerulus
D) Renal capsule

Q.42 Which of the following represent capillary network of nephrons?
A) Bowman's capsule & glomerulus
B) Proximal & distal convoluted tubules
C) Afferent & efferent vessels
D) Glomerulus & vasa recta

Q.43 In juxtamedullary nephrons, additional capillaries extend down to form a loop of vessels called:
A) Afferent vessels
B) Efferent vessels
C) Vasa recta
D) Glomerulus

Q.44 All of the following are normal constituents of glomerular filtrate except:
A) Glucose
B) Amino acids
C) Water
D) Proteins

Q.45 Tubular epithelium of nephron secretes substances into lumen. These substances are mainly:
A) Na^+
B) K^+
C) Cl^-
D) H^+

Q.46 Highly concentrated portion of kidney is:
A) Outer cortex
B) Inner cortex
C) Outer medulla
D) Inner medulla

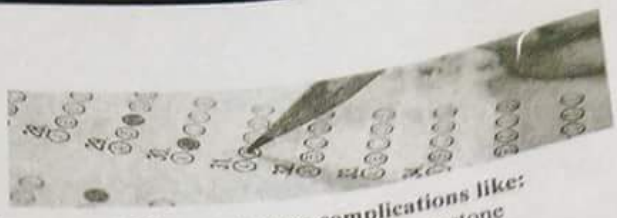
Q.47 Reabsorption of water occurs from all of the following parts of nephron except:
A) Proximal convoluted tubule
B) Descending loop of Henle
C) Ascending loop of Henle
D) Distal convoluted tubule

Q.48 Aldosterone acts on:
A) Proximal tubule
B) Distal tubule
C) Loop of Henle
D) Collecting tubule

Q.49 The production of varied concentrations of urine mainly depends upon availability of:
A) Nitrogenous wastes
B) Salts
C) Glucose
D) Water

Q.50 All of the following are causes of kidney stone except:
A) Hypercalcemia
B) Hyperglycemia
C) Hyperoxaluria
D) Hyperuricemia

Q.51 The most common way to remove kidney stones is:
A) Dialysis
B) Surgery
C) Medicine
D) Lithotripsy



Q.52 **Retention of urea in body due to renal failure may cause complications like:**
A) Hyperglycemia & hypotension
B) Hypertension & anemia
C) Hypocalcemia & kidney stone
D) Uremia & diabetes mellitus

Q.53 **Peritoneal dialysis involves filtration within:**
A) Blood
B) Dialyzer
C) Abdomen
D) Kidney

Q.54 **Human kidneys are involved in all of the following except:**
A) Osmoregulation
B) Excretion
C) Homeostasis
D) Thermoregulation

Q.55 **If a cell is placed in hypotonic external environment, then there will be:**
A) Entry of water into the cell
B) Entry of salts into the cell
C) Concentration of cell solution
D) Dilution of external environment

Q.56 **It is an example of heterotherm:**
A) Flying insect
B) Birds
C) Reptiles
D) Bats

Q.57 **Changes in rate of blood flow to skin for thermoregulation is example of:**
A) Structural adaptation
B) Anatomical adaptation
C) Physiological adaptation
D) Behavioural adaptation

Q.58 **The homeostatic thermostat is present in:**
A) Thalamus
B) Hypothalamus
C) Skin
D) Thyroid

Q.59 **Elimination of nitrogenous wastes outside the body is mainly for:**
A) Homeostasis
B) Egestion
C) Osmoregulation
D) Thermoregulation

Q.60 **Which of the following correctly represent/s movement of substances between blood & lumen of nephron?**

	Filtration	Reabsorption	Secretion
A)	Blood → Lumen	Blood → Lumen	Blood → Lumen
B)	Lumen → Blood	Lumen → Blood	Lumen → Blood
C)	Blood → Lumen	Lumen → Blood	Blood → Lumen
D)	Blood → Lumen	Lumen → Blood	Lumen → Blood

KIPS | ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 4+5)

TOPICS:

- ✓ Digestive System
- ✓ Gas Exchange
- ✓ Transportation
- ✓ Homeostasis

Q.1 Elimination of undigested matter from the body is called:
A) Excretion
B) Egestion
C) Digestion
D) Assimilation

Q.2 Large intestine starts with:
A) Ascending colon
B) Descending colon
C) Caecum
D) Rectum

Q.3 The opening between oesophagus and stomach is:
A) Funnel
B) Sphincter
C) Orifice
D) Valve

Q.4 Digestion of food with help of teeth is called:
A) Deglutition
B) Churning
C) Emulsification
D) Mastication

Q.5 All of the following are components of saliva except:
A) Mucus
B) $NaHCO_3$
C) Water
D) Amylopsin

Q.6 Cartilaginous structure round the top of the windpipe is:
A) Trachea
B) Larynx
C) Glottis
D) Epiglottis

Q.7 Pyloric sphincter opens and food is transferred from stomach to small intestine. Stimulus for opening of this sphincter is:
A) Bolus
B) Chyme
C) Swallowing
D) Peristalsis

Q.8 Tubular gastric glands of stomach secrete all of the following except:
A) Mucus
B) HCl
C) Pepsinogen
D) Gastrin

Q.9 The substrate and product for pepsin in stomach are:
A) Polypeptides & Peptones
B) Polypeptides & Dipeptides
C) Proteins & Polypeptides
D) Polypeptides & Amino Acids

Q.10 Secretions from pancreas, liver and duodenal cells are stimulated to be released by:
A) Acid in food
B) Alkalies in food
C) Protein in food
D) Carbohydrate in food

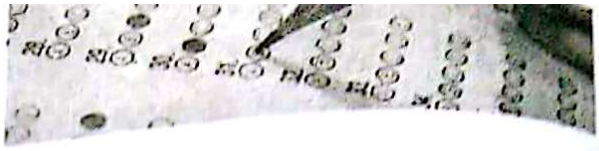
Q.11 For removal of urea, liver depends upon:
A) Spleen
B) Kidneys
C) Gall bladder
D) Duodenum

Q.12 Finger-like outgrowths present in ileum are:
A) Villi
B) Microvilli
C) Lacteals
D) Folds

Q.13 Excessive absorption of water in large intestine leads to:
A) Diarrhoea
B) Constipation
C) Vomiting
D) Dehydration

Q.14 Gall bladder is not involved in:
A) Production of bile
B) Storage of bile
C) Concentration of bile
D) Absorption of electrolytes

Q.15 Anorexia nervosa is a mental illness which largely affects:
A) Girls below 12 years' age
B) Girls above 12 years' age
C) Boys below 12 years' age
D) Boys above 12 years' age



Q.16 Nasal cavity transfers air from nostrils to:
A) Buccal cavity
B) Throat
C) Trachea
D) Bronchi

Q.17 Vocal cords are _____ in nature:
A) Muscular
B) Fibrous
C) Cartilaginous
D) Bony

Q.18 Role of cartilage rings in trachea is to:
A) Allow gaseous exchange
B) Humidify air
C) Prevent collapse
D) Prevent entry of food

Q.19 Lungs are covered with double layered thin membranous sacs called:
A) Chest
B) Pleura
C) Peritonium
D) Mediastinum

Q.20 During inspiration, muscles of ribs contract and ribs move:
A) Upwards & inwards
B) Downwards & forwards
C) Downwards & inwards
D) Upwards & forwards

Q.21 Hemoglobin readily combines with oxygen to form _____ oxyhemoglobin:
A) Dark red
B) Bright red
C) Purple red
D) Blue red

Q.22 Oxygen holding capacity of hemoglobin decreases by increase in all of the following except:
A) Carbon dioxide
B) Temperature
C) H^+ ions
D) pH

Q.23 How much CO_2 is transported by binding with hemoglobin?
A) 5%
B) 20%
C) 25%
D) 70%

Q.24 Net amount of CO_2 transported per 100 ml of blood is:
A) 4 ml
B) 20 ml
C) 50 ml
D) 54 ml

Q.25 Which of the following has more affinity to bind with oxygen?
A) Hemoglobin
B) Myoglobin
C) Albumin
D) Creatine

Q.26 Residual volume of lungs is:
A) 0.5 litre
B) 1.5 litre
C) 3.5 litre
D) 5.0 litre

Q.27 Amount of which of the following is more in expired air as compared to inspired air?
A) Nitrogen
B) Oxygen
C) Carbon dioxide
D) Dust particles

Q.28 Physiological dead air space is increased in:
A) Cancer
B) Tuberculosis
C) Asthma
D) Emphysema

Q.29 Different compounds in tar of tobacco smoke are responsible for:
A) Respiratory distress syndrome & asthma
B) Asthma & tuberculosis
C) Lung cancer & emphysema
D) Emphysema & asthma

Q.30 Which of the following bind with protein part of hemoglobin?
A) O_2 & CO_2
B) CO & CO_2
C) O_2 & H^+
D) CO_2 & H^+

Q.31 Most abundant component of plasma is:
A) Albumin
B) Antibodies
C) Water
D) Glucose

Q.32 Antibodies can be found in:
A) Plasma only
B) Lymph only
C) Both plasma & lymph
D) Plasma, lymph, tissue fluid

Q.33 These have the longest life span:
A) Erythrocytes
B) Lymphocytes
C) Neutrophils
D) Basophils

Q.34 **It provides protection to heart by preventing over extension:**
A) Epicardium
B) Pericardium
C) Pericardial fluid
D) Pleural fluid

Q.35 **Flaps of tricuspid valve are attached with:**
A) Papillary muscles
B) Cardiac muscles
C) Chorda tendinae
D) Walls of atria

Q.36 **All of the following drain into inferior vena cava except:**
A) Subclavian vein
B) Iliac vein
C) Hepatic vein
D) Renal vein

Q.37 **Correct passage of impulses for heart excitation is:**
A) SA node > Musculature of atria > AV node > Interventricular septum > Myocardium of ventricles
B) SA node > AV node > Musculature of atria > Interventricular septum > Myocardium of ventricles
C) SA node > Interventricular septum > AV node > Musculature of atria + Myocardium of ventricles
D) SA node > Musculature of atria + AV node > Interventricular septum > Myocardium of ventricles

Q.38 **Lymph capillaries join to form larger and larger lymph vessels and ultimately form:**
A) Thoracic duct
B) Subclavian vein
C) Lymph node
D) Lymphoid mass

Q.39 **ECG helps to diagnose abnormalities of:**
A) Valve functioning
B) Coronary artery
C) Rhythmicity of heart
D) Septal defect

Q.40 **Structurally lymph vessels most closely resemble with:**
A) Arteries
B) Arterioles
C) Veins
D) Capillaries

Q.41 ***Main difference between walls of arteries and veins lies in:***
A) Tunica externa
B) Tunica media
C) Tunica interna
D) All A, B, C

Q.42 ***Vasoconstriction and vasodilation are due to:***
A) Longitudinal smooth muscles
B) Circular smooth muscles
C) Elastic tissue
D) All A, B, C

Q.43 **Which of the following actions are related with histamine?**

	Air Passage Way	Blood Vessels
A)	Bronchodilation	Vasodilation
B)	Bronchoconstriction	Vasoconstriction
C)	Bronchoconstriction	Vasodilation
D)	Bronchodilation	Vasoconstriction

Q.44 **It is deposition of hard yellow plaque of lipoid material in blood vessel:**
A) Thrombus
B) Embolus
C) Atheroma
D) Hematoma

Q.45 **Thrombosis can occur in all of the following diseases except:**
A) Pneumonia
B) Tuberculosis
C) Lung cancer
D) Emphysema

Q.46 **Urea in humans is commonly produced from the metabolism of:**
A) Amino acids
B) Fatty acids
C) Nitrogenous bases
D) Vitamins

Q.47 **Amount of blood received by kidneys with each cardiac beat is:**
A) 1%
B) 2%
C) 10%
D) 20%

