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NEET CELL: THE UNIT OF LIFE — PYQS

Max. Marks: 520 **Questions:** 130

Section A (MCQ) — 130 questions

Q.1 Which one of the following is the site for active ribosomal RNA synthesis ? [NEET (UG) 2026]

(1) Nucleolus (2) Kinetochore
(3) Centrosome (4) Chromatin

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Q.2 Non-membrane bound cell organelles found in both prokaryotic and eukaryotic cells are _____. [NEET (UG) 2026]

(1) Lysosomes (2) Centrosomes
(3) Mitochondria (4) Ribosomes

Scan or tap for the full solution

Q.3 Select the correct statements regarding cell membrane in eukaryotic cell.
Choose the correct answer from the options given below:

A. Membrane of human RBCs has approximately 52% protein.
B. Major phospholipids are arranged in a bilayer.
C. Extensions of the plasma membrane into the cell form mesosomes.
D. Tails towards the inner part of lipids are hydrophobic and thus protected from aqueous medium.
E. Glycocalyx is present on the outer surface of the plasma membrane. [NEET (UG) 2026]

(1) C, D and E only (2) B, C and E only
(3) A, B and D only (4) A, C and E only

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Q.4 Choose the correct statements regarding cell organelles and their inclusions.
Choose the correct answer from the options given below:

A. The endomembrane system includes Golgi complex, endoplasmic reticulum and mitochondria.
B. Rough endoplasmic reticulum bears ribosomes on its surface.
C. Both mitochondria and plastids have circular DNA.
D. A network of microtubules, microfilaments and intermediate filaments present in the cytoplasm is called cytoskeleton.
E. Mitochondrion is a single membrane-bound structure. [NEET (UG) 2026]

(1) A, B and C only (2) C, D and E only
(3) A and B only (4) B, C and D only

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Q.5 Mitochondrial inner membrane encloses _____ . [RE-NEET (UG) 2026]

(1) aqueous humor (2) matrix
(3) cytosol (4) mucus

Solution

Q.6 Cell theory was formulated by _____. [RE-NEET (UG) 2026]

(1) Antonie Von Leeuwenhoek
(2) Schleiden and Schwann
(3) Robert Brown
(4) Singer and Nicolson

Solution

Q.7 The plastid that stores xanthophyll is known as _____. [RE-NEET (UG) 2026]

(1) amyloplast (2) chloroplast
(3) chromoplast (4) aleuroplast

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Q.8 Smooth endoplasmic reticulum _____ . [RE-NEET (UG) 2026]

(1) is a site for the synthesis of carbohydrates
(2) has ribosomes attached to its surface
(3) is the major site for the synthesis of lipids
(4) is actively involved in protein synthesis

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Q.9 Which of the following are characteristics of prokaryotic cells?

A. Ribosomes are made of 50S and 30S subunits
B. They can have plasmids
C. They contain mesosome
D. They have peroxisomes [RE-NEET (UG) 2026]

(1) (A), (B) and (C) only
(2) (B) and (C) only
(3) (A) and (C) only
(4) (A), (C) and (D) only

Solution

Q.10 Match **List-I** with **List-II**. [RE-NEET (UG) 2026]

List-I		List-II	
A.	Cristae	I.	Flat membrane sacs in stroma of chloroplast
B.	Cisternae	II.	Infoldings in mitochondria
C.	Thylakoids	III.	Cell membrane
D.	Phospholipid	IV.	Disc shaped sacs in the Golgi apparatus

(1) A-IV, B-III, C-I, D-II
(2) A-III, B-IV, C-I, D-II
(3) A-II, B-IV, C-I, D-III
(4) A-II, B-IV, C-III, D-I

Solution

Q.11 Endomembrane system includes _____. [RE-NEET (UG) 2026]

(1) Golgi complex, chloroplast, peroxisomes and vacuole
(2) endoplasmic reticulum, Golgi complex, lysosomes and vacuole
(3) endoplasmic reticulum, chloroplast, peroxisomes and vacuole
(4) mitochondria, chloroplast, peroxisomes and vacuole

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Q.12 Given below are two statements : one is labelled as **Assertion (A)**, and the other is labelled as **Reason (R)**.

Assertion (A): The primary function of the Golgi apparatus is to package the materials made by the endoplasmic reticulum and deliver them to intracellular targets and outside the cell.

Reason (R): Vesicles containing materials made by the endoplasmic reticulum fuse with the cis face of the Golgi apparatus, and they are modified and released from the trans face of the Golgi apparatus.

In the light of the above statements, choose the correct answer from the options given below : [NEET (UG) 2025]

(1) A is true but R is false
(2) A is false but R is true
(3) Both A and R are true and R is the correct explanation of A
(4) Both A and R are true but R is not the correct explanation of A

Scan or tap for the full solution

Q.13 From the statements given below choose the correct option :

A. The eukaryotic ribosomes are 80S and prokaryotic ribosomes are 70S.
B. Each ribosome has two sub-units.
C. The two sub-units of 80 S ribosome are 60 S and 40 S while that of 70 S are 50 S and 30 S.
D. The two sub-units of 80 S ribosome are 60 S and 20 S and that of 70 S are 50 S and 20 S.
E. The two sub-units of 80 S are 60 S and 30 S and that of 70 S are 50 S and 30 S.

[NEET (UG) 2025]

(1) A, B, E are true
(2) B, D, E are true
(3) A, B, C are true
(4) A, B, D are true

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Q.14 A specialised membranous structure in a prokaryotic cell which helps in cell wall formation, DNA replication and respiration is [NEET (UG) 2025]

(1) Cristae
(2) Endoplasmic Reticulum
(3) Mesosome
(4) Chromatophores

Solution

Q.15 Match **List-I** with **List-II**.

