BIOLOGY

CLASS-XI NEET

MODULE-02

Cell the Unit of Life

| Structural Organization in Animal | Biomolecules
| Cell Cycle & Cell Division | Transports in Plants

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Physics Wallah

NEET Past 10 Year Questions

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1. Which of the following statements about inclusion bodies is incorrect? (2020)

a. These are involved in ingestion of food particles.

b. They lie free in the cytoplasm

c. These represent reserve material in cytoplasm

d. They are not bound by any membrane

2. Which is the important site of formation of glycoproteins and glycolipids in eukaryotic cells? (2020)

a. Peroxisomes b. Golgi bodies

c. Polysomes d. Endoplasmic reticulum

3. The biosynthesis of ribosomal RNA occurs in: (2020 Covid Re-NEET)

a. Golgi apparatus b. Microbodies

c. Nucleolus d. Ribsosomes

4. Inclusion bodies of blue-green, purple and green photosynthetic bacteria are: (2020 Covid Re-NEET)

a. Gas vacuoles b. Centrioles

c. Microtubules d. Contractile vacuoles

5. Match the following columns and select the correct option; (2020 Covid Re-NEET)

	Column-I		Column-II
1.	Smooth Endoplasmic Reticulum	(i)	Protein synthesis
2.	Rough endoplasmic reticulum	(ii)	Lipid synthesis
3.	Golgi complex	(iii)	Glycosylation
4.	Centriole	(iv)	Spindle formation

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

6. The size of Pleuropneumonia - like Organism (PPLO) is: (2020 Covid Re-NEET)

a. 1 - 2 µm b. 10 - 20 µm

c. 0.1 µm d. 0.02 µm

7. The shorter and longer arms of a submetacentric chromosome are referred to as (2019)

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

8. Which of the following statements is not correct? (2019)

a. Lysosomes have numerous hydrolytic enzymes.

b. The hydrolytic enzymes of lysosomes are active under acidic pH.

c. Lysosomes are membrane bound structures.

d. Lysosomes are formed by the process of packaging in the endoplasmic reticulum.

9. The concept of "*Omnis cellula-e cellula*" regarding cell division was first proposed by (2019)

a. Rudolf Virchow b. Theodor Schwann

c. Schleiden d. Aristotle

10. Which of the following statements regarding mitochondria is incorrect? (2019)

a. Outer membrane is permeable to monomers of carbohydrates, fats and proteins.

b. Enzymes of electron transport are embedded in outer membrane.

c. Inner membrane is convoluted with infoldings.

d. Mitochondrial matrix contains single circular DNA molecule and ribosomes.

11. Which among the following is not a prokaryote? (2018)

a. *Saccharomyces* b. *Mycobacterium*

c. *Nostoc* d. *Oscillatoria*

12. Which of the following is true for nucleolus? (2018)

a. Larger nucleoli are present in dividing cells.

b. It is a membrane-bound structure.

c. It takes part in spindle formation.

d. It is a site for active ribosomal RNA synthesis

13. The Golgi complex participates in (2018)

a. Fatty acid breakdown

b. Formation of secretory vesicles

c. Respiration in bacteria

d. Activation of amino acid

14. Which of the following events does not occur in rough endoplasmic reticulum? (2018)

a. Protein folding

b. Protein glycosylation

c. Cleavage of signal peptide

d. Phospholipid synthesis

15. Many ribosomes may associate with a single mRNA to form multiple copies of a polypeptide simultaneously. Such strings of ribosomes are termed as (2018)

a. Polysome b. Polyhedral bodies
c. Plastidome d. Nucleosome

16. Select the incorrect match: (2018)

a. Lampbrush chromosomes – Diplotene bivalents
b. Allosomes – Sex chromosomes
c. Submetacentric chromosomes – L-shaped chromosomes
d. Polytene chromosomes – Oocytes of amphibians

17. Which of the following cell organelles is responsible for extracting energy from carbohydrates to form ATP? (2017-Delhi)

a. Lysosome b. Ribosome
c. Chloroplast d. Mitochondrion

18. Which of the following components provides sticky character to the bacterial cell? (2017-Delhi)

a. Cell wall b. Nuclear membrane
c. Plasma membrane d. Glycocalyx

19. The correct sequence of involvement of cell organelles in secretion of proteins from the cell is: (2017-Gujarat)

a. Nucleus → Endoplasmic reticulum → Ribosomes → Golgi apparatus → Secretory vesicles → Plasma membrane
b. Nucleus → Ribosomes → Endoplasmic reticulum → Golgi apparatus → Secretory vesicles → Plasma membrane
c. Nucleus → Ribosomes → Endoplasmic reticulum → Lysosomes → Plasma membrane
d. Nucleus → Endoplasmic reticulum → Ribosomes → Golgi apparatus → Lysosomes → Plasma membrane