Q.48 **Juxtamedullary nephrons have their tubular system looping deep in:**
A) Outer cortex
B) Inner cortex
C) Outer medulla
D) Inner medulla

Q.49 Nature of afferent and efferent vessels in kidneys is:
A) Artery
B) Arteriole
C) Capillary
D) Venule

Q.50 All the useful constituents of glomerular filtrate are reabsorbed in:
A) Proximal tubule
B) Distal tubule
C) Collecting tubule
D) Henle's loop

Q.51 In the sufficient or excess supply of water, reabsorption of water from the filtrate is reduced due to:
A) Counter current mechanism
B) Increased ADH
C) Decreased ADH
D) Increased aldosterone

Q.52 Site for mechanism of counter current in kidney is:
A) Proximal tubule
B) Distal tubule
C) Loop of Henle
D) Collecting tubule

Q.53 The incidence of kidney stones of calcium phosphate is:
A) 70%
B) 75%
C) 15%
D) 10%

Q.54 The mechanism of regulation, generally between organism and its environment, of solute and the gain and loss of water is:
A) Osmoregulation
B) Homeostasis
C) Thermoregulation
D) Excretion

Q.55 Humans maintain their body temperature within a narrow range of:
A) 36-38°C
B) 38-40°C
C) 36.1-37.8°C
D) 38.8-37.1°C

Q.56 In case of increase in temperature, all of the following changes occur in body to control temperature except:
A) Sweat gland activation
B) Vasodilation at skin
C) Shivering thermogenesis
D) Evaporative cooling

Q.57 Bilirubin is produced as a result of breakdown of:
A) Proteins
B) Nucleic acids
C) Protein part of hemoglobin
D) Non-protein part of hemoglobin

Q.58 External urethral sphincter is made of:
A) Smooth muscles only
B) Skeletal muscles only
C) Both smooth & skeletal muscles
D) Neither smooth nor skeletal muscles

Q.59 Vasa recta is additional network of capillaries found in:
A) Renal cortex
B) Renal medulla
C) Renal pelvis
D) Renal hilus

Q.60 Dialysis is actually an alternative/ replacement of failure of:
A) Filtration
B) Reabsorption
C) Secretion
D) Concentration

KIPS | ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 1 - 5)

TOPICS: -

- ✓ **Cell Biology**
- ✓ **Biological Molecule**
- ✓ **Microbiology**
- ✓ **Kingdom Animalia**
- ✓ **Digestive System**
- ✓ **Gas Exchange**
- ✓ **Transportation**
- ✓ **Homeostasis**

Q.1 **A structure that is commonly present in both plant and animal cells is:**
A) Centriole
B) Peroxisome
C) Glyoxysome
D) Lysosome

Q.2 **Cellulose is present in cell wall of all of the following except:**
A) Bryophytes
B) Water molds
C) Green algae
D) Eubacteria

Q.3 **Most abundant type of lipids found in plasma membrane are:**
A) Acylglycerols
B) Phospholipids
C) Waxes
D) Terpenoids

Q.4 **Transport of Na & K ions through Na-K pump is an example of:**
A) Diffusion
B) Osmosis
C) Direct active transport
D) Indirect active transport

Q.5 **Ribosomes are attached with:**
A) Inner surface of RER
B) Cytoplasmic surface of RER
C) Inner surface of SER
D) Cytoplasmic surface of SER

Q.6 **It is concerned with cell secretions:**
A) RER
B) SER
C) Vacuole
D) Golgi apparatus

Q.7 **Spindles arise from:**
A) Cilia
B) Flagella
C) Centrioles
D) Basal bodies

Q.8 **All of the following are formed through condensation reactions except:**
A) Glucose
B) Amylopectin
C) Insulin
D) Triglyceride

Q.9 **Terpenoids are made up of simple repeating units called:**
A) Cholesterol
B) Fatty acid
C) Isoprene
D) Glycerol

Q.10 **The amount of DNA is fixed for a particular species as it depends upon:**
A) Number of cells
B) Number of nuclei
C) Number of chromosomes
D) Habitat of that species

Q.11 **It is a structure where all three types of RNA interact to translate the information from genes into a specific protein:**
A) Nucleus
B) Chromosome
C) Ribosome
D) Cytoplasm

Q.12 **Their effect can be neutralized completely or partly by an increase in the concentration of substrate:**
A) Irreversible competitive
B) Irreversible non-competitive
C) Reversible competitive
D) Reversible non-competitive

Q.13 **A biochemical test used for detection of reducing sugars is:**
A) Biuret test
B) Benedict test
C) Spot test
D) Iodine test

Q.14 A bond that is most sensitive to temperature change in proteins:
A) Peptide bond
B) Disulphide bond
C) Hydrogen bond
D) Ionic bond

Q.15 Which amino acid is essential for formation of disulphide linkages in proteins?
A) Glycine
B) Alanine
C) Methionine
D) Cysteine

Q.16 An antibody molecule shows:
A) Primary structure
B) Secondary structure
C) Tertiary structure
D) Quaternary structure

Q.17 Vitamin that acts as precursor for formation of NAD^+ is:
A) B1
B) B2
C) B3
D) B6

Q.18 First virus which was purified and crystallized was:
A) Pox virus
B) Tobacco mosaic virus
C) Rabies virus
D) Bacteriophage

Q.19 The common host for T phages is:
A) *Mycoplasma*
B) *Pneumococcus*
C) *Escherichia coli*
D) *Vibrio cholerae*

Q.20 The process by which viral DNA is incorporated into bacterial chromosome as prophage is called:
A) Adsorption
B) Lysogeny
C) Induction
D) Virulence

Q.21 *Pseudomonas* is a:
A) Coccus
B) Bacillus
C) Vibrio
D) Spirochete

Q.22 Bacterial cell envelope is a complex of layers external to:
A) Cell wall
B) Nucleoid
C) Cell protoplasm
D) Extracellular matrix

Q.23 Enzymes for respiratory metabolism in bacteria are associated with:
A) Cytoplasm & mitochondria
B) Mitochondria & cell membrane
C) Cell membrane & mesosome
D) Mesosome & peroxisome

Q.24 Which of the following are source of carbon and hydrogen in green sulphur bacteria?

	Source of C	Source of H
A)	CO_2	H_2O
B)	CH_2O	H_2O
C)	CO_2	H_2S
D)	CH_2O	H_2S

Q.25 A cell wall component that is more resistant to decay:
A) Cellulose
B) Pectin
C) Chitin
D) Lignin

Q.26 Short dikaryotic phase is developed in:
A) Zygomycetes
B) Ascomycetes
C) Basidiomycetes
D) Deuteromycetes

Q.27 Aflatoxins are the mycotoxins of:
A) *Amanita*
B) *Penicillium*
C) *Aspergillus*
D) *Candida*

Q.28 Members of phylum hemichordata and chordata are placed under:
A) Radiata & diploblastica
B) Bilateria & diploblastica
C) Radiata & triploblastica
D) Bilateria & triploblastica

Q.29 Pseudocoelom is bounded internally by:
A) Muscles
B) Skin
C) Cuticle
D) Coelom

Q.30 Location of tape worm in its primary host is:
A) Bile duct
B) Pancreatic duct
C) Intestine
D) Skeletal muscles

Q.31 It is a parasitic example of annelida:
A) *Nereis*
B) *Sylaria*
C) *Hirudo*
D) *Pheretima*

Q.32 Cause of African sleeping sickness is:
A) *Anopheles*
B) *Tse-tse* fly
C) *Plasmodium*
D) *Trypanosoma*

Q.33 Digestion involves breakdown of all of the following except:
A) Carbohydrates
B) Proteins
C) Vitamins
D) Lipids

Q.34 It acts as lubricant in saliva:
A) Mucus
B) $NaHCO_3$
C) Amylase
D) Lipase

Q.35 Cardiac sphincter prevents transfer of food from:
A) Esophagus to stomach
B) Stomach to esophagus
C) Stomach to duodenum
D) Duodenum to stomach

Q.36 Secretin is produced by:
A) Gastric mucosa
B) Gastric sub-mucosa
C) Intestinal mucosa
D) Intestinal sub-mucosa

Q.37 Nearly all absorption of the products of digestion takes place in:
A) Duodenum
B) Jejunum
C) Ileum
D) Colon

Q.38 It is the last part of large intestine where feces are temporarily stored:
A) Caecum
B) Colon
C) Rectum
D) Anus

Q.39 Which of the following type of adipose tissue is related with heat production?
A) White
B) Brown
C) Red
D) Blue

Q.40 It is a complex cartilaginous structure surrounding upper end of trachea:
A) Pharynx
B) Larynx
C) Glottis
D) Epiglottis

Q.41 Each air sac consists of several microscopic _____ structures called alveoli:
A) Single layered
B) Double layered
C) Triple layered
D) Multi layered

Q.42 During rest, breathing occurs rhythmically at the frequency of:
A) 10-20 times per minute
B) 10-15 times per minute
C) 15-20 times per minute
C) 15-25 times per minute

Q.43 The maximum amount of oxygen which normal human blood absorbs and carries at sea level is about:
A) 20 ml/ 100 ml
B) 19.6 ml/ 100 ml
C) 14.6 ml/ 100 ml
D) 5 ml/ 100 ml

Q.44 Plasma proteins carry _____ carbon dioxide from the body fluids to the capillaries of lungs:
A) 5%
B) 10%
C) 20%
D) 70%

Q.45 Hemoglobin in man increases the oxygen carrying capacity of the blood to about:
A) 20 times
B) 25 times
C) 75 times
D) 100 times

Q.46 It is estimated that 90% of lung cancer is caused by:
A) Unhealthy air
B) Poor living conditions
C) Cigarette smoke
D) All air pollutants

Q.47 **Lactic acid is produced in muscles as a result of glycolysis and is transported by blood to:**
A) Kidneys
B) Skin
C) Liver
D) Lungs

Q.48 **Complete separation of deoxygenated and oxygenated blood in heart is maintained by:**
A) Foramen
B) Valves
C) Septa
D) Vessels

Q.49 **Coronary arteries arise from:**
A) Base of aorta
B) Arch of aorta
C) Thoracic aorta
D) Abdominal aorta

Q.50 **Lymph is a fluid in transit between:**
A) Blood & interstitial fluid
B) Interstitial fluid & blood
C) Plasma & tissue fluid
D) Tissue fluid & lymph

Q.51 **In normal ECG, P wave occurs just prior to:**
A) Atrial relaxation
B) Atrial contraction
C) Ventricular relaxation
D) Ventricular contraction

Q.52 **All the arteries in humans carry oxygenated blood except:**
A) Renal & hepatic artery
B) Iliac & pulmonary artery
C) Carotid & hepatic artery
D) Pulmonary & umbilical artery

Q.53 **Atherosclerosis is the hardening and thickening of:**
A) Innermost layer of artery
B) Middle layer of artery
C) Innermost layer of vein
D) Middle layer of vein

Q.54 **Most of the reabsorption of glucose occurs at:**
A) Bowman's capsule
B) Proximal convoluted tubule
C) Loop of Henle
D) Distal convoluted tubule

Q.55 **This is blind end of nephron:**
A) Glomerulus
B) Bowman's capsule
C) PCT
D) Collecting duct

Q.56 **All of the following metabolic wastes are found in human urine except:**
A) Urea
B) Creatinine
C) Uric acid
D) Lactic acid

Q.57 **Those animals who are capable of varying degree of endothermic heat production but generally do not regulate their body temperature within a narrow range are:**
A) Poikilotherms
B) Endotherms
C) Ectotherms
D) Heterotherms

Q.58 **Cleansing of blood by passing it through an artificial kidney is called:**
A) Lithotripsy
B) Hemodialysis
C) Peritonial dialysis
D) Micturition – need for micturition

Q.59 **The active uptake of sodium in the thick loop of Henle is promoted by the action of:**
A) ADH
B) Oxytocin
C) Aldosterone
D) Vasopressin