List - I		List - II	
A.	Centromere	I.	Mitochondrion
B.	Cilium	II.	Cell division
C.	Cristae	III.	Cell movement
D.	Cell membrane	IV.	Phospholipid Bilayer

Choose the correct answer from the options given below : [NEET (UG) 2025]

(1) A-IV, B-II, C-III, D-I
(2) A-II, B-III, C-I, D-IV
(3) A-I, B-II, C-III, D-IV
(4) A-II, B-I, C-IV, D-III

Solution

Q.16 Match **List I** with **List II**

List - I		List - II	
A.	Nucleolus	I.	Site of formation of glycolipid
B.	Centriole	II.	Organization like the cartwheel
C.	Leucoplasts	III.	Site of active ribosomal RNA synthesis
D.	Golgi apparatus	IV.	For storing nutrients

Choose the correct answer from the options given below: [NEET (UG) 2024]

(1) A-III, B-II, C-IV, D-I
(2) A-II, B-III, C-I, D-IV
(3) A-III, B-IV, C-II, D-I
(4) A-I, B-II, C-III, D-IV

Solution

Q.17 The DNA present in chloroplast is: [NEET (UG) 2024]

(1) Linear, double stranded
(2) Circular, double stranded
(3) Linear, single stranded
(4) Circular, single stranded

Solution

Q.18 Match **List I** with **List II** :

List - I		List - II	
A.	Axoneme	I.	Centriole
B.	Cartwheel pattern	II.	Cilia and flagella
C.	Crista	III.	Chromosome
D.	Satellite	IV.	Mitochondria

Choose the correct answer from the options given below : [NEET (UG) 2024]

(1) A-IV, B-III, C-II, D-I
(2) A-IV, B-II, C-III, D-I
(3) A-II, B-IV, C-I, D-III
(4) A-II, B-I, C-IV, D-III

Solution

Q.19 Given below are two statements:
Statement-I: Mitochondria and chloroplasts are both double membrane bound organelles.
Statement-II: Inner membrane of mitochondria is relatively less permeable, as compared to chloroplast.

In the light of the above statements, choose the most appropriate answer from the options given below: [NEET (UG) 2024]

(1) Both Statement-I and Statement-II are correct.
(2) Both Statement-I and Statement-II are incorrect.
(3) Statement-I is correct but Statement-II is incorrect.
(4) Statement-I is incorrect but Statement-II is correct.

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Q.20 Match **List I** with **List II** :

List - I		List - II	
A.	Flemming	I.	Disc shaped sacs or cisternae near cell nucleus
B.	Robert Brown	II.	Chromatin
C.	George Palade	III.	Ribosomes
D.	Camillo Golgi	IV.	Nucleus

Choose the correct answer from the options given below: [RE-NEET (UG) 2024]

(1) A-II, B-IV, C-III, D-I
(2) A-II, B-III, C-I, D-IV
(3) A-I, B-II, C-III, D-IV
(4) A-IV, B-II, C-III, D-I

Solution

Q.21 Mesosome in a cell is a : [RE-NEET (UG) 2024]

(1) Membrane bound vesicular structure
(2) Chain of many ribosomes attached to a single mRNA
(3) Special structure formed by extension of plasma membrane
(4) Medium sized chromosome

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Q.22 Match **List-I** with **List-II** : [RE-NEET (UG) 2024]

List-I		List-II	
A.	Metacentric chromosome	I.	Chromosome has a terminal centromere
B.	Sub-metacentric chromosome	II.	Middle centromere forming two equal arms of chromosome
C.	Acrocentric chromosome	III.	Centromere is slightly away from the middle of chromosome resulting into two unequal arms
D.	Telocentric chromosome	IV.	Centromere is situated close to its end forming one extremely short and one very long arm

(1) A-II, B-I, C-IV, D-III
(2) A-IV, B-I, C-II, D-III
(3) A-I, B-II, C-III, D-IV
(4) A-II, B-III, C-IV, D-I

Solution

Q.23 Match **List-I** with **List-II**.

List-I		List-II	
A.	F_1 Particles	I.	Chromosomes
B.	Histones	II.	Cilia
C.	Axoneme	III.	Golgi apparatus
D.	Cisternae	IV.	Mitochondria

Choose the correct answer from the options given below: [RE-NEET (UG) 2024]

(1) A-II, B-I, C-IV, D-III
(2) A-IV, B-I, C-II, D-III
(3) A-IV, B-I, C-III, D-II
(4) A-IV, B-III, C-I, D-II

Solution

Q.24 Given below are two statements :
Statement-I: Concentrically arranged cisternae of Golgi complex are arranged near the nucleus with distinct convex cis or maturing and concave trans or forming face.
Statement-II: A number of proteins are modified in the cisternae of Golgi complex before they are released from cis face.

In the light of the above statements, choose the correct answer from the options given below. [RE-NEET (UG) 2024]

(1) Statement-I is true but Statement-II is false.
(2) Statement-I is false but Statement-II is true.
(3) Both Statement-I and Statement-II are true
(4) Both Statement-I and Statement-II are false

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Q.25 Which of the following are NOT considered as the part of endomembrane system?
A. Mitochondria
B. Endoplasmic reticulum
C. Chloroplasts
D. Golgi complex
E. Peroxisomes
Choose the most appropriate answer from the options given below: [NEET (UG) 2023]

(1) A, C and E only (2) A and D only
(3) A, D and E only (4) B and D only

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Q.26 Which of the following functions is carried out by cytoskeleton in a cell? [NEET (UG) 2023]

(1) Protein synthesis (2) Motility
(3) Transportation (4) Nuclear division

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Q.27 Match **List I** with **List II**.

