Chapter:8 Cell: The Unit of Life

True and False

Q.No	Question	Answer True/ False	Typology
Q.1	Ribosomes are the membrane bound organelles found only in eukaryotes.	False	Understanding
Q.2	Endomembrane system includes all the cell organelles in a cell.	False	Evaluating and Analysis
Q.3	Multicellular organisms show division of labour.	True	Knowledge based
Q.4	Basal body of flagellum and centrioles are structurally similar.	False	Evaluating and Analysis
Q.5	All the cells have genetic material organized into chromosomes.	False	Understanding
Q.6	Pili and fimbriae are the surface structures of bacteria which provides motility.	False	Understanding
Q.7	The cells that have membrane bound nuclei are called eukaryotic cells.	True	Knowledge based
Q.8	Ribosomes are the membrane bound vesicular structures formed by the process of packaging in golgiappararus.	False	Understanding/ Knowledge based
Q.9	Nucleolus is the site of ribosomal RNA synthesis.	True	Knowledge based
Q.10	The prokaryotic cells are smaller and multiply more rapidly than the eukaryotic cells.	True	Understanding/ Evaluating and Analysis
Q.11	Chromatophores are membranous extensions into the cytoplasm.	True	Knowledge based
Q.12	Functions of mitochondria, endoplasmic reticulum and lysosomes are coordinated.	False	Evaluating and Analysis
Q.13	Nucleolus is a membrane bound structure present in eukaryotes.	False	Knowledge based
Q.14	Plasmids are the small circular DNA present outside the genomic DNA in prokaryotes.	True	Knowledge based

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Multiple Choice Questions

Q.No	Question	Answer	Typology
Q.1	Ribosomes A. in both prokaryotic and eukaryotic cells are 80S type B. of eukaryote is 70 S type and prokaryote is of 80 S type. C. of eukaryote is 80 S type and prokaryote is of 70 S type. D. in eukaryotes consists of sub units similar in size and that of prokaryotes are dissimilar in size.	C	**Evaluating & Analysis**
Q.2	Endoplasmic reticulum and Golgi complex are situated close to each other in a cell because : A. Structurally they show resemblance. B. Functionally they are coordinated. C. Structurally and functionally they are related. D. Both of them are associated with ribosomes.	B	**Application**
Q.3	The size of the nucleolus changes with cellular activity. A larger nucleoli in a cell suggest that A. The cell is actively involved in protein synthesis. B. The cell is actively involved in lipid synthesis. C. The cell is in the division phase. D. The cell is in a resting stage.	A	**Application**
Q.4	Common characteristic feature of plant sieve tube cells and most of mammalian erythrocytes is …. A. Absence of mitochondria B. Presence of cell wall C. Presence of haemoglobin D. Absence of nucleus	D	Knowledge based
Q.5	Features common to both prokaryotes and eukaryotes are A. presence of chromosomes B.presence of plasmid C.presence of Nuclear membrane D.presence of Sub-cellular organelles.	A	**Evaluating & Analysis**
Q.6	Ribosomes are A. membrane bound cell organelles B. part of endo-membrane system C. non-membrane bound cell organelles D. non-cellular structures	C	**Understanding**

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Q.7	In human erythrocytes, the percentages of proteins and lipids respectively are ..... A. 62 per cent protein and 40 per cent lipids. B. 60 per cent protein and 40 per cent lipids. C.52 per cent protein and 40 per cent lipids. D.30 per cent protein and 40 per cent lipids.	C	Knowledge based
Q.8	The type of vacuole which is important for osmoregulation and excretion in *Amoeba* is... A. Food vacuole B. Sap vacuole C. Excretory vacuole D. Contractile vacuole	D	**Understanding**
Q.9	A type of leucoplasts which stores oils and fats are.... A. Aleuroplasts B.Elaioplasts C.Amyloplasts D. Chloroplasts	B	Knowledge based
Q.10	Nucleolus are A. the sites of ribosomal RNA synthesis B.the sites of messenger RNA synthesis C. the sites of transfer RNA synthesis. D.the sites of heteronuclear RNA synthesis	A	**Understanding**
Q.11	A type of chromosome with a very short and very long chromosomal arms is... A. Metacentric B. Acrocentric C. Sub-metacentric D.Telocentric	B	Knowledge based
Q.12	An organelle without membrane covering is... A. Mitochondria B. Golgi apparatus C. Ribosome D. Lysosome	C	Knowledge based
Q.13	Which of the following is common among chloroplasts, chromoplasts and leucoplasts? A. Presence of pigments B. Possession of thylakoids and grana C. Storage of starch, proteins and lipids D. Ability to multiply by a fission-like process.	D	**Evaluating & Analysis**