20. Which of the following pathways is involved for packaging of secretory proteins? (2017-Gujarat)

a. RER → Trans face of Golgi body → Cis face of Golgi body → Secretory vesicles
b. Trans face of Golgi body → Cis face of Golgi body → RER → SER → Secretory veiscles
c. RER → Cis face of Golgi body → Trans face of Golgi body → Secretory vesicles
d. Cis face of Golgi body → Trans face of Golgi body → RER → Secretory vesides

21. The type of ribosomes is same in (2017-Gujarat)

a. Eukaryotic cytoplasm, mitochondria and endoplasmic reticulum
b. Cytoplasm of eukaryotic cells, their mitrochondria and chloroplasts
c. Cytoplasm of eukaryotic cells, their chloroplasts and microbodies
d. Prokaryotes, mitochondria and chloroplasts

22. Reserved material in prokaryotic cells is stored as: (2017-Gujarat)

a. Basal body b. Inclusion bodies
c. Mesosome d. Polysome

23. A complex of ribosomes attached to a single strand of mRNA is known as: (2017-Gujarat)

a. Okazaki fragment b. Polymer
c. Polyribosome d. Polypeptide

24. A cell organelle containing hydrolytic enzymes is: (2016 - II)

a. Ribosome b. Mesosome
c. Lysosome d. Microsome

25. Select the wrong statement: (2016 - II)

a. Cyanobacteria lack flagellated cells.
b. Mycoplasma is a wall-less microorganism
c. Bacterial cell wall is made up of peptidoglycan.
d. Pilli and fimbriae are mainly involved in motility of bacterial cells

26. Select the mismatch: (2016 - II)

a. Protists - Eukaryotes
b. Methanogens - Prokaryotes
c. Gas vacuoles - Green bacteria
d. Large central vacuoles - Animal cells

27. Microtubules are the constituents of: (2016 - I)

a. Cilia, Flagella and Peroxisomes
b. Spindle fibres, Centrioles and Cilia
c. Centrioles, Spindle fibres and Chromatin
d. Centrosome, Nucleosome and Centrioles

28. Spindle fibres attach on to: (2016 - I)

a. Telomere of the chromosome
b. Kinetochore of the chromosome
c. Centromere of the chromosome
d. Kinetosome of the chromosome

29. Mitochondria and chloroplast are

A. Semi-autonomous organelles
B. Formed by division of pre-existing organelles and they contain DNA but lack protein synthesizing machinery

Which one of the following options is correct? (2016 - I)

a. Both (A) and (B) are correct
b. (B) is true but (A) is false
c. (A) is true but (B) is false
d. Both (A) and (B) are false

30. Which one of the following is not an inclusion body found in prokaryotes? (2015)

a. Glycogen granule b. Polysome
c. Phosphate granule d. Cyanophycean granule

31. The chromosomes in which centromere are situated close to one end are: (2015)

a. Telocentric b. Sub-metacentric
c. Metacentric d. Acrocentric

32. Select the correct matching in the following pairs: (2015)

a. Rough ER – Synthesis of glycogen
b. Rough ER – Oxidation of fatty acids
c. Smooth ER – Oxidation of phospholipids
d. Smooth ER – Synthesis of lipids

33. The structures that are formed by stacking of organized flattened membranous sacs in the chloroplasts are: (2015)

a. Stroma lamellae b. Stroma
c. Cristae d. Grana

34. Nuclear envelope is a derivative of: (2015)

a. Microtubules
b. Rough endoplasmic reticulum
c. Smooth endoplasmic reticulum
d. Membrane of Golgi complex

35. DNA is not present in: (2015)

a. Nucleus b. Mitochondria
c. Chloroplast d. Ribosomes

36. Match the columns and identify the correct option. (2015 Re)

	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

a. A-(iii), B-(iv), C-(i), D-(ii)
b. A-(iii), B-(i), C-(iv), D-(ii)
c. A-(iii), B-(iv), C-(ii), D-(i)
d. A-(iv), B-(iii), C-(i), D-(ii)

37. Cellular organelles with membranes are: (2015 Re)

a. Chromosomes, ribosomes and endoplasmic reticulum
b. Endoplasmic reticulum, ribosomes and nuclei
c. Lysosomes, Golgi apparatus and mitochondria
d. Nuclei, ribosome and mitochondria

38. Balbiani rings are sites of: (2015 Re)

a. Nucleotide synthesis
b. Polysaccharide synthesis
c. RNA and protein synthesis
d. Lipid synthesis