List - I		List - II	
a.	Metacentric chromosome	i.	Centromere situated close to the end forming one extremely short and one very long arm
b.	Acrocentric chromosome	ii.	Centromere at the terminal end
c.	Submetacentric	iii.	Centromere in the middle forming two equal arms of chromosomes
d.	Telocentric chromosome	iv.	Centromere slightly away from the middle forming one shorter arm and one longer arm

Choose the correct answer from the options given below: [NEET (UG) 2022]

(1) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)
(2) (a)-(i), (b)-(iii), (c)-(ii), (d)-(iv)
(3) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
(4) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)

Solution

Q.28 Which of the following statements with respect to Endoplasmic Reticulum is incorrect? [NEET (UG) 2022]

(1) RER has ribosomes attached to ER
(2) SER is devoid of ribosomes
(3) Only RER are present in prokaryotes
(4) SER are the sites for lipid synthesis

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Q.29 Which type of substance would face difficulty to pass through the cell membrane? [NEET (UG) 2022 (Phase 2)]

(1) Substance soluble in lipids
(2) Substance with hydrophobic moiety
(3) Substance with hydrophilic moiety
(4) All substances irrespective of hydrophobic and hydrophilic moiety

Scan or tap for the full solution

Q.30 If the pH in lysosomes is increased to alkaline, what will be the outcome? [NEET (UG) 2022 (Phase 2)]

(1) Lysosomal enzymes will be more active
(2) Hydrolytic enzymes will function more efficiently
(3) Hydrolytic enzymes will become inactive
(4) Lysosomal enzymes will be released into the cytoplasm

Scan or tap for the full solution

Q.31 Pathogenic bacteria gain resistance to antibiotics due to changes in their : [NEET (UG) 2022 (Phase 2)]

(1) Nucleoid (2) Cosmids
(3) Plasmids (4) Nucleus

Scan or tap for the full solution

Q.32 Which of the following is an incorrect statement? [NEET (UG) 2021]

(1) Nuclear pores act as passages for proteins and RNA molecules in both directions between nucleus and cytoplasm
(2) Mature sieve tube elements possess a conspicuous nucleus and usual cytoplasmic organelles
(3) Microbodies are present both in plant and animal cells
(4) The perinuclear space forms a barrier between the materials present inside the nucleus and that of the cytoplasm

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Q.33 Match **List-I** with **List-II**.

List-I		List-II	
a.	Cristae	i.	Primary constriction in chromosome
b.	Thylakoids	ii.	Disc-shaped sacs in Golgi apparatus
c.	Centromere	iii.	Infoldings in mitochondria
d.	Cisternae	iv.	Flattened membranous sacs in stroma of plastids

Choose the correct answer from the options given below. [NEET (UG) 2021]

(1) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
(2) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)
(3) (a)-(i), (b)-(iv), (c)-(iii), (d)-(ii)
(4) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)

Solution

Q.34 When the centromere is situated in the middle of two equal arms of chromosomes, the chromosome is referred as : [NEET (UG) 2021]

(1) Acrocentric (2) Metacentric
(3) Telocentric (4) Sub-metacentric

Scan or tap for the full solution

Q.35 The organelles that are included in the endomembrane system are [NEET (UG) 2021]

(1) Golgi complex, Endoplasmic reticulum, Mitochondria and Lysosomes
(2) Endoplasmic reticulum, Mitochondria, Ribosomes and Lysosomes
(3) Endoplasmic reticulum, Golgi complex, Lysosomes and Vacuoles
(4) Golgi complex, Mitochondria, Ribosomes and Lysosomes

Scan or tap for the full solution

Q.36 Which of the following statements about inclusion bodies is incorrect? [NEET (UG) 2020]

(1) These are involved in ingestion of food particles
(2) They lie free in the cytoplasm
(3) These represent reserve material in cytoplasm
(4) They are not bound by any membrane

Scan or tap for the full solution

Q.37 Which is the important site of formation of glycoproteins and glycolipids in eukaryotic cells? [NEET (UG) 2020]

(1) Peroxisomes
(2) Golgi bodies
(3) Polysomes
(4) Endoplasmic reticulum

Solution

Q.38 Which of the following pair of organelles does not contain DNA? [NEET (UG) 2019]

(1) Lysosomes and Vacuoles
(2) Nuclear envelope and Mitochondria
(3) Mitochondria and Lysosomes
(4) Chloroplast and Vacuoles

Scan or tap for the full solution

Q.39 Which of the following statements regarding mitochondria is **incorrect**? [NEET (UG) 2019]

(1) Inner membrane is convoluted with infoldings
(2) Mitochondrial matrix contains single circular DNA molecule and ribosomes
(3) Outer membrane is permeable to monomers of carbohydrates, fats and proteins
(4) Enzymes of electron transport are embedded in outer membrane

Scan or tap for the full solution

Q.40 Which of the following statements is **not** correct? [NEET (UG) 2019]

(1) Lysosomes are membrane bound structures.
(2) Lysosomes are formed by the process of packaging in the endoplasmic reticulum.
(3) Lysosomes have numerous hydrolytic enzymes.
(4) The hydrolytic enzymes of lysosomes are active under acidic pH.

Scan or tap for the full solution

Q.41 The shorter and longer arms of a submetacentric chromosome are referred to as: [NEET (UG) 2019]
(1) q-arm and p-arm respectively
(2) m-arm and n-arm respectively
(3) s-arm and l-arm respectively
(4) p-arm and q-arm respectively
Solution

Q.42 The concept of "*Omnis cellula-e cellula*" regarding cell division was first proposed by : [NEET (UG) 2019]
(1) Schleiden (2) Aristotle
(3) Rudolf Virchow (4) Theodore Schwann
Scan or tap for the full solution

Q.43 Which of the following is true for nucleolus? [NEET 2018]
(1) It takes part in spindle formation
(2) Larger nucleoli are present in dividing cells
(3) It is a membrane-bound structure
(4) It is a site for active ribosomal RNA synthesis
Scan or tap for the full solution

Q.44 The Golgi complex participates in [NEET 2018]
(1) activation of amino acid
(2) fatty acid breakdown
(3) formation of secretory vesicles
(4) respiration in bacteria
Solution

Q.45 Which of the following events does not occur in rough endoplasmic reticulum? [NEET 2018]
(1) Cleavage of signal peptide
(2) Phospholipid synthesis
(3) Protein folding
(4) Protein glycosylation
Solution

Q.46 Select the incorrect match. [NEET 2018]
(1) Allosomes – Sex chromosomes
(2) Sub-metacentric chromosomes – L-shaped chromosomes
(3) Lampbrush chromosomes – Diplotene bivalents
(4) Polytene chromosomes – Oocytes of amphibians
Scan or tap for the full solution

