Arjuna NEET (2026)

Botany

DPP: 2

Cell - The Unit of Life

Q1 Plant cell differs from animal cell in the:
(A) presence of vacuoles.
(B) presence of cell wall and chloroplast.
(C) absence of cell wall.
(D) absence of chloroplast.

Q2 A student compared onion cell & human cheek cell then cell of onion peel differs from a cell of human cheek in:
(A) The type of outer boundary
(B) Having both $70\ S$ and $80\ S$ ribosomes
(C) Having two non-membrane bound cell organelles
(D) Double membrane bound nucleus

Q3 Plant cells differ from animal cells in having
(A) cell wall
(B) plastids
(C) a large central vacuole
(D) all of these

Q4 Which of the following cell lacks cell wall?
(A) Animal cell (B) Plant cell
(C) Algal cell (D) Bacterial cell

Q5 You are asked to examine a cell using a powerful light microscope. The image you see has a clearly defined nucleus and mitochondria. It also has a large central vacuole and chloroplasts. From what group of organisms did this cell most likely come?
(A) Bacteria (B) Protists
(C) Fungi (D) Plants

Q6 Plant cell differs from animal cell by
(A) Presence of vacuoles
(B) Presence of cell wall and chloroplast
(C) Absence of cell wall
(D) Absence of chloroplast

Q7 Consider the following statements.
(a) Plant cells have centrioles which are absent in almost all animal cells.
(b) Ribosomes are the site of protein synthesis.
(c) The middle lamella is the layer mainly of calcium carbonate which holds the different neighboring cells together.
(d) In animal cells lipid like steroidal hormones are synthesized by smooth endoplasmic reticulum.
Of the above statements
(A) a and b only are correct
(B) a and d only are correct
(C) b and d only are correct
(D) c and d only are correct

Q8 Who mentioned that the presence of a cell wall is a unique character of the plant cell?
(A) Schwann
(B) Virchow
(C) Schleiden
(D) Robert Brown

Answer Key

Q1	(B)	Q5	(D)
Q2	(A)	Q6	(B)
Q3	(D)	Q7	(C)
Q4	(A)	Q8	(A)

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Botany

DPP: 3

Cell - The Unit of Life

Q1 In the question two statements are given as statement-I and statement-II.
Statement-I: Nuclear pores are the passages through which bidirectional movement occurs between nucleus and cytoplasm.
Statement-II: Cell theory explains how new cells were formed from pre-existing cells.
Mark the correct choice as:
(A) Both Statement-I and Statement-II are correct
(B) Both Statement-I and Statement-II are incorrect
(C) Statement-I is correct and Statement-II is incorrect
(D) Statement-I is incorrect and Statement-II is correct

Q2 New cells are formed from pre-existing cells, this generalisation is given by:
(A) Robert brown.
(B) Schleiden and Schwann.
(C) Anton Von Leeuwenhoek.
(D) Rudolf Virchow.

Q3 What is the meaning of *Omnis cellula-e cellula*?
(A) All cells have a nucleus
(B) Cell is the basic unit of life
(C) Living things are composed of cells
(D) All cells arise from pre-existing cells

Q4 Cell theory as understood today describes that:
(A) All living organisms are composed of cells and products of cells
(B) All cells arise from pre-existing cells
(C) Plants and animals possess exactly same type of cellular components
(D) Both (A) and (B)

Q5 Select the statements which are related to Schwann.
(i) He reported that cells have a thin outer layer which is today known as plasma membrane.
(ii) Cell wall is a unique character of the plant cell.
(iii) Body of plants and animals are composed of cells and products of cells.
(A) Only (i)
(B) Only (iii)
(C) (i) and (iii)
(D) All of the above

Q6 Who stated that new cells develop from pre-existing cells:
(A) Remak
(B) Virchow
(C) Prevost and Dumas
(D) Strasburger

Q7 Cell theory states that -
(A) All cells have nucleus
(B) Cell are the functional and structural units of plants and animals
(C) All cells are living
(D) Cells reproduce by mitosis and meiosis

Q8 The concept of *"Omnis cellula-e cellula"* regarding cell division was first proposed by:
(A) Rudolf Virchow.
(B) Theodore Schwann.
(C) Matthias Schleiden.
(D) Aristotle.