Q.60 **The filtrate appearing in Bowman's capsule is called:**
A) Bowman's filtrate
B) Glomerular filtrate
C) Lymph
D) Urine

KIPS ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 6)

TOPICS: -

- ✓ **Nervous System**
- ✓ **Reproduction**

Q.1 **It is the main coordinating system of human body:**
A) Respiratory system
B) Nervous system
C) Hormonal system
D) Circulatory system

Q.2 **Neuroglia play a vital role for neurons that is associated with:**
A) Nutrition & division
B) Division & protection
C) Protection & nutrition
D) Division & regeneration

Q.3 **Distinction of neuron from other cells of our body is:**
A) Na-K Pump
B) Nucleus
C) Nissl's granules
D) ER & Golgi apparatus

Q.4 **These give spiny look to neurons:**
A) Nissl's granules
B) Cell body
C) Dendrites
D) Axons

Q.5 **In case of neuron, the charge separating barrier is:**
A) Endoplasmic reticulum
B) T tubules
C) Plasma membrane
D) Myelin sheath

Q.6 **Which of the following is correct concentration of ions when neuron is at resting state?**

	Na^+ ions	K^+ ions
A)	10 times inside	20 times outside
B)	10 times outside	20 times inside
C)	20 times inside	10 times outside
D)	20 times outside	10 times inside

Q.7 **Nerve impulse in neuron is initiated by the opening of:**
A) Na – gate
B) K – gate
C) Cl – channel
D) Na-K pump

Q.8 **It restores original ion gradient and resting potential (recovery):**
A) Na-gate
B) K-gate
C) K-pump
D) Na-K pump

Q.9 **Synaptic vesicles having neurotransmitters are found in:**
A) Cell body of pre-synaptic neuron
B) Axon ending of pre-synaptic neuron
C) Cell body of post-synaptic neuron
D) Dendrite ending of post-synaptic neuron

Q.10 **It is the main neurotransmitter for synapses that lie outside the central nervous system:**
A) Acetylcholine
B) Adrenalin
C) Serotonin
D) Dopamine

Q.11 **In *Planaria*, associative neurons are present in:**
A) Brain & spinal cord
B) Brain & longitudinal nerves
C) Longitudinal & lateral nerves
D) Spinal cord & lateral nerves

Q.12 **Parasympathetic division dominates during times of:**
A) Stressful activity
B) Energetic activity
C) Fight or flight
D) Rest & rumination

Q.13 **It carries sensory information to the cerebrum & limbic system:**
A) Thalamus
B) Hypothalamus
C) Midbrain
D) Medulla

Q.14 **Pineal gland is located at the base of:**
A) Forebrain
B) Midbrain
C) Hindbrain
D) Spinal cord

Q.15 Corpus callosum is a large band of:
A) Dendrites
B) Axons
C) Nerves
D) Ganglia

Q.16 It is the functionally most important part of cerebrum:
A) Corpus callosum
B) Cerebral hemisphere
C) Cerebral cortex
D) Cerebral medulla

Q.17 Hindbrain does not include:
A) Medulla
B) Pons
C) Cerebrum
D) Cerebellum

Q.18 Transitions between sleep and wakefulness are influenced by:
A) Thalamus
B) Hypothalamus
C) Pons
D) Medulla

Q.19 It guides smooth and accurate motions and maintains body position:
A) Hypothalamus
B) Cerebrum
C) Reticular formation
D) Cerebellum

Q.20 Gray matter of spinal cord contains:
A) Cell bodies only
B) Myelinated tracts only
C) Cell bodies & myelinated tracts
D) Cell bodies & non-myelinated tracts

Q.21 Total number of nerves in human body is:
A) 24
B) 31
C) 62
D) 86

Q.22 Autonomic nervous system controls involuntary responses by influencing all of the following except:
A) Glands
B) Skeletal muscles
C) Heart
D) Smooth muscles

Q.23 Ganglia of sympathetic nerves lie near to:
A) Brain
B) Spinal cord
C) Glands
D) Muscles

Q.24 Parkinson's disease is believed to be caused by cell death in a brain area that produces:
A) Acetylcholine
B) Dopamine
C) Serotonin
D) Epinephrin

Q.25 Alzheimer's disease is characterized by decline in:
A) Autonomic functions
B) Motor functions
C) Brain functions
D) Muscle power

Q.26 At which of the following membrane potential, it is difficult to excite neuron for action potential:
A) -50 mV
B) -70 mV
C) -90 mV
D) -40 mV

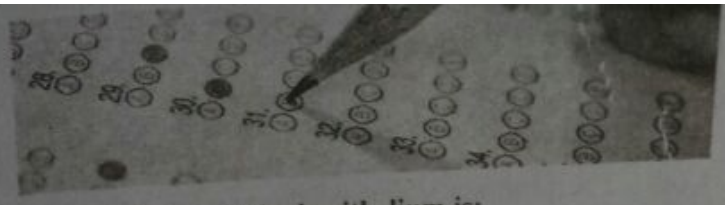
Q.27 Central branch of dorsal root ganglion contains:
A) Dendron of sensory neuron
B) Axon of sensory neuron
C) Dendrite of motor neuron
D) Axon of motor neuron

Q.28 Sleep-wake cycle is an example of:
A) Circadian rhythm
B) Circannual rhythm
C) Infaradian rhythm
D) Ultradian rhythm

Q.29 Myelin sheath around neurons of peripheral nervous system is formed by:
A) Neuron cells
B) Microglial cells
C) Oligodendrocytes
D) Schwann cells

Q.30 Neuromuscular junction is an example of:
A) Physical synapse
B) Electrical synapse
C) Chemical synapse
D) Biological synapse

Q.31 The male reproductive structure used to transfer the sperms into the female reproductive tract:
A) Ejaculatory duct
B) Seminal vesicles
C) Copulatory organ
D) Scrotal sac



Q.32 Site for production of spermatogonia from germinal epithelium is:
A) Scrotum
B) Epididymis
C) Sperm duct
D) Seminiferous tubules

Q.33 Sperms are produced from spermatids through:
A) Mitosis
B) Meiosis I
C) Meiosis II
D) Differentiation

Q.34 Main duct of the male reproductive tract is:
A) Seminiferous tubule
B) Sperm duct
C) Ejaculatory duct
D) Urinogenital duct

Q.35 Highly convoluted proximal part of vas deferens is called:
A) Vasa efferentia
B) Epididymis
C) Sperm duct
D) Ejaculatory duct

Q.36 Sperms are discharged out of the body through:
A) Ureter
B) Urinary bladder
C) Ejaculatory duct
D) Urinogenital duct

Q.37 This hormone is essential for the successful production of sperms and also controls male secondary sexual characters:
A) FSH
B) ICSH
C) Testosterone
D) Progesterone

Q.38 Change that occurs during conversion of spermatid into sperm is:
A) Formation of nucleus
B) Formation of tail
C) Storage of food
D) Division through mitosis

Q.39 Total number of sperms produced from one primary spermatocyte is:
A) 1
B) 2
C) 3
D) 4

Q.40 Primary oocytes in ovary are enclosed in group of cells called:
A) Sertoli cells
B) Interstitial cells
C) Follicle cells
D) Germinal cells

Q.41 Second meiotic division in the oocyte is not completed until the oocyte is:
A) Released
B) Differentiated
C) Fertilized
D) Discharged

Q.42 Phenomenon by which an egg is discharged from the ovary is called:
A) Leutinization
B) Menstruation
C) Ovulation
D) Fertilization

Q.43 Which of the following cells are formed in ovary after meiosis I?
A) Secondary oocyte & 2nd polar body
B) Primary oocyte & 1st polar body
C) Secondary oocyte & 1st polar body
D) Ovum & 2nd polar body

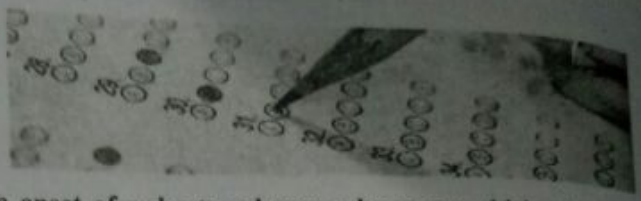
Q.44 The fallopian tube opens into:
A) Ovary
B) Oviduct
C) Uterus
D) Cervix

Q.45 Placenta is involved in exchange of all of the following except:
A) Blood
B) Gases
C) Wastes
D) Nutrients

Q.46 Pick the correct combination of structures for given functions:

	Fertilization	Conception	Development
A)	Ovary	Oviduct	Uterus
B)	Oviduct	Uterus	Uterus
C)	Oviduct	Uterus	Cervix
D)	Oviduct	Uterus	Vagina

Q.47 Events of menstrual cycle are regulated by:
A) Pituitary gonadotrophins
B) Placental gonadotrophins
C) Chorionic gonadotrophins
D) Paternal gonadotrophins



Q.48 The pituitary gland on the onset of puberty releases a hormone which stimulates development of primary follicles:
A) FSH
B) LH
C) Estrogen
D) Progesterone

Q.49 At the onset of puberty, FSH stimulates the development of _____ primary follicle/s:
A) One
B) Two
C) Four
D) Several

Q.50 All of the following actions are stimulated by estrogen except:
A) Proliferation of endometrium
B) Vascularization of endometrium
C) Secretion of FSH
D) Secretion of LH

Q.51 Hormone that makes uterus receptive for the implantation of zygote and placental formation is:
A) FSH
B) LH
C) Estrogen
D) Progesterone

Q.52 Menstrual stage usually lasts for:
A) 1-2 day
B) 3-7 days
C) 10-14 days
D) 24-28 days

Q.53 Peak level of progesterone is developed during:
A) Follicular stage
B) Proliferative stage
C) Secretory stage
D) Menstrual stage

Q.54 Stage of menstrual cycle that starts right after ovulation is:
A) Menstrual
B) Follicular
C) Proliferative
D) Secretory

Q.55 Hormones produced by placenta are:
A) Estrogen & progesterone
B) Progesterone & LTH
C) Prolactin & lactogen
D) Lactogen & progesterone

Q.56 Major source of dissemination of syphilis is:
A) Blood transfusion
B) Insect bite
C) Contaminated water
D) Sexual contact

Q.57 It produces genital soreness and ulcers in the infected areas:
A) Gonorrhea
B) Syphilis
C) Genital herpes
D) AIDS

Q.58 It is an example of endocrine gland in male reproductive system:
A) Testes
B) Seminal vesicle
C) Prostate gland
D) Bulbourethral gland

Q.59 Glands that play main role in semen formation:
A) Seminal vesicle
B) Prostate gland
C) Bulbourethral gland
D) Cowper's gland

Q.60 It is also called as urinogenital duct in humans:
A) Ureter
B) Vas deferens
C) Oviduct
D) Urethra

KIPS | ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 7)