Q.47 Which of the following components provides sticky character to the bacterial cell? [NEET 2017]
(1) Nuclear membrane (2) Plasma membrane
(3) Glycocalyx (4) Cell wall
Scan or tap for the full solution

Q.48 DNA replication in bacteria occurs [NEET 2017]
(1) within nucleolus
(2) prior to fission
(3) just before transcription
(4) during S phase
Solution

Q.49 Which of the following cell organelles is responsible for extracting energy from carbohydrates to form ATP? [NEET 2017]
(1) Ribosome (2) Mitochondrion
(3) Chloroplast (4) Lysosome
Scan or tap for the full solution

Q.50 Water soluble pigments found in plant cell vacuoles are [NEET 2016 (Phase 1)]
(1) carotenoids (2) anthocyanins
(3) xanthophylls (4) chlorophylls.
Scan or tap for the full solution

Q.51 Mitochondria and chloroplast are-
Which one of the following options is correct?
A. semi-autonomous organelles
B. formed by division of pre-existing organelles and they contain DNA but lack protein synthesising machinery [NEET 2016 (Phase 1)]
(1) Both A and B are false
(2) Both A and B are correct
(3) B is true but A is false
(4) A is true but B is false
Solution

Q.52 Microtubules are the constituents of [NEET 2016 (Phase 1)]
(1) Cilia, Flagella and Peroxisomes
(2) Centrosome, Nucleosome and Centrioles
(3) Spindle fibres, Centrioles and Cilia
(4) Centrioles, spindle fibres and chromatin
Scan or tap for the full solution

Q.53 Which one of the following cell organelles is enclosed by a single membrane? [NEET 2016 (Phase 1)]
(1) Mitochondria (2) Chloroplasts
(3) Lysosomes (4) Nuclei
Scan or tap for the full solution

Q.54 Select the mismatch. [NEET 2016 (Phase 2)]
(1) Large central vacuoles – Animal cells
(2) Methanogens – Prokaryotes
(3) Gas vacuoles – Green bacteria
(4) Protists – Eukaryotes
Solution

Q.55 Select the wrong statement- [NEET 2016 (Phase 2)]

(1) Pili and fimbriae are mainly involved in motility of bacterial cells
(2) *Mycoplasma* is a wall-less microorganism
(3) Bacterial cell wall is made up of peptidoglycan
(4) Cyanobacteria lack flagellated cells.

Scan or tap for the full solution

Q.56 A cell organelle containing hydrolytic enzymes is [NEET 2016 (Phase 2)]
(1) Ribosome (2) Mesosome
(3) Lysosome (4) Microsome

Scan or tap for the full solution

Q.57 The structures that help some bacteria to attach to rocks and/or host tissues are [AIPMT 2015]
(1) mesosomes (2) holdfast
(3) rhizoids (4) fimbriae.

Scan or tap for the full solution

Q.58 Chromatophores take part in [AIPMT 2015]
(1) movement (2) respiration
(3) photosynthesis (4) growth.

Scan or tap for the full solution

Q.59 Balbiani rings are sites of : [AIPMT 2015]
(1) Polysaccharide synthesis
(2) Lipid synthesis
(3) RNA and protein synthesis
(4) Nucleotide synthesis

Solution

Q.60 Match the columns and identify the correct option. [AIPMT 2015]

Column I		Column II	
a.	Thylakoids	i.	Disc-shaped sacs in Golgi apparatus
b.	Cristae	ii.	Condensed structure of DNA
c.	Cisternae	iii.	Flat membranous sacs in stroma
d.	Chromatin	iv.	Infoldings in mitochondria

(1) (a) ⟶ (iv), (b) ⟶ (ii), (c) ⟶ (i), (d) ⟶ (iii)
(2) (a) ⟶ (iv), (b) ⟶ (iii), (c) ⟶ (i), (d) ⟶ (ii)
(3) (a) ⟶ (iii), (b) ⟶ (iv), (c) ⟶ (i), (d) ⟶ (ii)
(4) (a) ⟶ (iii), (b) ⟶ (i), (c) ⟶ (iv), (d) ⟶ (ii)

Scan or tap for the full solution

Q.61 Which of the following structures is not found in a prokaryotic cell? [AIPMT 2015]
(1) Mesosome (2) Nuclear envelope
(3) Ribosome (4) Plasma membrane

Scan or tap for the full solution

Q.62 Cellular organelles with membranes are - [AIPMT 2015]
(1) endoplasmic reticulum, ribosomes and nuclei
(2) lysosomes, Golgi apparatus and mitochondria
(3) nuclei, ribosomes and mitochondria
(4) chromosomes, ribosomes and endoplasmic reticulum

Scan or tap for the full solution

Q.63 Which of the following are not membrane-bound ? [AIPMT 2015]
(1) Ribosomes (2) Mesosomes
(3) Lysosomes (4) Vacuoles

Scan or tap for the full solution

Q.64 DNA is not present in : [AIPMT 2015 (Cancelled)]
(1) Nucleus (2) Chloroplast
(3) Mitochondria (4) Ribosomes

Scan or tap for the full solution

Q.65 Nuclear envelope is a derivative of : [AIPMT 2015 (Cancelled)]
(1) Membrane of Golgi complex
(2) Smooth endoplasmic reticulum
(3) Rough endoplasmic reticulum
(4) Microtubules

Solution

Q.66 The structures that are formed by stacking of organized flattened membranous sacs in the chloroplasts are [AIPMT 2015 (Cancelled)]
(1) Stroma lamellae (2) Cristae
(3) Stroma (4) Grana

Solution

Q.67 Select the correct matching in the following pairs : [AIPMT 2015 (Cancelled)]
(1) Rough ER – Oxidation of fatty acids
(2) Smooth ER – Oxidation of phospholipids
(3) Rough ER – Synthesis of glycogen
(4) Smooth ER – Synthesis of lipids

Scan or tap for the full solution

Q.68 The chromosomes in which centromere is situated close to one end are : [AIPMT 2015 (Cancelled)]

(1) Telocentric (2) Metacentric
(3) Sub-metacentric (4) Acrocentric

Scan or tap for the full solution

Q.69 Which one of the following is not an inclusion body found in prokaryotes? [AIPMT 2015 (Cancelled)]
(1) Cyanophycean granule
(2) Phosphate granule
(3) Polysome
(4) Glycogen granule

Solution

Q.70 Which structures perform the function of mitochondria in bacteria? [AIPMT 2014]
(1) Nucleoid (2) Ribosomes
(3) Cell wall (4) Mesosomes

Scan or tap for the full solution

Q.71 The motile bacteria are able to move by [AIPMT 2014]
(1) fimbriae (2) flagella
(3) cilia (4) pili.