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Fill in the Blanks

Q.No	Question	Answer	Typology
Q.1	The nucleus and the cytoplasm together make up the _____.	Protoplasm	Knowledge based
Q.2	The plastids that help to prepare food for the plant are _____.	Chloroplasts	Knowledge based
Q.3	If _____ is absent, cell of Amoeba may swell up and burst.	Contractile vacuole	Application
Q.4	Several ribosomes may attach to a single mRNA and form a chain called _____.	Polyribosomes or Polysomes	Knowledge based
Q.5	In human being, the membrane of the erythrocyte has approximately 52 per cent _____ and 40 per cent _____.	Proteins and lipids	Knowledge based
Q.6	Many molecules can move across the membrane with the expense of energy is called _____.	Active transport	Knowledge based
Q.7	The _____ chromosome essentially has middle centromere forming two equal arms of the chromosomes.	Metacentric	Knowledge based
Q.8	Centriole form the basal body of _____ and _____ that facilitateslocomotion in unicellular eukaryotes.	Cilia and Flagella	Knowledge based
Q.9	Lysosomes are single membrane structures containing _____ for digestion of all types of macromolecules.	Enzymes	**Understanding**
Q.10	A single human cell has approximately two meter long thread of _____ distributed among its forty six chromosomes.	DNA	Knowledge based
Q.11	Rough endoplasmic reticulum has _____ on its surface.	Ribosomes	Knowledge based
Q.12	In many cells _____ of formed by engulfing food particles.	Food vacuoles.	**Understanding**
Q.13	Elaioplasts are the type of leucoplasts which store _____ , _____.	Fats and oils	**Understanding**
Q.14	Nucleolus is the site of synthesis of _____ RNA.	Ribosomal	**Understanding**
Q.15	Functionally coordinated organelles of eukaryotic cells constitute _____.	Endo-membrane system	**Understanding**

Q.16	Cilium and flagellum emerge from _____ like structure called basal body.	Centriole	**Understanding**
Q.17	The formation of polysome is possible in prokaryotes because of the lack of _____.	Nuclear membrane	Application

Match the Following

Q.No	Question		Answer		Typology
Q.1	Column A a.Elaioplasts b.Aleuroplasts	Column B i) Store proteins ii) Store strach iii) Store protein and starch iv) Store fats and oils.	Column A a.Elaioplasts b. Aleuroplasts	Column B iv) i)	**Evaluating & Analysis**
Q.2	Column A a.Mesosome b. Lysosome	Column B i) Hydrolytic enzymes ii) Bacteria iii) Protein synthesis iv) Lipid synthesis	Column A a. Mesosome b. Lysosome .	Column B ii) i)	**Evaluating & Analysis**
Q.3	Column A a. Sub-meta centric chromosomes b. Acrocentric chromosomes	Column B i) Both the arms are equal ii) Only one arm present iii) One arm shorter than the other iv) One arm is very short and other arm is very large	Column A a. Sub-meta centric chromosomes b. Acrocentric chromosomes	Column B iii) iv)	**Evaluating & Analysis**
Q.4	Column A a.Chromatophore b.Chromoplasts	Column B i) Mycoplasma ii) Cyanobacteria iii) Plant cell iv) Bacteria	Column A a. Chromatophore b. Chromoplasts .	Column B ii) iii)	**Evaluating & Analysis**

Q.5	Column A a.cristae b.cisternae	Column B i) Disc shaped sacs in Golgi apparatus ii) Infoldings in mitochondria iii) Flat membranes of stroma iv) microbodies	Column A a.cristae b.cisternae .	Column B ii) i)	**Evaluating & Analysis**
Q.6	Column A a. Metacentric chromosomes b. Acrocentric chromosomes	Column B i) has terminal centromere ii) has middle centromere iii) centromere is situated close to its end iv) has centromere slightly away from middle of the chromosome	Column A a. Metacentric chromosomes b. Acrocentric chromosomes	Column B ii) iii)	**Evaluating & Analysis**
Q.7	Column A a.Chromoplasts b.Chroloplasts	Column B i) Photosynthesis ii) Colourless plastids iii) Coloured plastids iv) Store proteins	Column A a.Chromoplasts b. Chroloplasts	Column B iii) i)	**Evaluating & Analysis**
Q.8	Column A a.Cellwall of algae b.Cellwall of fungi	Column B i) Proteins and sugars ii) Cellulose iii) Chitin iv) Proteins and lipids	Column A a. Cellwall of algae b. Cellwall of fungi .	Column B ii) iii)	**Evaluating & Analysis**
Q.9	Column A a. Circular DNA b. Linear DNA	Column B i) Ribosome ii) Chloroplasts iii) Nucleus iv) Lysosome	Column A a. Circular DNA b. Linear DNA	Column B ii) iii)	**Evaluating & Analysis**

Q.10	Column A a.Schleiden and Schwann b. Robert Brown	Column B i) Modified cell theory ii) Proposed cell theory iii) Discovered cell iv) Discovered nucleus	Column A a.Schleiden and Schwann b. Robert Brown	Column B ii) iv)	**Evaluating & Analysis**
Q.11	Column A a. Chloroplast b. Nucleus	Column B i) Linear DNA ii) Circular DNA iii) Circular RNA iv) Double stranded RNA	Column A a. Chloroplast b. Nucleus	Column B ii) i)	**Evaluating & Analysis**
Q.12	Column A a. Red blood cells b. White blood cells	Column B i) round and oval ii) long and narrow iii) amoeboid iv) round and biconcave	Column A a. Red blood cells b. White blood cells	Column B iv) iii)	**Evaluating & Analysis**