Q9 The cells discovered in thin sections of cork by Robert Hooke were actually
(A) Cell wall (B) Cellulose
(C) Protoplasm (D) Nuclei

Answer Key

Q1	(A)
Q2	(D)
Q3	(D)
Q4	(D)
Q5	(D)
Q6	(B)
Q7	(B)
Q8	(A)
Q9	(A)

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Botany

DPP: 4

Cell - The Unit of Life

Q1 Read the following statements
P. The eukaryotic cells have a membrane-bound nucleus
Q. All living organisms are composed of cells and products of cells
R. All cells arise from pre-existing cells
S. Prokaryotic cells are represented by bacteria, blue-green algae
Which of the above statements are considered to be part of cell theory after Virchow's contribution?
(A) P and Q only (B) Q and R only
(C) Q and S only (D) P, Q, R and S

Q2 Contribution of Rudolf Virchow is proposition of
(A) *Omnis cellula-e-cellula*, (all cells arise from pre-existing cells).
(B) How new eukaryotic cell arise
(C) *Contagium vivum fluidum*
(D) How virus divide

Q3 Schwann proposed about plant cell was
(A) cell wall is a unique character of the plant cells.
(B) all life activities of the organisms are present in miniature form in each and every cell of its body
(C) bodies of animals and plants are made up of cells
(D) a new cell always develops by the division of pre-existing cells

Q4 Match column-I (scientists) with column-II (discovery) and select the correct option.

	Column-I		Column-II
A.	Leeuwenhoek	I.	First saw and described a living cell.
B.	Robert Brown	II.	Presence of cell wall is unique to plant cells.
C.	Schleiden	III.	Discovered the nucleus.
D.	Schwann	IV.	All plants are composed of different kind of cells.

(A) A-I; B-III; C-IV; D-II
(B) A-I, B-II, C-III, D-IV
(C) A-III, B-I , C-IV, D-II
(D) A-I, B-IV, C-II, D-III

Q5 The following is generally used for creating density gradient during centrifugation.
(A) $NaCl$
(B) KCl
(C) $CsCl$
(D) $MgCl_2$

Q6 A few major discoveries in cell biology are listed:
I. Schleiden and Schwann proposed the cell theory.
II. Leeuwenhoek discovered bacteria.
III. Golgi stained cells with silver nitrate, discovered golgi apparatus.
IV. First transmission electron microscope was developed.
The correct chronological order of these events starting with the earliest event is
(A) I, II, III, IV
(B) II, III, I, IV
(C) II, I, III, IV
(D) II, I, IV, III.

Q7 Match the following columns.

Column I	Column II
A. Leeuwenhoek	1. Described a living cell
B. Robert Hooke	2. Term protoplasm
C. Purkinje	3. Discovered cell membrane
D. Robert Brown	4. Wrote *'Micrographia'*
E. Schwann	5. Discovered the nucleus

Codes

	A	B	C	D	E
(a)	1	4	2	5	3
(b)	3	2	5	4	1
(c)	4	1	5	3	2
(d)	5	3	1	4	2

(A) a (B) b
(C) c (D) d

Q8 *Acetabularia* used in Hammerling's nucleocytoplasmic experiments is:
(A) unicellular fungus
(B) multicellular fungus
(C) unicellular uninucleate green-alga
(D) unicellular multinucleate green-alga

Q9 Name of Schleiden and Schwann are associated with
(A) protoplasm as the physical basis of life
(B) cell theory
(C) theory of cell lineage
(D) nucleus functions as control centre of cell

Q10 Fill in the blank:
The term 'cell membrane' was given by .....though it was discovered by Schwann (1838).
(A) Nageli and Cramer
(B) Robert Brown
(C) Schwann and Schleiden
(D) Rudolf Virchow and Robert Brown

Answer Key

Q1	(B)
Q2	(A)
Q3	(A)
Q4	(A)
Q5	(C)
Q6	(C)
Q7	(A)
Q8	(C)
Q9	(B)
Q10	(A)

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Botany

Cell - The Unit of Life DPP 05

Q1 The latest model of cell membrane is the:
(A) Unit membrane model
(B) Fluid mosaic model
(C) Danielli and Davson's model
(D) Robertson's model

Q2 *'Omnis cellula-e cellula'* i.e., new cells arise from pre-existing cells; this statement is given by:
(A) Schleiden and Schwann.
(B) Rudolf Virchow.
(C) Robert Brown.
(D) George Palade.