Solution

Q.72 The solid linear cytoskeletal elements having a diameter of 6 nm and made up of a single type of monomer are known as: [AIPMT 2014]
(1) Microfilaments (2) Lamins
(3) Microtubules (4) Intermediate filaments

Scan or tap for the full solution

Q.73 The osmotic expansion of a cell kept in water is chiefly regulated by: [AIPMT 2014]
(1) Vacuoles (2) Plastids
(3) Mitochondria (4) Ribosomes

Scan or tap for the full solution

Q.74 Match the following and select the **correct** answer : [AIPMT 2014]

List-I		List-II	
a.	Centriole	i.	Infoldings in mitochondria
b.	Chlorophyll	ii.	Thylakoids
c.	Cristae	iii.	Nucleic acid
d.	Ribozymes	iv.	Basal body cilia or flagella

(1) (a) ⟶ (iv), (b) ⟶ (iii), (c) ⟶ (i), (d) ⟶ (ii)
(2) (a) ⟶ (i), (b) ⟶ (iii), (c) ⟶ (ii), (d) ⟶ (iv)
(3) (a) ⟶ (iv), (b) ⟶ (ii), (c) ⟶ (i), (d) ⟶ (iii)
(4) (a) ⟶ (i), (b) ⟶ (ii), (c) ⟶ (iv), (d) ⟶ (iii)

Scan or tap for the full solution

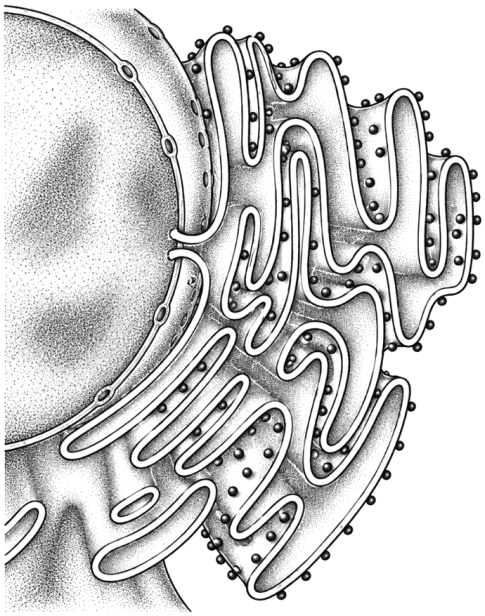
Q.75 Pigment containing membranous extensions in some cyanobacteria are [NEET 2013]
(1) pneumatophores (2) chromatophores
(3) heterocysts (4) basal bodies.

Scan or tap for the full solution

Q.76 The Golgi complex plays a major role : [NEET 2013]
(1) as energy transferring organelles
(2) in post translational modification of proteins and glycosidation of lipids
(3) in trapping the light and transforming it into chemical energy
(4) in digesting proteins and carbohydrates

Scan or tap for the full solution

Q.77 Which one of the following organelle in the figure correctly matches with its function ? [NEET 2013]



(1) Golgi apparatus, formation of glycolipids
(2) Rough endoplasmic reticulum, formation of glycoproteins
(3) Rough endoplasmic reticulum, protein synthesis
(4) Golgi apparatus, protein synthesis

Scan or tap for the full solution

Q.78 A major site for synthesis of lipids is : [NEET 2013]
(1) RER (2) Nucleoplasm
(3) SER (4) Symplast

Scan or tap for the full solution

Q.79 Why is a capsule advantageous to a bacterium? [NEET 2013 (Karnataka)]

(1) It protects the bacterium from desiccation.
(2) It provides means of locomotion
(3) It allows bacterium to "hide" from host's immune system.
(4) It allows the bacterium to attach to the surface.

Scan or tap for the full solution

Q.80 The term 'glycocalyx' is used for : [NEET 2013 (Karnataka)]

(1) bacterial cell glyco-engineered to possess N-glycosylated proteins
(2) a layer present between cell wall and membrane of bacteria
(3) a layer surrounding the cell wall of bacteria
(4) cell wall of bacteria

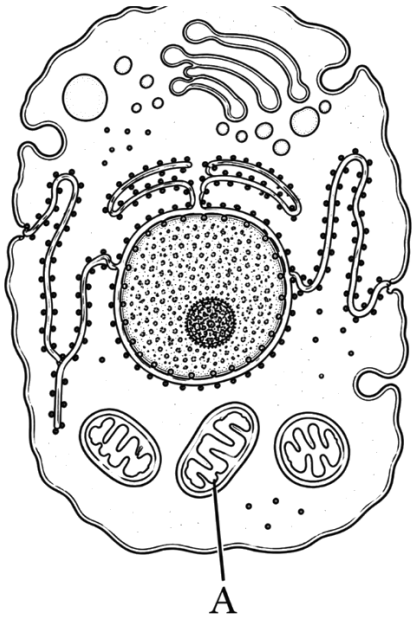
Scan or tap for the full solution

Q.81 Which of the following types of plastids does not contain stored food material ? [NEET 2013 (Karnataka)]

(1) Elaioplasts (2) Chromoplasts
(3) Amyloplasts (4) Aleuroplasts

Scan or tap for the full solution

Q.82 Select the alternative giving correct identification and function of the organelle 'A' in the diagram [NEET 2013 (Karnataka)]



(1) Golgi body - provides packaging material
(2) Mitochondria - produce cellular energy in the form of ATP
(3) Endoplasmic reticulum - synthesis of lipids
(4) Lysosomes - secrete hydrolytic enzymes