TOPICS: -

- ✓ **Support & Movement**
- ✓ **Hormonal Control**
- ✓ **Immunity**

Q.1 **It provides an attachment site for a muscle:**

A) Compact bone
B) Spongy bone
C) Hyaline cartilage
D) Fibrocartilage

Q.2 **Blood vessels do not penetrate in:**

A) Compact bone
B) Spongy bone
C) Cartilage
D) Muscle

Q.3 **It forms external ear and the epiglottis:**

A) Hyaline cartilage
B) Fibrocartilage
C) Elastic cartilage
D) Living cartilage

Q.4 **The axial skeleton includes skull, vertebrae, ribs and:**

A) Scapula
B) Sternum
C) Clavicle
D) Patella

Q.5 **Number of paired and unpaired bones in cranium is:**

	Paired	Unpaired
A)	2	2
B)	4	4
C)	2	4
D)	4	2

Q.6 **Floating ribs articulate with:**

A) Cervical vertebrae
B) Thoracic vertebrae
C) Sternum
D) Clavicle

Q.7 **Total number of bones in one arm is:**

A) 14
B) 26
C) 30
D) 33

Q.8 **These form framework of palm of hand:**

A) Carpals
B) Phalanges
C) Metacarpals
D) Metatarsals

Q.9 **Pelvic girdle attaches the hind limb to:**

A) Trunk
B) Body
C) Sacrum
D) Coccyx

Q.10 **Joint formed between upper ends of radius and ulna is:**

A) Ball & socket joint
B) Hinge joint
C) Pivot joint
D) Multistage joint

Q.11 **Synovial joint is surrounded by a layer of connective tissue called:**

A) Synovial membrane
B) Fibrous capsule
C) Ligament
D) Tendon

Q.12 **Hinge joints allow movements on:**

A) Single plane
B) Two planes
C) Three planes
D) Four planes

Q.13 **Cells with cylindrical appearance are found in:**

A) Smooth muscles
B) Cardiac muscles
C) Skeletal muscles
D) All A, B, C

Q.14 **Generally, each end of the entire skeletal muscle is attached to bone by a bundle of collagen, non-elastic fibers known as:**

A) Capsule
B) Tendon
C) Ligament
D) Synovium

Q.15 It is a muscle protein that acts as store for energy:
A) Myoglobin
B) ATP
C) Creatine-PO_4
D) Creatinine-PO_4

Q.16 The myofibrils contain smaller contractile units called:
A) Muscle fibers
B) Muscle cells
C) Sarcomere
D) Myofilaments

Q.17 Each A band has a lighter strip in its mid section called:
A) M line
B) Z line
C) H zone
D) I band

Q.18 Each myosin molecule has a tail terminating in:
A) 1 globular head
B) 2 globular heads
C) 3 globular heads
D) 4 globular heads

Q.19 Troponin binds to all of the following except:
A) Actin
B) Myosin
C) Tropomyosin
D) Calcium

Q.20 During muscle contraction, ATP hydrolysis is required to:
A) Release Ca^{+2} from SER
B) Bind Ca^{+2} with troponin
C) Make link between myosin & actin
D) Break link between myosin & actin

Q.21 All the muscle fibers innervated by a single motor neuron are:
A) Motor nerve
B) Motor unit
C) Muscle bundle
D) Sarcomere

Q.22 Sarcoplasmic reticulum is continuous system of:
A) Sacs
B) Tubules
C) Vacuoles
D) Cristae

Q.23 The degree of muscle contraction depends upon number of _____ that participate:
A) Muscle bundles
B) Muscle fibers
C) Muscle fasciculi
D) Myofibrils

Q.24 All of the following changes appear in skeletal muscles after aerobic exercises except:
A) Capillaries increase
B) Mitochondria increase
C) Myoglobin increases
D) Cell fibers increase

Q.25 Lactic acid which causes muscle pH to drop causes extreme fatigue is produced by breakdown of:
A) ATP
B) Glucose
C) Actin-Myosin complex
D) Cross bridges

Q.26 It lasts for just a few seconds to several hours, causing the muscles to become taut and painful:
A) Muscle fatigue
B) Muscle cramp
C) Muscle atrophy
D) Muscle hypertrophy

Q.27 These may progress to spasm of larynx, respiratory paralysis and ultimately death:
A) Muscle fatigue & tetany
B) Muscle tetany & tetanus
C) Muscle cramp & tetanus
D) Muscle tetany & cramp

Q.28 This bone is vestigial in humans:
A) Atlas
B) Sacrum
C) Patella
D) Coccyx

Q.29 Part of skull that forms joint with atlas is:
A) Parietal
B) Palatine
C) Temporal
D) Occipital

Q.30 Which of the following are not endocrine glands?
A) Pituitary gland
B) Pineal gland
C) Adrenal gland
D) Salivary gland

Q.31 Hormones are transported to target sites through:
A) Lymph
B) Blood
C) Ducts
D) Blood cells

Q.32 **Hormones of which of the following glands are amino acid derivatives?**
A) Iselet of Langerhans
B) Anterior pituitary
C) Adrenal cortex
D) Adrenal medulla

Q.33 **ADH and oxytocin are produced by:**
A) Secretory cells of hypothalamus
B) Neurosecretory cells of hypothalamus
C) Secretory cells of posterior pituitary
D) Neurosecretory cells of posterior pituitary

Q.34 **Releasing and inhibiting hormones from hypothalamus are carried to pituitary through:**
A) Sensory neurons
B) Motor neurons
C) Arterial blood
D) Venous blood

Q.35 **Infundibulum is a short stalk that connects:**
A) Thalamus with pituitary
B) Hypothalamus with pituitary
C) Cerebrum with pituitary
D) Hypothalamus with pineal gland

Q.36 **Anterior lobe of pituitary is called master gland due to its:**
A) Connection with hypothalamus
B) Location below forebrain
C) Primary hormones
D) Tropic hormones

Q.37 **Somatotrophin releasing factor is secreted from:**
A) Hypothalamus
B) Anterior pituitary
C) Median pituitary
D) Posterior pituitary

Q.38 **Abnormal development of hands, feet and jaws due to excess secretion of growth hormone in early life is called:**
A) Microcephaly
B) Polydactyl
C) Acromegaly
D) Gigantism

Q.39 **A pituitary hormone inhibited by a factor from hypothalamus is:**
A) TSH
B) FSH
C) Luteinizing hormone
D) Prolactin

Q.40 **FSH in male stimulates:**
A) Follicle development
B) Estrogen secretion
C) Milk production
D) Sperm production

Q.41 **Thyroid gland in humans has:**
A) 1 anterior lobe
B) 2 lateral lobes
C) 1 posterior & 2 lateral lobes
D) 2 posterior & 2 lateral lobes

Q.42 **Which of the following glands produce higher levels of secretions during stress situations:**
A) Thyroid & parathyroid
B) Thyroid & adrenal
C) Adrenal & pancreas
D) Parathyroid & adrenal

Q.43 **The cause of Grave's diseases is:**
A) Deficiency of iodine
B) Excess of thyroxin
C) Abnormal protein
D) Excess fat

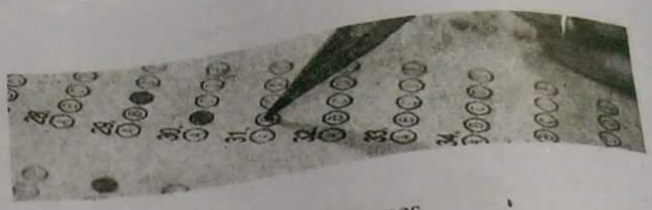
Q.44 **Under activity of parathyroid gland may lead to:**
A) Muscular tetany
B) Demineralization of bone
C) Rickets
D) Kidney stone

Q.45 **Insulin inhibits hydrolysis of glycogen in:**
A) Liver & pancreas
B) Liver & muscles
C) Pancreas & kidney
D) Kidney & liver

Q.46 **Glucagon increases blood glucose level mainly by increasing breakdown of:**
A) Proteins
B) Fats
C) Glycogen
D) Starch

Q.47 **Which of the following hormone of adrenal gland is not under the control of ACTH?**
A) Adrenaline
B) Aldosterone
C) Cortisol
D) Corticosterone

Q.48 **Androgens in female are secreted from:**
A) Pituitary
B) Testes
C) Ovaries
D) Adrenals



Q.49 **Gastrin and secretin are:**
A) Duodenal hormones
B) Gastric hormones
C) Mucosal hormones
D) Sub-mucosal hormones

Q.50 **Which of the following actions are not common for estrogen and progesterone?**
A) Inhibition of FSH
B) Secondary sexual characters
C) Thickening of uterus
D) Proliferation of endometrium

Q.51 **Which of the following correctly represent level of testosterone in body?**

	Birth to Puberty	After Puberty
A)	Increases	Increases
B)	Decreases	Increases
C)	Increases	Constant
D)	Constant	Decreases

Q.52 **Skin and mucous membranes are examples of:**
A) Cellular barriers
B) Physical barriers
C) Chemical barriers
D) Mechanical barriers

Q.53 **Immune system in our body acts as:**
A) 1st defense line
B) 2nd defense line
C) 3rd defense line
D) 4th defense line

Q.54 **Its influence is essential in making T-cells immunologically competent:**
A) Bone marrow
B) Lymph node
C) Thymus
D) Spleen

Q.55 **An antibody molecule has _____ polypeptide chains:**
A) 1
B) 2
C) 3
D) 4

Q.56 **Cell mediated immune response depends upon:**
A) T lymphocytes
B) B lymphocytes
C) Antibodies
D) Macrophages

Q.57 **Cells that synthesize and liberate antibodies into the blood plasma:**
A) T lymphocytes
B) B lymphocytes
C) Plasma cell clone
D) Phagocytes

Q.58 **Passive immunization depends upon:**
A) Antigen
B) Vaccine
C) Antiserum
D) Phagocytes

Q.59 **In body, antigen-antibody complexes are taken up and destroyed by:**
A) B lymphocytes
B) T lymphocytes
C) Erythrocytes
D) Phagocytes

Q.60 **An antibody molecule has _____ disulphide linkages:**
A) 2
B) 4
C) 6
D) 8

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 6+7)

OPICS: -

- ✓ Nervous System
- ✓ Reproduction
- ✓ Support & Movement
- ✓ Hormonal Control
- ✓ Immunity

Q.1 Any change in external or internal environment of an organism is called:
A) Sensation
B) Coordination
C) Stimulus
D) Response

Q.2 In neuron, nucleus and various other organelles are embedded in cytoplasm of:
A) Dendron
B) Axon
C) Cell body
D) Cell processes

Q.3 These have long axons:
A) Sensory neurons
B) Motor neurons
C) Associative neurons
D) All A, B, C

Q.4 Cell bodies of sensory neurons are usually located in:
A) Gray matter of spinal cord
B) White matter of spinal cord
C) Dorsal root ganglion
D) Ventral root ganglion

Q.5 It correctly represents movement of ions by Na-K pump:

A)	$2K^+$ inside	$3Na^+$ outside
B)	$2K^+$ outside	$3Na^+$ inside
C)	$3K^+$ inside	$2Na^+$ outside
D)	$3K^+$ outside	$2Na^+$ inside

Q.6 Minimum amount of stimulus required to initiate nerve impulse is called:
A) Subthreshold stimulus
B) Threshold stimulus
C) Action potential
D) Variable stimulus

Q.7 Chemical messengers involved in synaptic transmission are:
A) Hormones
B) Enzymes
C) Neurotransmitters
D) Synaptic vesicles

Q.8 Centralized nervous system first time developed in members of phylum:
A) Porifera
B) Cnidaria
C) Platyhelminthes
D) Aschelminthes

Q.9 It prepares the body for stressful or energetic activity:
A) Somatic nervous system
B) Autonomic nervous system
C) Sympathetic nervous system
D) Parasympathetic nervous system

Q.10 The thalamus is crucial relay center for:
A) Senses
B) Emotions
C) Memories
D) Motor responses

Q.11 Part of central nervous system that is reduced in humans:
A) Forebrain
B) Midbrain
C) Hindbrain
D) Spinal cord

Q.12 Central canal containing CSF is related with:
A) Gray matter of brain
B) White matter of brain
C) Gray matter of spinal cord
D) White matter of spinal cord

Q.13 It is a nervous disorder, characterized by involuntary tremors, diminished moto power and rigidity:
A) Parkinson's disease
B) Grave's disease
C) Epilepsy
D) Alzheimer's disease

Q.14 Which of the following lie outside the body in humans?
A) Ovaries
B) Testes
C) Kidneys
D) Bladder

Q.15 Liquid medium, protection and nourishment to sperms while they are in seminiferous tubules is provided by fluid secreted by:
A) Germ cells
B) Sertoli cells
C) Interstitial cells
D) Leydig cells

Q.16 Which of the following cells are always diploid?
A) Spermatogonia
B) Spermatocyte
C) Spermatid
D) Sperm

Q.17 In humans, how many ova are usually discharged from the ovary at one time:
A) 1
B) 2
C) 3
D) 4

Q.18 The fertilized ovum is implanted and undergoes further development in:
A) Ovary
B) Oviduct
C) Uterus
D) Cervix

Q.19 Spermatogenesis in humans starts _____ and lasts _____:
A) Before birth, at puberty
B) Before puberty, after puberty
C) Before birth, throughout life
D) At puberty, throughout life

Q.20 All of the following actions are stimulated by FSH except:
A) Development of primary follicle
B) Development of primary oocyte
C) Release of estrogen
D) Release of progesterone

Q.21 Which of the following causes the pituitary to release LH?