Q3 Which one is an exception to cell theory?
(A) Virus (B) Mycoplasma
(C) Algae (D) All the above

Q4 According to cell theory
(A) Cells have nuclei
(B) Cells are living
(C) Cells reproduce
(D) Cells are structural unit of organisms

Q5 'Life cannot be formed if its constituent parts are not formed of cells.' This was observed by
(A) Robert Hooke
(B) Louis Pasteur and Lamarck
(C) Lamarck
(D) Matthias Schleiden

Q6 *Acetabularia* used in Hammerling's nucleocytoplasmic experiments is:
(A) unicellular fungus
(B) multicellular fungus
(C) unicellular uninucleate green-alga
(D) unicellular multinucleate green-alga

Q7 Consider the following statements regarding the fundamental features of cell theory.
I. All cells share similar chemistry and physiology.
II. Activities of an organism are the sum total of activities and interactions of its constituent cells.
Choose the correct option :-
(A) Statement I is correct, but II is incorrect
(B) Statement I is incorrect, but II is correct
(C) Both statements I and II are correct
(D) Both statements I and II are incorrect

Q8 The cells discovered in thin sections of cork by Robert Hooke were actually
(A) Cell wall (B) Cellulose
(C) Protoplasm (D) Nuclei

Answer Key

Q1	(B)	Q5	(C)
Q2	(B)	Q6	(C)
Q3	(A)	Q7	(C)
Q4	(D)	Q8	(A)

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Botany

Cell - The Unit of Life

DPP 06

Q1 Living beings are made up of cells. This statement belongs to
(A) Lamarck
(B) Von Helmont
(C) Hugo de Vries
(D) Schleiden and Schwann

Q2 An exception to cell theory is
(A) Angiosperms (B) Bryophytes
(C) Insects (D) Virus

Q3 Theodore Schwann named the outer layer of the cell which is today known as
(A) Tonoplast
(B) Cell membrane
(C) Basement membrane
(D) Biological membrane

Q4 The concept of "*Omnis cellula-e cellula*" regarding cell division was first proposed by:
(A) Rudolf Virchow
(B) Theodor Schwann
(C) Schleiden
(D) Aristotle

Q5 Who proposed the theory that cells arise only from the preexisting cells?
(A) Mohl (B) Virchow
(C) Haeckel (D) Brown

Q6 Names of Schleiden and Schwann are associated with
(A) protoplasm as the physical basis of life
(B) cell theory
(C) theory of cell lineage
(D) nucleus functions as control centre of cell.

Q7 Which of the following is also known as cell drinking?
(A) Phagocytosis (B) Pinocytosis
(C) Exocytosis (D) Ephagy

Answer Key

Q1	(D)
Q2	(D)
Q3	(B)
Q4	(A)
Q5	(B)
Q6	(B)
Q7	(B)

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Botany

Cell - The Unit of Life

DPP 09

Q1 The membrane of the RER are continuous with the membrane of;
(A) Nucleus.
(B) Golgi body.
(C) Membrane of mitochondria.
(D) Membrane of plastid.