Scan or tap for the full solution

Q.83 Which one of the following cellular parts is correctly described ? [AIPMT 2012 (Mains)]

(1) Lysosomes - optimally active at a pH of about 8.5
(2) Centrioles - sites for active RNA synthesis
(3) Thylakoids - flattened membranous sacs forming the grana of chloroplasts
(4) Ribosomes - those on chloroplasts are larger (80S) while those in the cytoplasm are smaller (70S)

Scan or tap for the full solution

Q.84 Which one of the following structures is an organelle within an organelle ? [AIPMT 2012 (Mains)]

(1) Mesosome (2) Peroxisome
(3) Ribosome (4) ER

Scan or tap for the full solution

Q.85 Ribosomal RNA is actively synthesized in [AIPMT 2012 (Prelims)]

(1) Nucleolus (2) Ribosomes
(3) Lysosomes (4) Nucleoplasm

Scan or tap for the full solution

Q.86 Select the correct statement from the following regarding cell membrane [AIPMT 2012 (Prelims)]

(1) Na^+ and K^+ ions move across cell membrane by passive transport
(2) Lipids are arranged in bilayer with polar heads towards the inner part
(3) Proteins make up 60 to 70% of the cell membrane
(4) Fluid mosaic model of cell membrane was proposed by Singer and Nicolson

Scan or tap for the full solution

Q.87 What is true about ribosomes ? [AIPMT 2012 (Prelims)]

(1) These are self-splicing introns of some RNAs.
(2) These are found only in eukaryotic cells
(3) These are composed of ribonucleic acid and proteins
(4) The prokaryotic ribosomes are 80 S, where 'S' stands for sedimentation coefficient.

Scan or tap for the full solution

Q.88 Which one of the following does not differ in *E. coli* and *Chlamydomonas* ? [AIPMT 2012 (Prelims)]

(1) Chromosomal Organization
(2) Cell wall
(3) Ribosomes
(4) Cell membrane

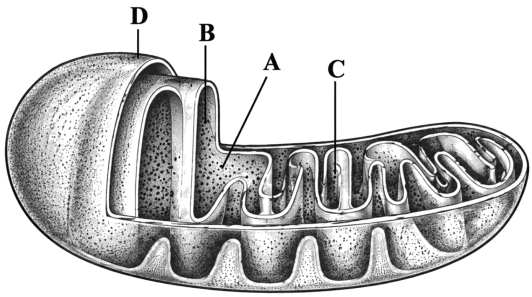
Solution

Q.89 Which one of the following is not considered as a part of the endomembrane system ? [AIPMT 2011 (Mains)]

(1) Vacuole (2) Lysosome
(3) Golgi complex (4) Peroxisome

Scan or tap for the full solution

Q.90 The figure below shows the structure of a mitochondrion with its four parts labelled (A), (B), (C) and (D). Select the part correctly matched with its function. [AIPMT 2011 (Mains)]



(1) Part (B) : Inner membrane – forms infoldings called cristae
(2) Part (C) : Cristae – possess single circular DNA molecule and ribosomes
(3) Part (A) : Matrix – major site for respiratory chain enzymes
(4) Part (D) : Outer membrane – gives rise to inner membrane by splitting

Scan or tap for the full solution

Q.91 In eubacteria, a cellular component that resembles eukaryotic cell is [AIPMT 2011 (Prelims)]

(1) plasma membrane (2) nucleus
(3) ribosomes (4) cell wall

Scan or tap for the full solution

Q.92 Which one of the following organisms is not a eukaryote? [AIPMT 2011 (Prelims)]

(1) *Paramecium caudatum*
(2) *Escherichia coli*
(3) *Euglena viridis*
(4) *Amoeba proteus*

Solution

Q.93 Peptide synthesis inside a cell takes place in : [AIPMT 2011 (Prelims)]

(1) Chromoplast (2) Ribosomes
(3) Chloroplast (4) Mitochondria

Scan or tap for the full solution

Q.94 Important site for formation of glycoproteins and glycolipids is : [AIPMT 2011 (Prelims)]

(1) Plastid (2) Lysosome
(3) Golgi apparatus (4) Vacuole

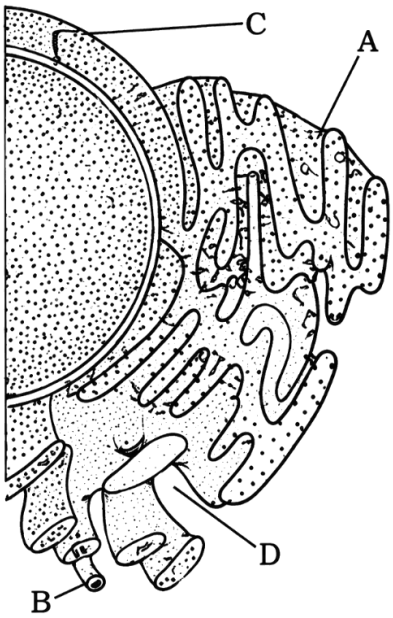
Scan or tap for the full solution

Q.95 An elaborate network of filamentous proteinaceous structures present in the cytoplasm which helps in the maintenance of cell shape is called - [AIPMT 2010 (Mains)]

(1) Cytoskeleton
(2) Endoplasmic Reticulum
(3) Thylakoid
(4) Plasmalemma

Solution

Q.96 Identify the components labelled A, B, C and D in the diagram below from the list (i) to (viii) given along with –



Components :
(i) Cristae of mitochondria
(ii) Inner membrane of mitochondria
(iii) Cytoplasm
(iv) Smooth endoplasmic reticulum
(v) Rough endoplasmic reticulum
(vi) Mitochondrial matrix
(vii) Cell vacuole
(viii) Nucleus

The correct components are : [AIPMT 2010 (Mains)]

(1) (A) ⟶ (v), (B) ⟶ (iv), (C) ⟶ (viii), (D) ⟶ (iii)
(2) (A) ⟶ (i), (B) ⟶ (iv), (C) ⟶ (viii), (D) ⟶ (vi)