	FSH	Estrogen
A)	↑	↑
B)	↓	↓
C)	↑	↓
D)	↓	↑

Q.22 The end or complete stop of the menstrual cycle is called:
A) Estrous
B) Menarche
C) Menopause
D) Andropause

Q.23 Level of LH is maximum in blood during which stage of menstrual cycle?
A) Menstrual
B) Proliferative
C) Ovulation
D) Secretory

Q.24 Which of the following STDs can be cured by use of antibiotics?
A) Gonorrhea & syphilis
B) Syphilis & genital herpes
C) Genital herpes & AIDS
D) Gonorrhea & genital herpes

Q.25 Sperm duct is another name used for:
A) Epididymis
B) Vas deferens
C) Ejaculatory duct
D) Urinogenital duct

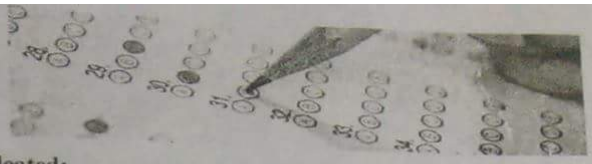
Q.26 Correct passage of transfer of sperms is:
A) Seminiferous tubules > Epididymis > Vas Deferens > Vasa efferentia > Ureter > Urethra
B) Seminiferous tubules > Vasa efferentia > Epididymis > Vas Deferens > Urethra
C) Seminiferous tubules > Vasa efferentia > Vas Deferens > Epididymis > Ureter > Urethra
D) Seminiferous tubules > Vasa efferentia > Vas Deferens > Epididymis > Urethra > Ureter

Q.27 In cartilage, collagen is secreted by:
A) Osteoblasts
B) Osteocytes
C) Osteoclasts
D) Chondrocytes

Q.28 It is found at the moveable joints:
A) Hyaline cartilage
B) Fibrocartilage
C) Elastic cartilage
D) Living cartilage

Q.29 Vertebral curvatures provide more _____ than the straight column:
A) Protection
B) Strength
C) Flexibility
D) Elasticity

Q.30 Joints that fix teeth into the jaws are:
A) Fibrous joints
B) Primary cartilaginous joints
C) Secondary cartilaginous joints
D) Synovial joints



Q.31 These are always multinucleated:
A) Smooth muscle cells
B) Cardiac muscle cells
C) Skeletal muscle cells
D) White blood cells

Q.32 It acts as store house of oxygen in skeletal muscle fiber:
A) Hemoglobin
B) Myoglobin
C) Creatinine
D) ATP

Q.33 All of the following are true about A band in skeletal muscle fiber except:
A) Dark band
B) Anisotropic
C) Non-polarizing
D) Myosin

Q.34 It is actually three polypeptide complex:
A) Actin
B) Myosin
C) Troponin
D) Tropomyosin

Q.35 ATP for muscle contraction are provided by:
A) Sarcoplasmic reticulum
B) Nucleus
C) Mitochondria
D) Creatinine

Q.36 Lumen of T-tubules is continuous with:
A) Sarcoplasm
B) Sarcoplasmic reticulum
C) Intracellular fluid
D) Extracellular fluid

Q.37 Sarcoplasmic reticulum does not contain:
A) Cisternae
B) Tubules
C) Ribosomes
D) Ca^{+2} gates

Q.38 Lactic acid accumulation causes:
A) Muscle atrophy
B) Muscle fatigue
C) Muscle cramp
D) Muscle tetany

Q.39 It is the condition caused by low calcium in the blood:
A) Fatigue
B) Tetany
C) Cramp
D) Tetanus

Q.40 Hormones are _____ in nature:
A) Protein
B) Non-protein
C) Organic
D) Inorganic

Q.41 Which of the following is the part of both nervous system and endocrine system?
A) Thalamus
B) Hypothalamus
C) Anterior pituitary
D) Posterior pituitary

Q.42 ADH and oxytocin are stored in:
A) Cell body at hypothalamus
B) Axon ending at hypothalamus
C) Cell body at posterior pituitary
D) Axon ending at posterior pituitary

Q.43 Release of TRF from hypothalamus is controlled by the levels of _____ in blood:
A) Iodine
B) TSH
C) Thyroxine
D) Steroid

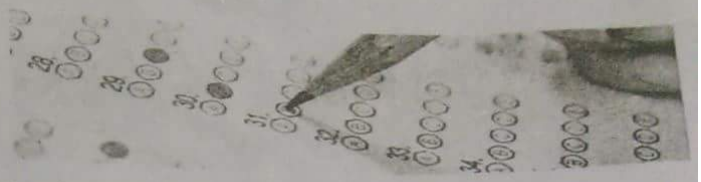
Q.44 Inhibition of secretion of melanophore stimulating hormone is controlled by:
A) Hypothalamus
B) Pineal gland
C) Anterior pituitary
D) Median pituitary

Q.45 All of the following hormones are produced by thyroid gland except:
A) Tri-iodothyronine
B) Tetra-iodothyronine
C) Calcitonin
D) Cortisol

Q.46 Exophthalmic goiter is associated with:
A) Cretinism
B) Myxedema
C) Goiter
D) Grave's disease

Q.47 These two hormones are antagonist to each other:
A) T3 & T4
B) Calcitonin & parathormone
C) Glucagon & cortisol
D) Adrenaline & nor-adrenaline

Q.48 Higher blood sugar level, dehydration and loss of valuable metal ions are symptoms of:
A) Grave's disease
B) Diabetes mellitus
C) Addison's disease
D) Cushing disease



Q.49 **Group of hormones that are not produced from adrenal cortex:**
A) Corticosteroids
B) Androgens
C) Gonadotrophins
D) Glucocorticoids

Q.50 **Excess of adrenaline & nor-adrenaline may lead to:**
A) Addison's disease
B) Cushing disease
C) Low blood glucose
D) High blood pressure

Q.51 **Gastrin stimulates the secretion of:**
A) Gastric juice
B) Pancreatic juice
C) Bile
D) Intestinal juice

Q.52 **All of the following structures secrete progesterone except:**
A) Graffian follicle
B) Corpus luteum
C) Ruptured follicles
D) Placenta

Q.53 **The components of immune system include:**
A) Lymphocytes & phagocytes
B) Skin & mucous membranes
C) Phagocytes & skin
D) Antibodies & lymphocytes

Q.54 **Foreign substance that stimulates the formation of antibodies is:**
A) Immunogen
B) Immunoglobulins
C) Antitoxins
D) Interferons

Q.55 **Antibodies are manufactured in:**
A) Thymus
B) Bone marrow
C) T lymphocytes
D) B lymphocytes

Q.56 **Different polypeptide chains in an antibody molecule are held together by:**
A) Peptide linkages
B) Hydrogen linkages
C) Ionic linkages
D) Disulphide linkages

Q.57 **Transplant rejection is an example of:**
A) Humoral immune response
B) Cell mediated response
C) Auto-immune response
D) Immune suppressive response

Q.58 **Antibodies are involved in:**
A) Destruction of antigen
B) Speed up phagocytosis
C) Neutralize toxins
D) All A, B, C

Q.59 **Artificially induced active immunity is produced by introducing:**
A) Antibodies
B) Antitoxins
C) Vaccine
D) Antibiotic

Q.60 **This immune response is immediate:**
A) Cell mediated immune response
B) Antibody mediated immune response
C) Active immune response
D) Passive immune response

KIPS | ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 8)

TOPICS: -

- ✓ **Bioenergetics**
- ✓ **Ecosystem**

Q.1 **Net equation of photosynthesis is exactly opposite to the equation of:**
A) Lactic acid fermentation
B) Alcoholic fermentation
C) Aerobic respiration
D) Anaerobic respiration

Q.2 **These are mostly red to orange pigments:**
A) Chlorophylls
B) Carotenoids
C) Carotenes
D) Xanthophylls

Q.3 **All of the following are characteristics of head of chlorophyll except:**
A) Light absorbing
B) Hydrophobic
C) Porphyrin ring
D) Tetrapyrrole ring

Q.4 **Terminal group in chlorophyll b that is different from a is:**
A) Methyl group
B) Carbonyl group
C) Carboxyl group
D) Ketone group

Q.5 **Absorption spectrum of chlorophylls indicates that maximum absorption is at:**
A) 380 nm
B) 430 nm
C) 500 nm
D) 620 nm

Q.6 **Which of the following colour is absorbed by carotenoids and reflected by chlorophylls?**
A) Blue
B) Green
C) Violet
D) Red

Q.7 **It is true about peaks and valley of action spectrum:**
A) Peaks – Broader, Valley – Broader
B) Peaks – Narrow, Valley – Narrow
C) Peaks – Narrow, Valley - Broader
D) Peaks – Broader, Valley – Narrow

Q.8 **It acts as a reducing power for dark reactions of photosynthesis:**
A) NADP
B) NADPH
C) ATP
D) $FADH_2$

Q.9 **It has main role in the conversion of light energy into chemical energy:**
A) Cytoplasm
B) Stroma
C) Antenna complex
D) Reaction center

Q.10 **First step in non-cyclic photophosphorylation is:**
A) Photolysis of water
B) Photoexcitation of electrons
C) Electron transport
D) Formation of ATP & NADPH

Q.11 **Number of electrons required to reduce $NADP^+$ is:**
A) 1
B) 2
C) 3
D) 4

Q.12 **Which of the following electron carrier of light reactions will be at lowest energy level?**
A) Plastoquinone
B) Cytochrome
C) Plastocyanin
D) Ferridoxin

Q.13 **During chemiosmosis in photosynthesis, protons are pumped from:**
A) Stroma to thylakoid space
B) Thylakoid space to stroma
C) Mitochondrial matrix to cristae
D) Cristae to mitochondrial matrix

Q.14 **A product of dark reaction of photosynthesis other than carbohydrate is:**
A) ATP
B) NADPH
C) H_2O
D) O_2

Q.15 **Calvin cycle is also known as C3 pathway because:**
A) Precursor is 3 carbon
B) Initial product is 3 carbon
C) Intermediates are 3 carbon
D) Final product is 3 carbon

Q.16 During Calvin cycle, which of the following is formed as a result of dephosphorylation?
A) 3-PG
B) 1,3-BPG
C) G3P
D) RuBP

Q.17 During Calvin cycle, how many molecules of G3P are recycled to regenerate three molecules of RuBP?
A) 1
B) 3
C) 5
D) 6

Q.18 How many ATP are required to synthesize one glucose molecule through Calvin cycle?
A) 6
B) 12
C) 9
D) 18

Q.19 The most common fuel used by the cell to provide energy by cellular respiration is:
A) Glycogen
B) Glucose
C) Protein
D) Fat

Q.20 Step of cellular respiration that does not depend upon availability of oxygen is:
A) Glycolysis
B) Pyruvic acid oxidation
C) Krebs cycle
D) Oxidative phosphorylation

Q.21 During aerobic respiration, glucose is oxidized to:
A) Pyruvate & CO_2
B) Lactate & CO_2
C) Ethyl alcohol & CO_2
D) H_2O, CO_2 & energy