Q2 A cell, which is very active in the synthesis and secretion of proteins, would be expected to have
(A) Equal amount of RER and SER
(B) More SER than RER
(C) More RER than SER
(D) More GB and no RER

Q3 Endoplasmic reticulum is called RER when it has on its surface
(A) Elementary particles
(B) Ribosomes
(C) Oxysome
(D) Quantasomes

Q4 Which face of Golgi body receives material for packaging?
(A) Cis face
(B) Trans face
(C) Forming face
(D) Both (A) and (C)

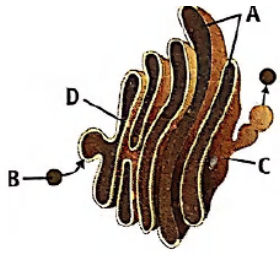
Q5 When was Golgi body discovered?
(A) 1998 (B) 1898
(C) 1975 (D) 1972

Q6 Acidic pH in lysosome is maintained by
(A) Pumping of protons from lysosome to cytosol
(B) Pumping of protons from cytosol to lysosome
(C) Facilitated diffusion of protons from cytosol to lysosome
(D) Facilitated diffusion of protons from lysosome to cytosol

Q7 **P** and **Q** are the major sites for the synthesis of _____ respectively.

(A) proteins and lipids
(B) lipids and proteins
(C) carbohydrates and lipids
(D) vitamins and proteins

Q8 Select the option with correct labelling of given structure



(A) A-Cisternae, B-Vesicle ,C-Trans-face, D-Cis-face
(B) A-Cisternae, B-Vesicle ,C-Cis-face, D-Trans-face

(C) A-Vesicle, B-Cisternae,C-Cis-face, D-Trans-face

(D) A-Tubules, B-Vesicle ,C-Trans-face, D-Cis- face

Q9 Match **List-I** with **List-II.**

List-I		List-II	
(A)	Rough endoplasmic reticulum	(I)	Hydrolytic enzymes
(B)	Ribosome	(II)	Composed of Ribonucleic acid (RNA) and protiens
(C)	Golgi complex	(III)	Protein synthesis and secretion
(D)	Lysosomes	(IV)	Packaging of material

Choose the **correct** answer from the options given below.

(A) A-III, B-II, C-IV, D-I

(B) A-II, B-III, C-IV, D-I

(C) A-I, B-III, C-II, D-IV

(D) A-IV, B-II, C-III, D-I

Q10 Which of the following is the correct sequence/route of the secretory product?

(A) ER $\rightarrow$ Vesicles $\rightarrow$ Cis region of GB $\rightarrow$ Trans region of GB $\rightarrow$ Vesicles $\rightarrow$ Plasma membrane

(B) ER $\rightarrow$ GB $\rightarrow$ Lysosome $\rightarrow$ Nuclear membrane $\rightarrow$ Plasma membrane

(C) ER $\rightarrow$ Vesicles $\rightarrow$ Trans region of GB $\rightarrow$ Cis region of GB $\rightarrow$ Vesicles $\rightarrow$ Plasma membrane

(D) Lysosome $\rightarrow$ ER $\rightarrow$ GB $\rightarrow$ Vesicles $\rightarrow$ Cell membrane

Answer Key

Q1	(A)	Q6	(B)
Q2	(C)	Q7	(B)
Q3	(B)	Q8	(A)
Q4	(D)	Q9	(A)
Q5	(B)	Q10	(A)

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Botany

Cell - The Unit of Life

DPP 10

Q1 Assertion: Certain bacteria possess plasmid.
Reason: Certain bacteria possess resistance to antibiotics.
(A) Both the assertion and the reason are true, and the reason is a correct explanation of the assertion.
(B) Both the assertion and reason are true, but the reason is not a correct explanation of the assertion.
(C) Assertion is true, but the reason is false.
(D) Both the assertion and reason are false.

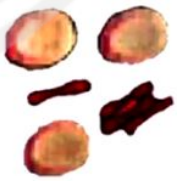
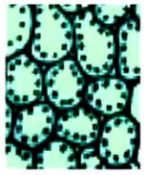
Q2 .....are self replicating, extra chromosomal segments of double stranded circular and naked DNA present in the bacterial cell.
(A) Plasmids (B) Nucleoid
(C) Mesosomes (D) Bacteriophages

Q3 Assertion: Mesosome in bacteria help in respiration
Reason: Mesosome contain respiratory enzyme
(A) If both the assertion and the reason are true and the reason is the correct explanation of the assertion.
(B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion.
(C) If the assertion is true but the reason is false.
(D) If both the assertion and reason are false.