(3) (A) ⟶ (v), (B) ⟶ (i), (C) ⟶ (iii), (D) ⟶ (ii)
(4) (A) ⟶ (vi), (B) ⟶ (v), (C) ⟶ (iv), (D) ⟶ (vii)

Scan or tap for the full solution

Q.97 Membrane-bound organelles are absent in [AIPMT 2010 (Prelims)]
(1) *Saccharomyces* (2) *Streptococcus*
(3) *Chlamydomonas* (4) *Plasmodium*

Scan or tap for the full solution

Q.98 Algae have cell wall made up of: [AIPMT 2010 (Prelims)]
(1) cellulose, galactans and mannans
(2) hemicellulose, pectins and proteins
(3) pectins, cellulose and proteins
(4) cellulose, hemicellulose and pectins

Scan or tap for the full solution

Q.99 The plasma membrane consists mainly of – [AIPMT 2010 (Prelims)]
(1) proteins embedded in a carbohydrate bilayer
(2) phospholipids embedded in a protein bilayer
(3) proteins embedded in a phospholipid bilayer
(4) proteins embedded in a polymer of glucose molecules

Scan or tap for the full solution

Q.100 The main area of various types of activities of a cell is – [AIPMT 2010 (Prelims)]
(1) Cytoplasm (2) Plasma membrane
(3) Nucleus (4) Mitochondrion

Scan or tap for the full solution

Q.101 Which one of the following has its own DNA? [AIPMT 2010 (Prelims)]
(1) Dictyosome (2) Mitochondria
(3) Peroxisome (4) Lysosome

Scan or tap for the full solution

Q.102 Which one of the following structures between two adjacent cells is an effective transport pathway? [AIPMT 2010 (Prelims)]
(1) Endoplasmic reticulum
(2) Plasmodesmata
(3) Plasmalemma
(4) Plastoquinones

Solution

Q.103 Middle lamella is composed mainly of : [AIPMT 2009]
(1) Calcium pectate (2) Phosphoglycerides
(3) Muramic acid (4) Hemicellulose

Scan or tap for the full solution

Q.104 Cytoskeleton is made up of : [AIPMT 2009]
(1) Cellulose microfibrils
(2) Proteinaceous filaments
(3) Calcium carbonate granules
(4) Callose deposits

Solution

Q.105 Plasmodesmata are : [AIPMT 2009]
(1) Locomotory structures
(2) Connection between adjacent cells
(3) Membranes connecting the nucleus with plasmalemma
(4) Lignified cemented layers between cells

Scan or tap for the full solution

Q.106 Polysome is formed by [AIPMT 2008]
(1) several ribosomes attached to a single mRNA
(2) many ribosomes attached to a strand of endoplasmic reticulum
(3) a ribosome with several subunits
(4) ribosomes attached to each other in a linear arrangement

Scan or tap for the full solution

Q.107 In germinating seeds fatty acids are degraded exclusively in the: [AIPMT 2008]
(1) proplastids (2) peroxisomes
(3) glyoxysomes (4) mitochondria

Scan or tap for the full solution

Q.108 Vacuole in a plant cell: [AIPMT 2008]
(1) is membrane-bound and contains storage proteins and lipids
(2) is membrane-bound and contains water and excretory substances
(3) lacks membrane and contains air
(4) lacks membrane and contains water and excretory substances

Scan or tap for the full solution

Q.109 The two sub-units of ribosome remain united at a critical ion level of: [AIPMT 2008]
(1) magnesium (2) manganese
(3) calcium (4) copper

Scan or tap for the full solution

Q.110 Keeping in view the "fluid mosaic model" for the structure of cell membrane, which one of the following statements is correct with respect to the movement of lipids and proteins from one lipid monolayer to the other (described as flip-flop movement)? [AIPMT 2008]

(1) Both lipids and proteins can flip-flop

(2) While lipids can rarely flip-flop proteins cannot

(3) While proteins can flip-flop, lipids cannot

(4) neither lipids, nor proteins can flip-flop

Scan or tap for the full solution

Q.111 Which one of the following is not a constituent of cell membrane? [AIPMT 2007]

(1) Glycolipids (2) Proline

(3) Phospholipids (4) Cholesterol

Scan or tap for the full solution

Q.112 Select the wrong statement from the following: [AIPMT 2007]

(1) The chloroplasts are generally much larger than mitochondria

(2) Both chloroplasts and mitochondria contain DNA

(3) Both chloroplasts and mitochondria contain an inner and an outer membrane

(4) Both chloroplasts and mitochondria have an internal compartment, the thylakoid space bounded by the thylakoid membrane

Scan or tap for the full solution

Q.113 Which of the following statements regarding mitochondrial membrane is not correct ? [AIPMT 2006]

(1) The inner membrane is highly convoluted forming a series of infoldings

(2) The outer membrane resembles a sieve

(3) The outer membrane is permeable to all kinds of molecules

(4) The enzymes of the electron transfer chain are embedded in the outer membrane

Scan or tap for the full solution

Q.114 Which of the following statements regarding cilia is not correct ? [AIPMT 2006]

(1) Microtubules of cilia are composed of tubulin

(2) The organized beating of cilia is controlled by fluxes of Ca^{2+} across the membrane

(3) Cilia are hair-like cellular appendages

(4) Cilia contain an outer ring of nine doublet microtubules surrounding two single microtubules

Scan or tap for the full solution

Q.115 A major breakthrough in the studies of cells came with the development of electron microscope. This is because [AIPMT 2006]

(1) Electron beam can pass through thick materials, whereas light microscopy requires thin sections

(2) The resolution power of the electron microscope is much higher than that of the light microscope

(3) The electron microscope is more powerful than the light microscope as it uses a beam of electrons which has wavelength much longer than that of photons

(4) The resolving power of the electron microscope is 200-350 nm as compared to 0.1-0.2 nm for the light microscope