Q.22 Formula for lactic acid is:
A) $C_3H_4O_3$
B) $C_3H_6O_3$
C) C_2H_5OH
D) $C_6H_{12}O_6$

Q.23 It is step of cellular respiration where energy is utilized instead of being released:
A) Glycolysis
B) Fermentation
C) Link reaction
D) Krebs cycle

Q.24 It is the product of preparatory phase of glycolysis:
A) ATP
B) Pyruvate
C) PGAL
D) Lactate

Q.25 Which of the following directly enters in Krebs cycle?
A) Glucose
B) Pyruvate
C) Acetate
D) Acetyl CoA

Q.26 During aerobic respiration, oxidation of glucose is completed in:
A) Glycolysis
B) Pyruvic acid oxidation
C) Krebs cycle
D) Respiratory chain

Q.27 During Krebs cycle, $FADH_2$ is formed during conversion of:
A) Iso-citrate into α-ketoglutarate
B) α-ketoglutarate into succinate
C) Succinate into fumarate
D) Fumarate into malate

Q.28 During aerobic respiration, hydrogen atoms of NADH are transferred to:
A) Pyruvate
B) Lactate
C) Krebs cycle
D) Respiratory chain

Q.29 In respiratory chain, oxidation of cytochrome b causes reduction of:
A) Coenzyme Q
B) Cytochrome c
C) Cytochrome a
D) Cytochrome a3

Q.30 In aerobic respiration, H_2O as a final product is generated during:
A) Lactic acid fermentation
B) Pyruvic acid oxidation
C) Krebs cycle
D) Oxidative phosphorylation

Q.31 Pyruvate decarboxylase (an enzyme of cellular respiration) can be inhibited by:
A) ↑ ATP
B) ↓ ATP
C) ↓ Citrate
D) ↑ NADH

Q.32 Abiotic components of ecosystem do not include:
A) Climate
B) Bacteria
C) Soil
D) Water

Q.33 These are the major types of ecosystems that occupy broad geographical regions:
A) Communities
B) Biosphere
C) Biomes
D) Flora

Q.34 **In an ecosystem, niche is the organism's:**

A) Trophic level
B) Interaction
C) Role
D) Habitat

Q.35 **These are the organisms which get energy directly from plants only:**

A) Producers
B) Primary consumers
C) Secondary consumers
D) Decomposers

Q.36 **Decomposers in an ecosystem include:**

A) Algae & plants
B) Plants & animals
C) Bacteria & fungi
D) Bacteria, fungi & scavengers

Q.37 **In a food chain, green plants, algae and phytoplanktons are placed at:**

A) T1
B) T2
C) T3
D) T1, T2 & T3 respectively

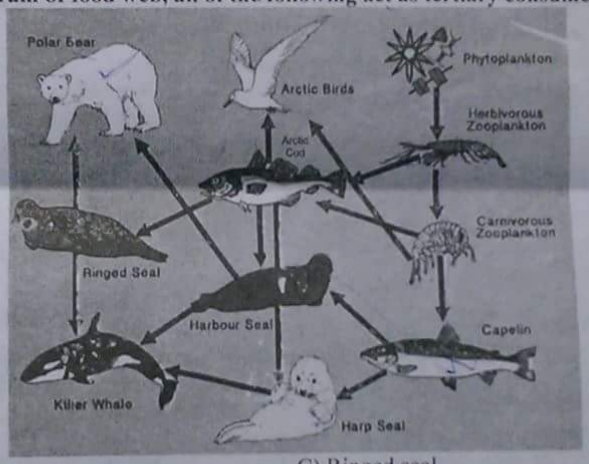
Q.38 **Which of the following trophic levels represent carnivores?**

A) T1 & T2
B) T1 & T3
C) T2 & T3
D) T3 & T4

Q.39 **Diverse and relatively stable community developed as a result of succession is called:**

A) Pioneer community
B) Seral community
C) Climax community
D) Regional community

Q.40 **In given diagram of food web, all of the following act as tertiary consumers except:**



A) Arctic cod
B) Capelin
C) Ringed seal
D) Polar bear

Q.41 ***Dermatocarpon*** **and** ***Permelia*** **are the examples of:**

A) Crustose lichen
B) Foliage lichen
C) Mosses
D) Herbs

Q.42 **During xerosere succession, seed plants start establishing during:**

A) Moss stage
B) Herbaceous stage
C) Shrub stage
D) Forest stage

Q.43 **All of the following are examples of predation except:**

A) Cat/mouse
B) Frog/ mosquito
C) Seal/ fish
D) Heather/ fungus

Q.44 **It is an interaction where one partner is benefited and other is neither benefitted nor harmed:**

A) Predation
B) Parasitism
C) Mutualism
D) Commensalism

Q.45 **Oxidation of ammonia or ammonium ions in soil by bacteria is called:**

A) Ammonification
B) Assimilation
C) Nitrification
D) Nitrogen fixation

Q.46 **It is involved in symbiotic nitrogen fixation:**
A) *Rhizobium*
B) *Nostoc*
C) *Nitrosomonas*
D) *Pseudomonas*

Q.47 **It shows up as plant biomass:**
A) Gross primary production
B) Net primary production
C) Gross secondary production
D) Net secondary production

Q.48 **Amount of energy that is transferred from one trophic level to next is about:**
A) 10%
B) 30%
C) 50%
D) 90%

Q.49 **Early man had a niche in the ecosystem as:**
A) Producer
B) Decomposer
C) Primary consumer
D) Secondary consumer

Q.50 **It is the study of human populations and things that affect them:**
A) Ecology
B) Biogeography
C) Demography
D) Evolution

Q.51 **All of the following are factors for increase in human population except:**
A) Increased life expectancy
B) Increased bacterial resistance
C) Better living conditions
D) Better supply of food & medicine

Q.52 **It protects the soil from the beating effects of rain:**
A) Clouds
B) Greenhouse
C) Leaf canopy
D) Top soil

Q.53 **Clearance of vast areas of forests leads to:**
A) Deforestation
B) Afforestation
C) Reforestation
D) Desertification

Q.54 **Pollution is the befouling of environment by anything produced by humans which is or may be:**
A) Naturally not present
B) Present at low concentration
C) Harmful to human life
D) All A, B, C

Q.55 **In upper atmosphere, ultraviolet rays cause _____ to release from CFCs which destroys ozone:**
A) Chlorine
B) Fluorine
C) Carbon
D) Hydrogen

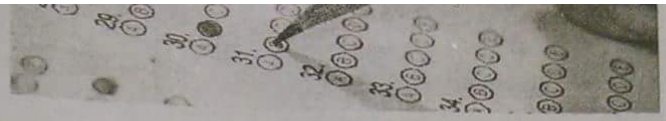
Q.56 **Plants and soil absorb the light rays from sun and re-radiate as:**
A) Ultraviolet radiations
B) Visible radiations
C) Long infra-red radiations
D) Short infra-red radiations

Q.57 **Greenhouse gases do not allow:**
A) Entry of ultraviolet rays
B) Escape of ultraviolet rays
C) Entry of infra-red rays
D) Escape of infra-red rays

Q.58 **These may be the cause of acid rains:**
A) CO & CO_2
B) CO_2 & SO_2
C) SO_2 & NO_2
D) NO_2 & CO_2

Q.59 **Eutrophicaltion of fresh water habitat results in excessive growth of:**
A) Plants
B) Animals
C) Algae
D) Fishes

Q.60 **It is a chemical substance that destroys agricultural parasites or competitors:**
A) Agrochemical
B) Pesticide
C) Effluent
D) Biopesticide



BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 9)

TOPICS:-

- ✓ **Biotechnology**
- ✓ **Evolution**

Q.1 **Use of Biology in industrial processes and improvement of quality of life is:**
A) Genetic engineering
B) Microbiology
C) Biotechnology
D) Eugenics

Q.2 **The organism whose genetic material has been altered by using technique of genetic engineering is called:**
A) Genetically mutant organism
B) Genetically modified organism
C) Genetically modern organism
D) Genetically transferred organism

Q.3 **Which technology is not in use to produce insulin from *E.coli*?**
A) Genetic engineering
B) PCR
C) Recombinant DNA technology
D) Centrifugation

Q.4 **The phenomenon of introduction of exogenous DNA in animal cell is called:**
A) In-vivo gene therapy
B) Ex-vivo gene therapy
C) Foreign gene therapy
D) Transgenesis

Q.5 **Which technology facilitates the production of DNA molecule by combining sequence of DNA from two different organisms?**
A) Gene Therapy
B) PCR
C) Recombinant DNA technology
D) Germ line gene therapy

Q.6 **Which of the following is incorrectly matched:**
A) Protoplast---plant cell engineering
B) RFLPs---DNA fingerprinting
C) DNA polymerase---PCR
D) DNA ligase---Mapping human chromosome

Q.7 **In genetic engineering, chimaeric DNA is:**
A) An enzyme that links with DNA
B) A viral DNA that infects bacteria
C) A plasmid that contains foreign DNA
D) A DNA of fungal cell

Q.8 **cDNA is synthesized on template of:**
A) DNA
B) rRNA
C) mRNA
D) tRNA

Q.9 **Bacteriophages are used as vector for carrying:**
A) Donor gene
B) Recipient DNA
C) Vector gene
D) Bacterial gene

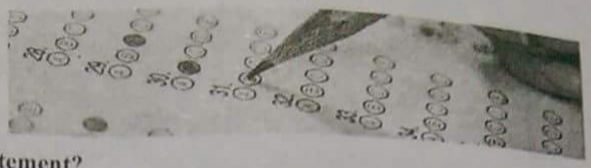
Q.10 **Which of the following is not a vector for Recombinant DNA Technology?**
A) pBR322
B) pSC101
C) Phage
D) Mosquito

Q.11 **Enzymes required for Recombinant DNA technology are:**
I. Helicase
III. Endonucleases
II. Reverse transcriptase
IV. Ligase
A) I only
B) I,II,IV only
C) II, III, IV only
D) I,II,III,IV only

Q.12 **Bacterial cell absorb plasmid when treated with:**
A) Calcium carbide
B) Silicon carbide
C) Cesium chloride
D) Calcium chloride

Q.13 **The segment of DNA for synthesis of polypeptide is called:**
A) Codon
B) Anticodon
C) Transposon
D) Gene

Q.14 **Foreign DNA that was inserted into a plasmid and then replicated many times in a population of bacteria is a:**
A) DNA clone
B) Gene library
C) DNA probe
D) Gene map



Q.15 **Which of these is a true statement?**
A) Both plasmids and viruses can serve as vectors
B) Both Plasmids and viruses have antibiotic resistant genes
C) Both Plasmids and viruses are self–replicating molecules
D) Both Plasmids and viruses are living cells

Q.16 **A genome is a full set of genes of a/an:**
A) Population
B) Community
C) Individual
D) Species

Q.17 **Arrange the following events in the proper sequence for recombinant DNA technology:**
1 = Expression of foreign gene
2 = Insertion into vector
3 = Isolation of gene of interest
4 = Formation of recombinant DNA
5 = Formation of transgenic cell
A) 1, 2, 4, 5, 3
B) 3, 2, 4, 5, 1
C) 5, 3, 2, 1, 4
D) 3, 1, 2, 4, 5

Q.18 **What is the function of the polymerase chain reaction in biotechnology?**
A) DNA fragment separation
B) Cutting of DNA into fragments
C) Amplification of DNA
D) Linking two different DNA

Q.19 **PCR Amplification and analysis is not used for:**
A) Disease diagnosis
B) Forensic tests
C) Evolutionary study
D) Cell cloning

Q.20 **During PCR, primer always attaches to _____ end of DNA.**
A) 5'
B) 1'
C) 3'
D) 2'

Q.21 **In addition to DNA polymerase and primers, the polymerase chain reaction also requires:**
A) A large amount of DNA
B) Restriction enzymes
C) DNA nucleotides
D) Primase

