Yakeen NEET 2.0 2026

Practice Sheet

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Cell - The Unit of Life

Q1 Which of the following is **not** a function of smooth endoplasmic reticulum?
(A) Synthesis of lipids
(B) Synthesis of steroid hormones
(C) Synthesis of lipid like hormones in animals
(D) Synthesis of glycoproteins and glycolipids

Q2 Select the **wrong** pair about cell wall.
(A) Algae – Cellulose, Galactans, Mannans and $CaCO_3$
(B) Fungi – Galactans and mannans
(C) Plant – Cellulose and Pectin
(D) Animal cell – Cell wall absent

Q3 Which of the following actually has chlorophyll pigment?
(A) Stroma (B) Vacuole
(C) Lumen (D) Thylakoids

Q4 The diameter of perinuclear space is:
(A) 0.5 µm – 1 µm
(B) 0.2 µm – 1 µm
(C) 10 nm – 50 nm
(D) 7.5 nm – 9 nm

Q5 Which among the following is **not** related with vacuole?
(A) Its membrane is called tonoplast
(B) It contains hydrolytic enzymes
(C) It can occupy up to 90% volume of plant cell
(D) Contractile vacuole performs osmoregulation

Q6 Diagram given below represents which type of chromosome?

(A) Sub-metacentric
(B) Metacentric
(C) Acrocentric
(D) Telocentric

Q7 If you remove the fimbriae from the bacterial cell, which of the following would you expect to happen?
(A) The bacterium could no longer swim
(B) The bacterium would not adhere to host tissues
(C) Transport of molecules across the membrane would stop
(D) The shape of the bacterium would change

Q8 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:
Assertion A: Cells vary in shapes, size and functions they perform.
Reason R: A typical eukaryotic cell consists of a cell membrane, nucleus and cytoplasm.
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.

Q9 Which of the following is **not** true about mitochondria?
(A) Diameter is 0.2 – 1μm.
(B) It is double membrane bound cell organelle as chloroplast.
(C) It is also known as power house of cell.
(D) It is a part of endomembrane system.

Q10 The cell wall and middle lamellae may be traversed by _____ which connect the cytoplasm of neighbouring cells.
(A) mesosomes (B) plasmodesmata
(C) ribosomes (D) lysosomes

Q11 Chromatin in eukaryotic cells contains:
(A) DNA and Ribosomes only.
(B) histone proteins, RNA, some non-histone proteins and DNA.
(C) RNA, histone proteins and DNA only.
(D) histone proteins only.

Q12 In eukaryotic cell, cilia and flagella are hair-like outgrowth of:
(A) cell membrane.
(B) cell wall.
(C) endoplasmic reticulum.
(D) golgi body.

Q13 The classification of plastids into leucoplast, chromoplast and chloroplast is based on;
(A) type of pigments.
(B) type of structures.
(C) type of sizes.
(D) type of shape.

Q14 Given below are two statements:
Statement I: Reserve materials in prokaryotic cells are stored in the cytoplasm in the form of inclusion bodies.
Statement II: Gas vacuoles are found in blue green, purple and green photosynthetic bacteria.
In the light of the above statements, choose the most appropriate answer from the options given below:
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

Q15 Which is **incorrect** about cilia?
(A) Small structures work like oars.
(B) Cilia emerge from basal body.
(C) Cilia cause the movement of either the cell or the surrounding fluid.
(D) It is hair-like outgrowth of cell wall.

Q16 For ribosomes Svedberg's constant is;
(A) direct measure of size and density.
(B) indirect measure of size and density.
(C) measure of weight in gram.
(D) measure of shape.

Q17 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:
Assertion A: Chloroplast can synthesise their own proteins.
Reason R: Chloroplast contains ribosomes.
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.

Q18 Tonoplast facilitates the transport of ions and other materials;
(A) against concentration gradients into the vacuole.
(B) along concentration gradients into the vacuole.
(C)

against concentration gradients into the cytoplasm.
(D) along concentration gradients into the cytoplasm.