Q4 The fluid mosaic model explains
(A) membrane functions like cell growth
(B) membrane functions like formation of intercellular junctions
(C) membrane functions like secretion
(D) All of the above

Q5 What is a genophore?
(A) DNA in prokaryoues
(B) DNA and RNA in prokaryotes
(C) DNA and protein in prokayotes
(D) RNA in prokaryotes

Q6 Correctly arrange the sequence of Gram staining in bacteria.
1. Treated with alcohol.
II. Excess stain washed with water.
III. Stain with crystal violet dye.
IV. 0.5% iodine added.
V. Observe under microscopic field for violet/colourless bacteria.
(A) $\mathrm{II} \rightarrow \mathrm{III} \rightarrow \mathrm{IV} \rightarrow \mathrm{I} \rightarrow \mathrm{V}$
(B) $\mathrm{III} \rightarrow \mathrm{I} \rightarrow \mathrm{II} \rightarrow \mathrm{V} \rightarrow \mathrm{IV}$
(C) $\mathrm{I} \rightarrow \mathrm{II} \rightarrow \mathrm{III} \rightarrow \mathrm{IV} \rightarrow \mathrm{V}$
(D) $\mathrm{III} \rightarrow \mathrm{IV} \rightarrow \mathrm{I} \rightarrow \mathrm{II} \rightarrow \mathrm{V}$

Q7 Piyush observed a slide of white blood cells under microscope. His teacher asked him to draw the diagram. Select the diagram which should be drawn by Piyush.
(A) 
(B) 
(C) 
(D)

Q8 Which of the following is incorrect?

(A) *Mycoplasma* is the smallest cell (0.3μ)

(B) Bacteria are 3 to $5\mu\text{m}$ in size.

(C) The largest cell is the egg of an ostrich.

(D) Nerve cells are some of the smallest cells.

Answer Key

Q1	(B)
Q2	(A)
Q3	(A)
Q4	(D)
Q5	(B)
Q6	(D)
Q7	(B)
Q8	(D)

Arjuna NEET 2026

Botany

DPP: 11

Cell - The Unit of Life

Q1 .....are self replicating, extra chromosomal segments of double stranded circular and naked DNA present in the bacterial cell.
(A) Plasmids (B) Nucleoid
(C) Mesosomes (D) Bacteriophages

Q2 Assertion: Mesosome in bacteria help in respiration
Reason: Mesosome contain respiratory enzyme
(A) If both the assertion and the reason are true and the reason is the correct explanation of the assertion.
(B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion.
(C) If the assertion is true but the reason is false.
(D) If both the assertion and reason are false.

Q3 Assertion: Plasmids are found in certain bacterial cells.
Reason: Some bacteria exhibit resistance to antibiotics.
(A) Both the assertion and the reason are true, and the reason is a correct explanation of the assertion.
(B) Both the assertion and reason are true, but the reason is not a correct explanation of the assertion.
(C) Assertion is true, but the reason is false.
(D) Both the assertion and reason are false.

Q4 What is true about genetic material of a prokaryotic cell?
(A) lacks histones
(B) Not enveloped by nuclear membrane
(C) Composed of a single circular DNA molecule
(D) All of these

Q5 Which of the following is **not** feature of plasmid?
(A) Confers certain unique phenotypic characters to bacteria
(B) Circular DNA
(C) Found outside the genomic DNA
(D) Small linear DNA

Q6 Select the **incorrect** statement for inclusion bodies.
(A) Store reserve food material
(B) Not bound by any membrane system
(C) They lie freely in cytoplasm
(D) Found in eukaryotes only

Q7 What is true about the genetic material of a prokaryotic cell?
(A) Lacks histones
(B) Not enveloped by a nuclear membrane
(C) Composed of a single circular DNA molecule
(D) All of these

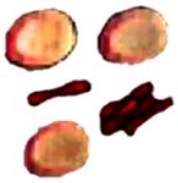
Q8 A prokaryotic cell does not have:
(A) ribosomes.
(B) microtubules in flagella.
(C) circular genomic DNA.
(D) inclusion bodies.