39. Chromatophores take part in: (2015 Re)

a. Growth b. Movement
c. Respiration d. Photosynthesis

40. The structures that help some bacteria to attach to rocks and / or host tissues are: (2015 Re)

a. Fimbriae b. Mesosomes
c. Holdfast d. Rhizoids

41. Which of the following structures is not found in a prokaryotic cell? (2015 Re)

a. Ribosome b. Mesosome
c. Plasma membrane d. Nuclear envelope

42. Which of the following is not membrane-bound? (2015 Re)

a. Ribosomes b. Lysosomes
c. Mesosomes d. Vacuoles

43. The motile bacteria are able to move by: (2014)

a. Pili b. Fimbriae
c. Flagella d. Cilia

44. The solid linear cytoskeleton elements having a diameter of 6 nm and made up of a single type of monomer are known as: (2014)

a. Lamins b. Microtubules
c. Microfilaments d. Intermediate filaments

45. The osmotic expansion of a cell kept in water is chiefly regulated by: (2014)

a. Ribosomes b. Mitochondria
c. Vacuoles d. Plastids

46. Which structures perform the function of mitochondria in bacteria? (2014)

a. Mesosomes b. Nucleoid
c. Ribosomes d. Cell wall

47. Match the following and select the correct answer: (2014)

A.	Centriole	i.	Infoldings in mitochondria
B.	Chlorophyll	ii.	Thylakoids
C.	Cristae	iii.	Nucleic acids
D.	Ribozymes	iv.	Basal body cilia or flagella

a. A-iv B-iii C-i D-ii
b. A-iv B-ii C-i D-iii
c. A-i B-ii C-iv D-iii
d. A-i B-iii C-ii D-iv

48. Which one of the following organelle in the figure correctly matches with its function? (2013)

a. Rough endoplasmic reticulum, protein synthesis
b. Rough endoplasmic reticulum, formation of glycoproteins
c. Golgi apparatus, protein synthesis
d. Golgi apparatus, formation of glycolipids

49. A major site for synthesis of lipids is: (2013)
a. Nucleoplasm b. RER
c. SER d. Symplast

50. The Golgi complex plays a major role: (2013)
a. In post translational modification of proteins and glycosidation of lipids
b. In trapping the light and transforming it into chemical energy
c. In digesting proteins and carbohydrates
d. As energy transferring organelles

51. Which one of the following cellular parts is correctly described? (2012 Mains)
a. Thylakoids - flattened membranous sacs forming the grana of chloroplasts
b. Centrioles - sites for active RNA synthesis
c. Ribosomes - those on chloroplasts are larger (80S) while those in the cytoplasm are smaller (70S)
d. Lysosomes - optimally active at a pH of about 8.5

52. Which one of the following structures is an organelle within an organelle? (2012 Mains)
a. Ribosome b. Peroxisome
c. ER d. Mesosome

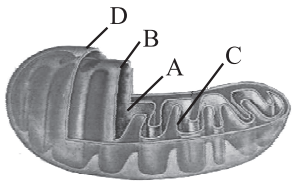
53. Select the correct statement from the following regarding cell membrane: (2012 Pre)
a. Fluid mosaic model of cell membrane was proposed by Singer and Nicolson
b. Na^+ and K^+ ions move across cell membrane by passive transport
c. Proteins make up 60 to 70% of the cell membrane
d. Lipids are arranged in a bilayer with polar heads towards the inner part

54. What is true about ribosomes? (2012 Pre)
a. These are self-splicing introns of some RNAs
b. The prokaryotic ribosomes are 80S, where "S" stands for sedimentation coefficient
c. These are composed of ribonucleic acid and proteins
d. These are found only in eukaryotic cells

55. Which one of the following does not differ in *E.coli* and *Chlamydomonas*? (2012 Pre)
a. Cell membrane
b. Ribosomes
c. Chromosomal Organisation
d. Cell wall

56. Ribosomal RNA is actively synthesised in: (2012 Pre)
a. Ribosomes b. Lysosomes
c. Nucleolus d. Nucleoplasm

57. The figure below shows the structure of a mitochondrion with its four parts labeled (A), (B), (C) and (D). Select the part correctly matched with its function. (2011 Mains)



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

58. Which one of the following is not considered as a part of the endomembrane system? (2011 Mains)
a. Vacuole b. Lysosome
c. Golgi complex d. Peroxisome

59. Which one of the following organisms is not an example of eukaryotic cells? (2011 Pre)
a. *Amoeba proteus* b. *Paramecium caudatum*
c. *Escherichia coli* d. *Euglena viridis*

60. In land plants the guard cells differ from other epidermal cells in having: (2011 Pre)
a. Chloroplasts b. Cytoskeleton
c. Mitochondria d. Endoplasmic reticulum

61. Peptide synthesis inside a cell takes place in: (2011 Pre)
a. Ribosomes b. Chloroplast
c. Mitochondria d. Chromoplast

62. Important site for formation of glycoproteins and glycolipids is: (2011 Pre)
a. Lysosome b. Vacuole
c. Golgi apparatus d. Plastid

ABOUT PHYSICS WALLAH

Alakh Pandey is one of the most renowned faculty in NEET & JEE domain's Physics. On his YouTube channel, Physics Wallah, he teaches the Science courses of 11th and 12th standard to the students aiming to appear for the engineering and medical entrance exams.

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