Q19 Given below are two statements:
Statement I: In the chromoplasts fat insoluble carotenoid pigments are present.
Statement II: Amyloplasts store carbohydrates whereas elaioplasts store oils and fats.
In the light of the above statements, choose the most appropriate answer from the options given below:
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

Q20 In *Amoeba,* the contractile vacuole helps in;
(A) storage. (B) digestion.
(C) excretion. (D) ingestion.

Q21 *'Omnis cellula-e cellula'.*
The above statement was given by:
(A) Robert Brown.
(B) Matthias Schleiden.
(C) Rudolf Virchow.
(D) Theodore Schwann.

Q22 Which statement about the endoplasmic reticulum (ER) is **not** true?
(A) In animal cells lipid-like steroidal hormones are synthesised in smooth endoplasmic reticulum.
(B) It is a reticulum of tiny tubular structures scattered in the cytoplasm.
(C) ER divides the intracellular space into two distinct compartments.
(D) ER are stacked parallel to each other.

Q23 Prokaryotic mesosomes do **not** help in:
(A) cell wall formation.
(B) DNA replication.
(C) respiration.
(D) cell movement.

Q24 Select the **incorrect** statement(s) w.r.t plasma membrane of eukaryotic cell.
(I) The lipids are arranged within the membrane with the polar head towards the inner sides.
(II) In human red blood cell (RBC) membrane, in addition to phospholipids membrane also contains cholesterol.
(III) The peripheral proteins are partially or totally buried in the membrane.
(IV) The integral proteins lie on the surface of membrane.
(V) The ratio of protein and lipid varies considerably in different cell types.
Choose the most appropriate answer from the options given below:
(A) I, III and IV only
(B) II and V only
(C) III and IV only
(D) I, IV and V only

Q25 Identify the **incorrectly** matched pair.
(A) Glycocalyx – It could be capsule or slime layer
(B) Pili – Small bristle like fibres
(C) Mesosome – Help in respiration in bacteria
(D) Flagella – Extends from the cell wall in prokaryotes

Q26 A major site for synthesis of lipids is:
(A) nucleoplasm.
(B) rough endoplasmic reticulum.
(C) smooth endoplasmic reticulum.
(D) nuclear matrix.

Q27 Match the **List-I** with **List-II.**

List-I		**List-II**	
(A)	Flemming	(I)	Ribosome
(B)	Palade	(II)	Singer & Nicolson
(C)	Fluid mosaic model	(III)	Chromatin

(D)	Nucleus	(IV)	Robert brown

Choose the **correct** answer from the options given below:
(A) A-III, B-I, C-II, D-IV
(B) A-III, B-I, C-IV, D-II
(C) A-II, B-III, C-IV, D-I
(D) A-I, B-II, C-III, D-IV

Q28 In a typical eukaryotic nucleus, nuclear pore allows movement of:
(A) protein molecules only.
(B) RNA molecules only.
(C) RNA and protein molecules.
(D) DNA and proteins usually.

Q29 Which of the following statements is **incorrect** regarding ribosome?
(A) First observed through high magnification light microscope.
(B) Appear as granular structure under the electron microscope.
(C) Eukaryotic and prokaryotic ribosomes consist of different type of rRNA.
(D) They are not surrounded by any membrane.

Q30 Which of the following has cartwheel like structure?
(A) Centrosome (B) Nucleus
(C) Centriole (D) Microbody

Q31 Who coined the term chromatin?
(A) Robert Brown
(B) Palade
(C) Golgi
(D) Flemming

Q32 Given below are two statements:
Statement I: Chloroplast have RNA, 70S ribosomes and double stranded circular DNA.
Statement II: Chloroplast is double membrane bounded cell organelle.
In the light of the above statements, choose the most appropriate answer from the options given below:
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

Q33 Schleiden and Schwann could **not** explain;
(A) origin of new cells.
(B) formation of tissue.
(C) fundamental unit of life.
(D) organisms are composed of cells.

Q34 The content of nucleolus is;
(A) continuous with nucleoplasm.
(B) discontinuous with nucleoplasm.
(C) continuous with cytoplasm.
(D) continuous with stroma.