Q9 Choose the **incorrectly** matched pair.
(A) Cytoskeleton - Maintain the shape of cell
(B) Rough Endoplasmic Reticulum (RER) - Involved in protein synthesis and secretion
(C) 70S - Found in prokaryotic cell only
(D) Contractile vacuole - Helps in excretion

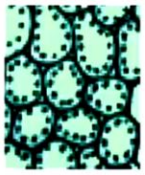
Q10 A capsule in bacteria is related to:
(A) glycocalyx.
(B) cell wall.
(C) plasma membrane.
(D) genetic material.

Q11 Gas vacuole is present in
P. Blue green algae
Q. Purple photosynthetic bacteria
R. Green photosynthetic bacteria
(A) P only (B) Q only
(C) R only (D) All P, Q and R

Q12 Piyush observed a slide of white blood cells under microscope. His teacher asked him to draw the diagram. Select the diagram which should be drawn by Piyush.

(A) 

(B) 

(C) 

(D) 

Q13 Which of the following is incorrect?
(A) *Mycoplasma* is the smallest cell (0.3μ)
(B) Bacteria are 3 to $5\mu\text{m}$ in size.
(C) The largest cell is the egg of an ostrich.
(D) Nerve cells are some of the smallest cells.

Answer Key

Q1	(A)
Q2	(A)
Q3	(B)
Q4	(D)
Q5	(D)
Q6	(D)
Q7	(D)
Q8	(B)
Q9	(C)
Q10	(A)
Q11	(D)
Q12	(B)
Q13	(D)

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Cell - The Unit of Life

DPP: 12

Q1 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: Anything less than a complete structure of a cell can ensure independent living.

Reason R: Unicellular organisms are capable of independent existence and performing essential functions of life.

In the light of the above statements, choose the **correct** answer from the options given below:

(A) A is true but R is false.

(B) A is false but R is true.

(C) Both A and R are true and R is the correct explanation of A.

(D) Both A and R are true but R is Not the correct explanation of A.

Q2 What is the size of the smallest cells in micrometer?

(A) 0.3 (B) 0.4

(C) 1.0 (D) 3.0

Q3 The main difference between prokaryotic and eukaryotic cell is that in the prokaryotic cell there is no:

I. nucleus with a nuclear membrane.

II. mitochondria and chloroplasts.

III. cell wall.

IV. genetic material.

(A) Only I (B) Only II

(C) I and II (D) I and III

Q4 A student coming out cell fractionation of a tissue and forgot to label his tubes. The contents of one tube when studied showed organelles bounded by membrane with activity of catalase enzyme. These organelles could be:

(A) SER (B) Chloroplast

(C) Lysosome (D) Peroxisome

Q5 Read the following statements:

I. Peroxisome is the important site of formation of glycoproteins and glycolipids.

II. Enzymes of lysosomes are optimally active at acidic pH.

III. Plant vacuole is bound by a single membrane called leucoplast.

IV. Endoplasmic reticulum is involved in protein and fat synthesis.

How many is/are **correct**?

(A) Four (B) One

(C) Three (D) Two

Q6 Match **List-I** with **List-II** to find out the **correct.**

List-I		**List-II**	
(A)	Cell envelope	(I)	Three layered structure
(B)	Plasma membrane	(II)	Semi-permeable in nature
(C)	Mesosome	(III)	Present both in prokaryotic and eukaryotic cells
(D)	Ribosomes	(IV)	Infolding of cell membrane

(A) A - I, B-II, C-IV, D-III

(B) A - IV, B-III, C - I, D-II

(C) A-II, B-I, C-III, D-IV

(D) A - II, B-III, C-IV, D-I

Q7 Which of the following is **incorrect**?

(A) Plant cells have centrioles.

(B) Plant cells have well-defined cell walls.

(C) In prokaryotes, there are no membrane-bound organelles.

(D) No cells are formed de novo from abiotic materials.