Q.22 **Total number of restriction enzymes discovered so far:**
A) 400
B) 350
C) 300
D) 500

Q.23 **Hydrogen bonds between complementary base pairs during PCR are broken down using:**
A) Helicase
B) Primase
C) Heat
D) DNA ligase

Q.24 **Number of nucleotides used in primers during PCR are:**
A) 10
B) 20
C) 40
D) 80

Q.25 **PCR can be used for all of the following EXCEPT:**
A) Diagnosis
B) Forensics
C) Phylogeny
D) Chemotherapy

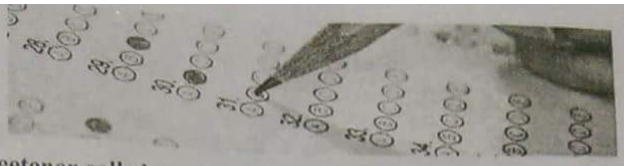
Q.26 **A pattern of bands made up of a specific DNA fragments is a:**
A) Restriction enzyme
B) Homeotic gene
C) Cloning vector
D) DNA fingerprint

Q.27 **Separation of DNA fragments according to their size and charge is done in all except:**
A) Gel electrophoresis
B) Polymerase chain reaction
C) DNA analysis
D) DNA fingerprinting

Q.28 **Method for generation of different sized DNA fragments by using dideoxyribonucleoside triphosphate is:**
A) Maxam-Gilbert Method
B) Sanger's Method
C) Vortex-mixing method
D) Polymerase chain reaction

Q.29 **Automated DNA sequencing relies on all except:**
A) Robotic devices
B) Fluorescently labeled ddNTPs
C) Primers
D) Radio labeled dNTPs

Q.30 **Gene sequencing is the procedure to find sequence of:**
A) Nucleotides in DNA
B) Genes on chromosome
C) Amino acids in polypeptide
D) Genes in a cell



Q.31 **Aspartate is a _____ sweetener called neutrasweet:**
A) Polypeptide
B) Dipeptide
C) Tripeptide
D) Amino acid

Q.32 **Biodegradable plastic is chemically:**
A) Dihydroxy butyrate
B) Polyhydroxy butyrate
C) Diphydroxy Propionate
D) Dihydroxyacetone

Q.33 **A botanist, Steward grew a complete carrot plant in 1958, from a tiny piece of:**
A) Cortex
B) Phloem
C) Xylem
D) Pith

Q.34 **Which one of the following biotechnology product is used in heart patients?**
A) Tissue Plasminogen activator
B) Bovine growth hormone
C) Hemophilia factor IX
D) Lovastatin

Q.35 **Cystic Fibrosis is due to abnormal:**
A) Cl^- transport
B) Na^+ transport
C) K^+ transport
D) Ca^{+2} transport

Q.36 **The protein expressed by gene in coronary artery angioplasty:**
A) Vascular endothelial growth inhibitor
B) Vascular endothelial growth promoter
C) Vascular epithelial growth factor
D) Vascular endothelial growth factor

Q.37 **ADA needed for the maturation of T and B cells is not produced in patients of:**
A) SCID
B) Parkinson disease
C) Cystic fibrosis
D) AIDS

Q.38 **All of the following diseases can be treated with *in vivo* gene therapy except:**
A) Haemophilia
B) Diabetes
C) Familial Hypercholesterolemia
D) AIDS

Q.39 **The enzyme luciferase is produced by an insect commonly called as:**
A) Housefly
B) Caddisfly
C) Butterfly
D) Firefly

Q.40 **Genetic material of retroviruses is:**
A) Single stranded DNA
B) Double stranded RNA
C) Single stranded RNA
D) Double stranded DNA

Q.41 **Series of changes in the genetic composition of a population over time is called:**
A) Revolution
B) Evolution
C) Population genetics
D) Succession

Q.42 **All of the following are related to evolution except:**
A) Change over time
B) Antibiotic resistance in bacteria
C) Muscle hypertrophy
D) Origin of new species

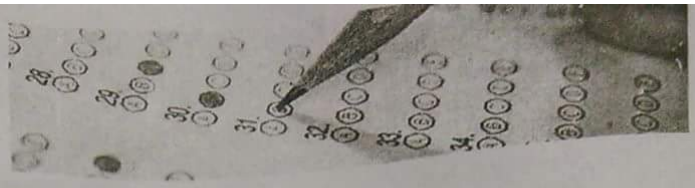
Q.43 **Evolutionary history of a group of organisms is called:**
A) Ontogeny
B) Systematics
C) Taxonomy
D) Phylogeny

Q.44 **These provide raw material for evolution:**
A) Variations
B) Natural selection
C) Adaptations
D) Developmental anatomy

Q.45 **All of the following are related to non-random mating in a particular population EXCEPT:**
A) Allele frequency remains constant
B) Increases the proportion of homozygous individuals
C) Lessens the proportion of heterozygous individuals
D) Strictly follows Hardy-Weinberg theorem

Q.46 **What was the perception of Darwin about unity of life?**
A) All organisms descend from a common ancestor
B) All organisms are created specially by a divine force
C) All organisms share a common biological composition
D) All organisms arise from non–living things

Q.47 **According to Darwin _____ become better adapted to local environment through natural selection:**
A) Regional community
B) Population
C) Ecosystem
D) Individual



Q.48 **Which is not related to the idea of use & disuse?**
A) Extensively used body parts become longer and stronger
B) Disused body parts deteriorate
C) Bigger biceps of black smith
D) Several types of beaks present in finches

Q.49 **Hardy–Weinberg equation is used to observe all at equilibrium EXCEPT:**
A) Frequency of alleles
B) Genotype
C) Evolution
D) Gene locus

Q.50 **Which one is related to natural selection?**
A) More people → more resources → no competition
B) More people → less resources → more competition
C) Less people → more resources → no competition
D) Less people → less resources → no competition

Q.51 **In Darwin's hypothetical evolutionary tree, tips of living twigs represent:**
A) Ancestral History
B) Current Biodiversity
C) Common skills
D) Fossils

Q.52 **According to Lamarck, extension of neck in giraffe was the result of:**
A) Mutation
B) Natural selection
C) Environmental change
D) Genetic drift

Q.53 **Following observations refer to Natural selection:**
1. Evolution
2. Struggle for existence
3. Over production
4. Natural selection

Which of these represent exact sequence of these events?
A) 3,2,4,1
B) 3,1,4,2
C) 4,2,1,3
D) 2,1,3,4

Q.54 **The most obvious visual evidence for evolution is:**
A) Fossil record
B) Biogeography
C) Comparative anatomy
D) Comparative embryology

Q.55 **Stronger evidence in support of evolution as the basis for unity and diversity of life:**
A) Anatomy
B) Embryology
C) Biogeography
D) Molecular Biology

Q.56 **Ancestors of all life forms, according to molecular biology and cell biology, are:**
A) Protists
B) Prokaryotes
C) Eukaryotes
D) Fungus like protists

Q.57 **In analogous structures, we look for:**
A) Similarity in structure and function
B) Similarity in functions and difference in structures
C) Similarity in organ structure
D) Similarity in cell make up

Q.58 **Which of the following is not a vestigial structure?**
A) Ear of humans
B) 3rd molar of humans
C) Coccyx
D) Vermiform appendix

Q.59 **In a population with two alleles for a particular locus, B and b, the allele frequency of B is 0.7. What would be the frequency of heterozygous if the population is in Hardy-Weinberg equilibrium?**
A) 0.36
B) 0.16
C) 0.42
D) 0.24

1 - 0.7

Q.60 **If p + q = 1 then what will be frequency of q?**
A) 1–p
B) 1–q
C) q^2
D) p^2

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 10)

TOPICS:-

✓ **Genetics**

Q.1 **Number of chromosomes that are same in both human males and females:**
A) 44
B) 22 pairs
C) 45
D) 23 pairs

Q.2 **Sex determining pattern of humans is:**
A) X0 - XX
B) XX - XY
C) XY - XX
D) ZZ - ZW

Q.3 **If a normal 'Y' carrying sperm fertilizes a normal egg; the zygote will be:**
A) 45A+ YY
B) 44A+ XX
C) 44A+ XY
D) 43A+ X0

Q.4 **Chances for birth of a son or daughter in humans are:**
A) 1:1
B) 2:1
C) 3:1
D) 1:2:1

Q.5 **Example of autosomal recessive trait:**
A) Haemophilia A
B) Haemophilia B
C) Blue blindness
D) Hypophosphatemia

Q.6 **Trait which passes directly from father to son:**
A) Colour blindness
B) Ichthyosis
C) Maleness
D) Hemophilia

Q.7 **Which one is mismatched?**
A) Haemophilia C – autosomal
B) Blue opsin - autosome 7
C) tfm – X chromosome
D) Pattern baldness – X linked

Q.8 **Which of the following is incorrectly matched about mitochondrial genetic code?**
A) AUA - Isoleucine
B) AGG – Stop codon
C) UGA - Tryptophan
D) AGA – Stop codon

Q.9 **Partially functional opsins are present in**
A) Protanopia
B) Deutranopia
C) Red green colorblindness
D) Protanomalous

Q.10 **Which one is not related to androgen insensitivity syndrome?**
A) Female genitalia
B) Degenerated testes in abdomen
C) Fertility
D) Female appearance

Q.11 **Cause of hypophosphatemic rickets is:**
A) Vit-D deficiency
B) Calcium deficiency
C) Genetic communication failure
D) Lack of exposure to sun

Q.12 **_____ gene is male sex switch which triggers developmental process towards maleness:**
A) Se
B) SRY
C) tfm
D) H

Q.13 **Sequence of three nucleotides on mRNA that specifies an amino acid is called:**
A) Triplet code
B) Codon
C) Anticodon
D) Gene

Q.14 **In humans, gender of child in progeny is determined by:**
A) Homogametic father
B) Homogametic mother
C) Heterogametic father
D) Heterogametic mother

Q.15 **How many autosomes are present in a human egg:**
A) 45
B) 23
C) 22
D) 46

Q.16 Which one is not true about normal human sperm:
A) Two types
B) Haploid
C) Have one sex chromosome
D) Non-motile

Q.17 Light absorbing non-protein pigment present in human eyes:
A) Opsins
B) Rhodopsin
C) Chlorophyll
D) Carotenes

Q.18 Most prevalent abnormality of blood clotting factor is of:
A) Factor VII
B) Factor VIII
C) Factor IX
D) Factor X

Q.19 Chromosomal combination of a person with tfm syndrome is:
A) XO
B) XY
C) XX
D) XYY

Q.20 XO in Humans is:
A) Sterile male
B) Sterile female
C) Fertile male
D) Fertile female

Q.21 Which is not true about multiple alleles?
A) Formed due to gene mutation
B) Belong to polymorphic gene
C) Number is always two
D) Gamete having just one of them

Q.22 All of the following are true about alleles except:
A) They are always identical
B) They control same trait
C) Present on respective homologue
D) Can be expressed independently

Q.23 A trait being controlled by a gene pair on chromosome 9 is interfered by a gene pair on chromosome 19. This effect is called:
A) Over dominance
B) Mutation
C) Epistasis
D) Complete dominance

Q.24 It acts as universal recipient:
A) AB +ive
B) AB -ive
C) O -ive
D) O +ive

Q.25 If both recessive alleles are present on respective homologous chromosomes, then the individual will be:
A) Heterozygous
B) Heterozygous recessive
C) Homozygous recessive
D) Homozygous dominant

Q.26 Blood group of a person is O while his children having A. All of the following can be the genotype of mother except:
A) Homozygous for gene I^A
B) Heterozygous for gene I^A
C) Homozygous for gene i
D) Heterozygous for gene i

Q.27 In multiple allele system, one gamete possesses:
A) Two alleles
B) One allele
C) Three alleles
D) Many alleles