Q35 Match the **List-I** with **List-II.**

List-I		**List-II**	
(A)	Contractile vacuole	(I)	Centromere
(B)	Kinetochore	(II)	Spindle fibre formation
(C)	Centrioles	(III)	Osmoregulation in *Amoeba*
(D)	Sap vacuole	(IV)	Contain sap and exceretory product

Choose the **correct** answer from the options given below:
(A) A-III, B-I, C-II, D-IV
(B) A-III, B-II, C-I, D-IV
(C) A-IV, B-I, C-II, D-III
(D) A-IV, B-II, C-I, D-III

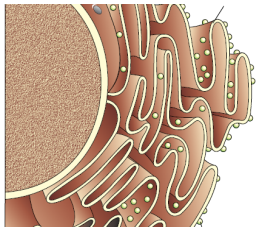
Q36 Which is **not** a part of cilia and flagella?
(A) Spokes
(B) Axoneme
(C) Central Sheath
(D) Kinetochore

Q37

The main distinction between prokaryotic and eukaryotic cells is the;
(A) presence of membrane bound organelles.
(B) presence of ribosomes.
(C) presence of cell membrane.
(D) presence of cytoplasm.

Q38 Prokaryotic cell is represented by:
(A) bacteria only.
(B) blue green algae only.
(C) plant cell only.
(D) bacteria, mycoplasma and blue green algae.

Q39 Which one of the following organelle in the figure **correctly** matches with its function?



(A) Rough endoplasmic reticulum, protein synthesis
(B) Rough endoplasmic reticulum, formation of glycoproteins
(C) Golgi apparatus, protein synthesis
(D) Golgi apparatus, formation of glycolipids

Q40 Read the following statements:-
(A) Mesosome is essential infolding of cell membrane in prokaryotic cells.
(B) Plasmid is double stranded, circular, extra chromosomal DNA that is common between both prokaryotic and eukaryotic cells.
(C) In photosynthetic bacteria like blue green algae, chromatophores contain pigments.
(D) Endoplasmic reticulum differentiates cellular space into luminal and extra-luminal.
How many above statements are **correct**?
(A) Three (B) Four
(C) Two (D) One

Q41 Among the following, which one is **not** associated with the mitochondria?
(A) ATP production (B) Cristae
(C) Stroma (D) Matrix

Q42 The double membrane bound cell organelle from the following is:
(A) smooth endoplasmic reticulum.
(B) vacuole.
(C) mitochondrion.
(D) lysosome.

Q43 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:
Assertion A: Cell is the fundamental structural and functional unit of all living organisms.
Reason R: A complete structure of a cell never ensure independent 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.

Q44 Arrangement of microtubules in cilia is:
(A) 9 + 2 (B) 9 + 4
(C) 9 + 0 (D) 9 + 9

Q45 Functions of which group of organelles are coordinated?
(A) ER, Golgi complex, lysosomes and vacuoles
(B) Mitochondria, chloroplast and peroxisomes
(C) ER, chloroplast and peroxisomes
(D) Lysosomes, vacuoles, mitochondria and peroxisomes

Answer Key

Q1	(D)
Q2	(B)
Q3	(D)
Q4	(C)
Q5	(B)
Q6	(A)
Q7	(B)
Q8	(D)
Q9	(D)
Q10	(B)
Q11	(B)
Q12	(A)
Q13	(A)
Q14	(C)
Q15	(D)
Q16	(B)
Q17	(C)
Q18	(A)
Q19	(B)
Q20	(C)
Q21	(C)
Q22	(D)
Q23	(D)
Q24	(A)
Q25	(B)
Q26	(C)
Q27	(A)
Q28	(C)
Q29	(A)
Q30	(C)
Q31	(D)
Q32	(C)
Q33	(A)
Q34	(A)
Q35	(A)
Q36	(D)
Q37	(A)
Q38	(D)
Q39	(A)
Q40	(A)
Q41	(C)
Q42	(C)
Q43	(A)
Q44	(A)
Q45	(A)