Q8

Statement I: The interphase nucleus has a loose and indistinct network of nucleoprotein fibres called chromatin.
Statement II: Chromatin contains DNA and some basic proteins called histones, some non-histone proteins and also RNA.
(A) Statement I and Statement II both are correct.
(B) Statement I is correct but Statement II is incorrect.
(C) Statement I is incorrect but Statement II is correct.
(D) Statement I and Statement II both are incorrect.

Answer Key

Q1	(B)	Q5	(D)
Q2	(A)	Q6	(A)
Q3	(C)	Q7	(A)
Q4	(D)	Q8	(A)

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DPP: 13

Cell - The Unit of Lif

Q1 Nucleus was discovered by
(A) Robert Hooke (B) Robert Brown
(C) Schleiden (D) Virchow

Q2 A true nucleus is absent in
(A) Blue-green algae
(B) Dinoflagellates
(C) Mature human RBCs
(D) Both (A) and (C)

Q3 The nucleus is separated from surrounding cytoplasm by a nuclear membrane, which is:
(A) Single-layered with pores
(B) Single-layered without pores
(C) Double-layered without pores
(D) Double-layered with pores

Q4 Both the nuclear membranes are separated by_____in perinuclear space
(A) 10 to 50 $\mathring{A}$
(B) 1 to 5 $\mathring{A}$
(C) 10 to 50 nm
(D) 1 to 5 nm

Q5 Chromatin consists of
(A) DNA only
(B) DNA + Histones
(C) DNA + RNA + histones + Non-histones
(D) Ribonucleoproteins only

Q6 The shorter and longer arms of a submetacentric chromosome are referred to as
(A) s-arm and l-arm respectively
(B) p-arm and q-arm respectively
(C) q-arm and p-arm respectively
(D) m-arm and n-arm respectively

Q7 Microbodies differ from lysosomes in that
(A) Microbodies are surrounded by a single unit membrane while lysosome membrane is double
(B) Microbodies are surrounded by double membrane while lysosomes membrane is single unit
(C) Microbodies contain lytic enzymes while lysosomes do not
(D) Lysosome contain lytic enzymes while microbodies do not

Q8 Which of the following is not true with reference to microbodies?
(A) Present in both plant and animal cells
(B) Non membranous structure
(C) Membrane bounded minute vesicles
(D) Contain various enzymes

Q9 Inside the cell, $\mathrm{H_2O_2}$ clearance is brought about by_____
(A) Peroxisome with enzyme amino oxidase
(B) Glyoxysome with the enzyme catalase
(C) Peroxisome with the enzyme catalase
(D) Glyoxysome with enzyme isocitrate lyase

Q10 Part of chromosome after secondary constriction is called:
(A) Chromomere
(B) Telomere
(C) Satellite
(D) Primary constriction

Q11 In which type of chromosome, the centromere is situated at the middle point of chromosome?
(A) Metacentric
(B) Isobrachial
(C) Heterobrachial
(D) More than one is true

Answer Key

Q1	(B)
Q2	(D)
Q3	(D)
Q4	(C)
Q5	(C)
Q6	(B)
Q7	(D)
Q8	(B)
Q9	(C)
Q10	(C)
Q11	(D)

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Botany

Cell - The Unit of Life

DPP 07

Q1 An exception to cell theory is
(A) Angiosperms (B) Bryophytes
(C) Insects (D) Virus

Q2 Who proposed the theory that cells arise only from the preexisting cells?
(A) Mohl (B) Virchow
(C) Haeckel (D) Brown

Q3 If you remove the cell wall from a plant cell and place it into a drop of water
(A) the cell divide mitotically
(B) the cell would shrink
(C) the cell would burst
(D) nothing would happen

Q4 Phagocytosis :
(A) is carried by cells of the adaptive immune system
(B) is restricted to macrophages
(C) is important in bacterial infections
(D) is a process that does not involve energy

Q5 Which of the following is also known as cell drinking?
(A) Phagocytosis (B) Pinocytosis
(C) Exocytosis (D) Ephagy

Q6 A cell organelle 'X' is divided into two types on the basis of a cell organelle 'Y', that helps in the protein synthesis. Identify 'X' and 'Y' respectively.
(A) Golgi complex and ribosome
(B) SER and mitochondria
(C) ER and ribosome
(D) Lysosome and ER