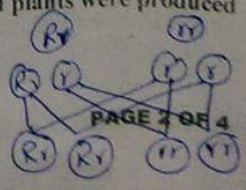
Q.28 Genetic make-up of a trait is called:
A) Phenotype
B) Genotype
C) Genome
D) Gene pool

Q.29 Phenylketonuria and alkaptonuria are disorders caused by:
A) Absence of chromosome
B) Presence of additional chromosome
C) Change in nucleotide sequence in gene
D) Transposition of gene

Q.30 The phenomenon in which one gene controls multiple traits:
A) Polygenic trait
B) Pleiotropy
C) Epistasis
D) Co dominance

Q.31 What will be the percentage of phenotypically round seed progeny if a pea plant heterozygous for round seed is crossed with wrinkled seeded pea plant?
A) 0%
B) 25%
C) 50%
D) 75%

Q.32 In Mendel's monohybrid cross what percentage of round seed plants were produced by F_2 heterozygous round on self-fertilization?
A) 25%
B) 50%
C) 75%
D) 100%



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A) Ecosystem
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C) D
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B) Epistasis
C) Pleiotropy
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A) Leukemia, Albinism
B) Hemophilia, Gout
C) Gout, Sickle cell anemia
D) Color blindness, Hemophilia

Q.48 **All of the following are related to G_1 phase of the cell cycle except:**
A) Extensive metabolic activities
B) DNA base units are accumulated
C) Cells grow in size
D) Energy storage for chromosomal movement

Q.49 **Linked genes can be separated through:**
A) Segregation of alleles
C) Crossing over
B) Independent assortment
D) Mutation

Q.50 **Microtubule sub-units are synthesized during:**
A) G_1 phase
C) G_2 phase
B) S phase
D) G_0 phase

Q.51 **Chemically, the microtubules are composed of:**
A) Tubulin protein and traces of RNA
C) Tubulin and Actin proteins
B) Actin protein and traces of RNA
D) Actin and Myosin protein

Q.52 **Following diagram represents a dividing human cell:**

This cell is in which phase of mitosis?
A) Prophase
C) Anaphase
B) Metaphase
D) Telophase

Q.53 **The incorrect option regarding prophase of mitosis:**
A) Chromatin condensation occurs
C) Nuclear envelop disappears
B) Chromosomes become visible
D) Cytoplasm becomes less viscous

Q.54 **During mitosis in human cell, how many kinetochore fibers can originate from each pole to bind with chromosomes:**
A) 23
C) 92
B) 46
D) 184

Q.55 **During plant cell division, the phragmoplast is formed from vesicles originated from:**
A) Endoplasmic reticulum
C) Golgi complex
B) Cytoskeletal proteins
D) Glyoxysomes

Q.56 **Pairing of homologous chromosomes starts during:**
A) Leptotene
C) Pachytene
B) Zygotene
D) Diplotene

Q.57 **During meiosis, separation of chromatids occurs during:**
A) Metaphase I
C) Anaphase I
B) Metaphase II
D) Anaphase II

Q.58 **Spread of cancer cells to distant areas occurs through:**
A) Invasion
C) Epistasis
B) Proliferation
D) Metastasis

Q.59 **These human beings are phenotypically male but have frequently enlarged breasts, tendency to tallness and small testes with no sperms at ejaculation:**
A) Down's syndrome
C) Turner's syndrome
B) Klinefelter's syndrome
D) Edward's syndrome

Q.60 **It is the result of trisomy of sex chromosomes:**
A) Down's syndrome
C) Turner's syndrome
B) Edward syndrome
D) Jacob's syndrome

KIPS ENTRY TESTS PREPARATION

BIOLOGY MDCAT

UHS TOPIC WISE TEST (UNIT 8-10)

TOPICS:-

- ✓ **Bioenergetics**
- ✓ **Ecosystem**
- ✓ **Biotechnology**
- ✓ **Evolution**
- ✓ **Genetics**

Q.1 **Net yield of water from photosynthesis during formation of glucose is:**

A) 0 C) 6
B) 3 D) 12

Q.2 **Which of the following two parts structurally resemble with each other?**

	Hemoglobin	Chlorophyll
A)	Globin	Phytol
B)	Haeme	Porphyrin
C)	Globin	Porphyrin
D)	Haeme	Phytol

Q.3 **Chlorophyll a maximally absorbs:**

A) Violet C) Orange
B) Blue D) Red

Q.4 **Photosynthetic pigments are organized to form:**

A) Thylakoids C) Photosystem
B) Grana D) Reaction centre

Q.5 **The primary electron acceptor of PS I passes the photoexcited electrons to ETC which transmits them to:**

A) Plastoquinone C) Plastocyanine
B) Cytochrome D) Ferridoxin

Q.6 **Which of the following is not involved in cyclic photophosphorylation?**

A) Primary electron acceptor C) Photosystem I
B) Cytochrome complex D) Photosystem II

Q.7 **All of the following are true about Calvin cycle except:**

A) 3 CO_2 molecules are involved C) 3 G3P molecules are produced
B) 3 RuBP molecules are involved D) 9 ATP molecules are involved

Q.8 **Stage of cellular respiration that occurs in cytosol:**

A) Glycolysis C) Krebs cycle
B) Pyruvic acid oxidation D) Oxidative phosphorylation

Q.9 **How many molecules of NADH are formed when one glucose molecules passes through Krebs cycle?**

A) 3 C) 6
B) 4 D) 8

Q.10 **During oxidative phosphorylation, H^+ are pumped across:**

A) Outer mitochondrial membrane C) Thylakoid membranes
B) Inner mitochondrial membrane D) Inner membrane of chloroplast

Q.11 **Organisms that capture and bring light energy into the ecosystem are called:**

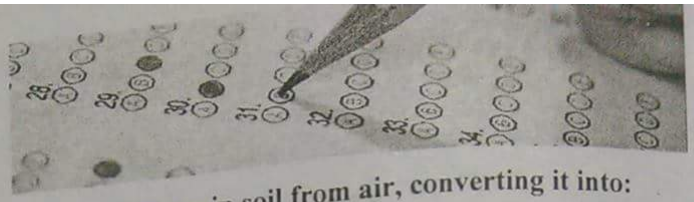
A) Producers C) Decomposers
B) Consumers D) Recyclers

Q.12 **It helps to maintain the stability of ecosystem:**

A) Number of individuals C) Infertility of soil
B) Variety of pathways D) Trophic levels in food chain

Q.13 **These are the pioneers in xerosere succession:**

A) Foliage lichen C) Herbaceous plants
B) Crustose lichen D) Forest trees



Q.14 The bacteria in the root nodules fix nitrogen in soil from air, converting it into:
A) Ammonia
B) Urea
C) Amino acid
D) Uric acid

Q.15 The chief reservoir of nitrogen is:
A) Soil
B) Air
C) Fresh water
D) Marine water

Q.16 All of the following processes are essential for plants to synthesize nitrogenous compounds except:
A) Ammonification
B) Nitrogen fixation
C) Nitrification
D) Denitrification

Q.17 All the energy is lost into ecosystem from:
A) Producers
B) Herbivores
C) Carnivores
D) Decomposers

Q.18 Clearance of vast areas of forests is called:
A) Deforestation
B) Afforestation
C) Reforestation
D) Desertification

Q.19 Ozone layer extends _____ above earth surface:
A) 5-10 km
B) 8-10 km
C) 10-50 km
D) 16-20 km

Q.20 This is due to overloading of Nitrogen and Sulphur cycle:
A) Ozone layer depletion
B) Greenhouse effect
C) Acid Rain
D) Eutrophication

Q.21 Introduction of foreign gene for improving genotype is called:
A) Vernalization
B) Biotechnology
C) Gene sequencing
D) Genetic engineering

Q.22 All of the following are the possible ways to get gene of interest EXCEPT :
A) From Chromosomes
B) Synthesize chemically
C) Reverse transcription
D) Transformation

Q.23 By reverse transcription, _____ is assembled on _____.
A) mRNA ; DNA
B) cDNA ; mRNA
C) DNA ; enzymes
D) DNA ; agar

Q.24 Bacteria protect themselves from viruses by cutting viral DNA upon entry with:
A) Ligases
B) Vector
C) Endonucleases
D) Methylases

Q.25 PCR is related to all EXCEPT:
A) Taq polymerase
B) DNA amplification
C) DNA selective replication
D) Synthesis of protein

Q.26 DNA probe is used in:
A) PCR technique
B) DNA fingerprinting
C) Genetic engineering
D) Electrophoresis

Q.27 In Maxam-Gilbert method DNA threads are chemically cut into:
A) Pieces of single nucleotides
B) Pieces of different size fragments
C) Pieces of oligonucleotides
D) Pieces of polynucleotides

Q.28 Which of the following is used to develop transgenic animals?
A) Sanger's dideoxy method
B) Gene sequencing
C) Particle gun
D) Microinjections

Q.29 Insertion of genetic material into human cells for the treatment of a disorder is called:
A) Reverse transcription
B) Nucleic acid hybridization
C) Gene mutation
D) Gene therapy

Q.30 Tissue culture technique used to produce precursor substances used for preparation of drugs:
A) Callus formation
B) Microinjection
C) Somatic embryo
D) Cell suspension

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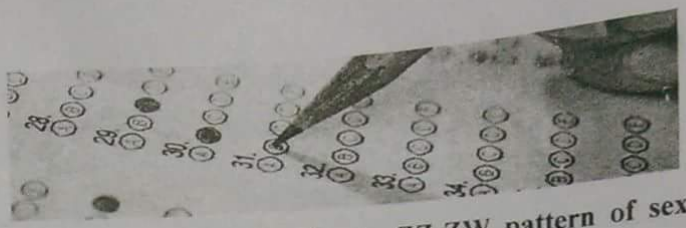

Q.48 The probability of having a male or female offspring in ZZ-ZW pattern of sex determination is:
A) 25%
B) 50%
C) 75%
D) 100%

Q.49 What percentage of round green seeds in F_2 progeny of dihybrid cross were heterozygous for round seed shape?
A) 25%
B) 33%
C) 66%
D) 75%

Q.50 The trait which appeared in F1 monohybird pea plants was named by Mendel as:
A) Dominant
B) Recessive
C) Co-dominant
D) Incompletely dominant

Q.51 Which of the following enzyme is responsible for breaking the hydrogen bonds between the DNA strands during replication:
A) Primase
B) DNA polymerase III
C) Helicase
D) Ligase

Q.52 DNA replication is best explained by which of the following hypotheses:
A) Conservative replication
B) Semi-conservative replication
C) Dispersive replication
D) Semi-dispersive replication

Q.53 Which of the following is the function of sigma factor?
A) Correct initiation of transcription
B) Elongation of mRNA
C) Attachment of tRNA
D) Termination of mRNA synthesis

Q.54 Binding of mRNA with small ribosomal subunit is guided by:
A) Aminoacyl tRNA
B) Start codon
C) Leader sequence
D) Sigma factor

Q.55 The maximum number of identified gene mutations, which can cause cancer, so far are:
A) 3
B) 12
C) 18
D) 20

Q.56 The point of interchange of homologous chromosomes is called as:
A) Chiasmata
B) Synapsis
C) Bivalent
D) Crossing over

Q.57 Total fibers that kinetochores of 46 chromosomes will get from one pole of cell undergoing mitosis?
A) 2
B) 23
C) 46
D) 92

Q.58 Maximum rate of abortion can be observed in:
A) Turner's syndrome
B) Down's syndrome
C) Edward's syndrome
D) Patau's syndrome

Q.59 The sex of all of the following can be female except:
A) Klinefelter's syndrome
B) Turner's syndrome
C) Metafemale syndrome
D) Down's syndrome

Q.60 Autosomal non-disjunction can cause all of the following, EXCEPT:
A) Edward syndrome
B) Patau syndrome
C) Mongolism
D) Jacobs' syndrome