Scan or tap for the full solution

Q.116 According to widely accepted "fluid mosaic model" cell membranes are semi-fluid, where lipids and integral proteins can diffuse randomly. In recent years, this model has been modified in several respects. In this regard, which of the following statements is incorrect ? [AIPMT 2005]

(1) Proteins in cell membranes can travel within the lipid bilayer

(2) Proteins can also undergo flip-flop movements in the lipid bilayer

(3) Proteins can remain confined within certain domains of the membranes

(4) Many proteins remain completely embedded within the lipid bilayer

Scan or tap for the full solution

Q.117 The main organelle involved in modification and routing of newly synthesized proteins to their destinations is - [AIPMT 2005]

(1) Mitochondria

(2) Endoplasmic Reticulum

(3) Chloroplast

(4) Lysosome

Solution

Q.118 In chloroplasts, chlorophyll is present in the :- [AIPMT 2004]

(1) Outer membrane (2) Inner membrane

(3) Thylakoids (4) Stroma

Scan or tap for the full solution

Q.119 Chromosomes in a bacterial cell can be 1–3 in number and [AIPMT 2003]

(1) are always circular
(2) are always linear
(3) can be either circular or linear, but never both within the same cell
(4) can be circular as well as linear within the same cell.

Scan or tap for the full solution

Q.120 In bacteria, plasmid is [AIPMT 2002]
(1) extra chromosomal material
(2) main DNA
(3) non functional DNA
(4) repetitive gene.

Solution

Q.121 Ribosomes are produced in: [AIPMT 2002]
(1) Mitochondria (2) Golgi body
(3) Nucleolus (4) Cytoplasm

Scan or tap for the full solution

Q.122 In fluid mosaic model of plasma membrane [AIPMT 2002]
(1) Phospholipids form a bimolecular layer in middle part
(2) Upper layer is non-polar and hydrophilic
(3) Proteins form a middle layer
(4) Polar layer is hydrophobic

Scan or tap for the full solution

Q.123 Difference in gram positive and gram negative bacteria is due to [AIPMT 2001]
(1) cell wall (2) cell membrane
(3) ribosome (4) cytoplasm

Scan or tap for the full solution

Q.124 Element necessary for the middle lamella is [AIPMT 2001]
(1) K (2) Cu (3) Ca (4) Zn

Scan or tap for the full solution

Q.125 Microtubules are absent in: [AIPMT 2001]
(1) Spindle fibres (2) Mitochondria
(3) Centriole (4) Flagella

Scan or tap for the full solution

Q.126 Spindle fibres unite with which structure of chromosomes? [AIPMT 2000]
(1) Chromocentre (2) Chromomere
(3) Kinetochore (4) Centriole

Scan or tap for the full solution

Q.127 Lysosome contains: [AIPMT 2000]
(1) Reductive enzymes (2) Oxidative enzymes
(3) Anabolic enzymes (4) Hydrolytic enzymes

Scan or tap for the full solution

Q.128 Which of the following ribosomes are engaged in protein synthesis in animal cell? [AIPMT 2000]
(1) Ribosomes of only nucleolus and cytosol
(2) Ribosomes which occur on nuclear membrane and E.R.
(3) Ribosomes of only mitochondria and cytosol
(4) Ribosomes of only cytosol

Scan or tap for the full solution

Q.129 Function of telomeres in nucleus is [AIPMT 2000]
(1) To seal the ends of chromosome
(2) Poleward movement
(3) To recognize the homologous chromosome
(4) To initiate the RNA synthesis

Scan or tap for the full solution

Q.130 Which cell organelle is concerned with glycosylation of protein? [AIPMT 2000]
(1) Endoplasmic reticulum
(2) Ribosome
(3) Mitochondria
(4) Peroxisome

Solution

ANSWER KEY

Ques.	1	2	3	4	5	6	7
Ans.	**1**	**4**	**3**	**4**	**2**	**2**	**3**
Ques.	8	9	10	11	12	13	14
Ans.	**3**	**1**	**3**	**2**	**3**	**3**	**3**
Ques.	15	16	17	18	19	20	21
Ans.	**2**	**1**	**2**	**4**	**3**	**1**	**3**
Ques.	22	23	24	25	26	27	28
Ans.	**4**	**2**	**4**	**1**	**2**	**1**	**3**
Ques.	29	30	31	32	33	34	35
Ans.	**3**	**3**	**3**	**2**	**4**	**2**	**3**
Ques.	36	37	38	39	40	41	42
Ans.	**1**	**2**	**1**	**4**	**2**	**4**	**3**
Ques.	43	44	45	46	47	48	49
Ans.	**4**	**3**	**2**	**4**	**3**	**2**	**2**
Ques.	50	51	52	53	54	55	56
Ans.	**2**	**4**	**3**	**3**	**1**	**1**	**3**
Ques.	57	58	59	60	61	62	63
Ans.	**4**	**3**	**3**	**3**	**2**	**2**	**1**
Ques.	64	65	66	67	68	69	70
Ans.	**4**	**3**	**4**	**4**	**4**	**3**	**4**
Ques.	71	72	73	74	75	76	77
Ans.	**2**	**1**	**1**	**3**	**2**	**2**	**3**

Ques.	78	79	80	81	82	83	84
Ans.	**3**	**3**	**3**	**2**	**2**	**3**	**3**
Ques.	85	86	87	88	89	90	91
Ans.	**1**	**4**	**3**	**4**	**4**	**1**	**1**
Ques.	92	93	94	95	96	97	98
Ans.	**2**	**2**	**3**	**1**	**1**	**2**	**1**
Ques.	99	100	101	102	103	104	105
Ans.	**3**	**1**	**2**	**2**	**1**	**2**	**2**
Ques.	106	107	108	109	110	111	112
Ans.	**1**	**3**	**2**	**1**	**2**	**2**	**4**
Ques.	113	114	115	116	117	118	119
Ans.	**4**	**2**	**2**	**2**	**2**	**3**	**1**
Ques.	120	121	122	123	124	125	126
Ans.	**1**	**3**	**1**	**1**	**3**	**2**	**3**
Ques.	127	128	129	130			
Ans.	**4**	**2**	**1**	**1**			

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