Q7 Where in a eukaryotic cell can DNA be found?
(A) Nucleus
(B) Mitochondrion
(C) Chloroplast
(D) All of these

Q8 The lipids have their polar heads facing.....in plasma membrane.
(A) outer side
(B) inner side
(C) in the middle
(D) stable facing nowhere

Q9 Stacks of membranous flattened discs in chloroplasts are termed as:
(A) Cisternae
(B) Thylakoids
(C) Grana
(D) Cristae

Q10 Select one which is not true for ribosome
(A) Made up of two sub-units
(B) Form polysome
(C) May attach to mRNA
(D) Have no role in protein synthesis

Q11 Which structures are responsible for synthesis of lipid like- steroidal hormones in animal cells?
(A) Smooth ER
(B) Smooth and rough ER
(C) Sphaerosomes
(D) Golgi bodies

Answer Key

Q1	(D)
Q2	(B)
Q3	(C)
Q4	(C)
Q5	(B)
Q6	(C)
Q7	(D)
Q8	(A)
Q9	(C)
Q10	(D)
Q11	(A)

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Cell - The Unit of Life

DPP 08

Q1 Read the Assertion and Reason carefully to mark the correct option out of the options given below:
Assertion (A): The transport occurs in membrane through the carrier proteins.
Reason (R): The transport carried by carrier proteins is always passive.
(A) Both the Assertion (A) and the Reason (R) are true and the Reason (R) is a correct explanation of the Assertion (A).
(B) Both the Assertion (A) and Reason (R) are true but the Reason (R) is not a correct explanation of the Assertion (A).
(C) Assertion (A) is true but the Reason (R) is false.
(D) Assertion (A) is false but Reason (R)) is true.

Q2 Fill in the blanks
I. Centrioles are___A__structures that lie __B__ to each other.
II. Centrioles have an organisation like __C__ .
III. Centrioles are made up of nine evenly spaced peripheral fibrils of __D__ protein.
IV. Each peripheral fibril of centriole is __E__.
V. Central part of the proximal region of the centriole is called __F__ which is proteinaceous.
(A) A-spherical, B-parallel, C-cartwheel, D-flagellin, E-doublet, F-bridge.
(B) A-cylindrical, B-perpendicular, C-cartwheel, D-tubulin, E-triplet, F-hub.
(C) A-cylindrical, B-perpendicular, C-cartwheel, D-tubulin, E-doublet, F-hub.
(D) A-spherical, B-perpendicular, C-cartwheel, D-tubulin,E-triplet, F-hub.

Q3 Extra chromosomal DNA occurs in:
(A) Mitochondria
(B) Ribosomes
(C) Nucleus
(D) Chromosomes

Q4 Which is a part of endomembrane system of eukaryotic cells?
(A) Mitochondria
(B) Peroxisomes
(C) Chloroplasts
(D) Golgi bodies

Q5 Incorrect statement is:
(A) The shape of the cell may vary with the function they perform.
(B) The plasma membrane is the main arena of cellular activities in both plant and animal cells.
(C) Ribosomes are non-membrane bound organelles found in all cells.
(D) Animal cells contain cylindrical structure called centriole which helps in cell division.

Q6 Assertion (A): Nucleolus is a site for active ribosomal RNA synthesis.
Reason (R): Larger and more numerous nucleoli are present in cells actively carrying out lipid synthesis.
(A) both Assertion (A) and Reason (R) are True and the Reason (R) is a correct explanation of the Assertion (A).
(B) both Assertion (A) and Reason (R) are True but Reason (R) is not a correct explanation of the Assertion (A).
(C) Assertion (A) is True but the Reason (R) is False.
(D) Assertion (A) is False but the Reason (R) is True.

Q7 The biosynthesis of ribosomal RNA occurs in:
(A) Golgi apparatus

(B) Microbodies
(C) Nucleolus
(D) Ribosomes

Answer Key

Q1	(C)
Q2	(B)
Q3	(A)
Q4	(D)
Q5	(B)
Q6	(C)
Q7	(C)