

NEET CELL: THE UNIT OF LIFE — PROKARYOTIC CELLS (CELL ENVELOPE, RIBOSOMES, INCLUSION BODIES) — PYQS

Max. Marks: 100

Questions: 25

Section A (MCQ) — 25 questions

Q.1 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

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Q.2 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

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Q.3 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.4 Pathogenic bacteria gain resistance to antibiotics due to changes in their : [NEET (UG) 2022 (Phase 2)]

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

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Q.5 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

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Q.6 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

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Q.7 DNA replication in bacteria occurs [NEET 2017]

- (1) within nucleolus
- (2) prior to fission
- (3) just before transcription
- (4) during S phase

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Q.8 Select the mismatch. [NEET 2016 (Phase 2)]

- (1) Large central vacuoles – Animal cells
- (2) Methanogens – Prokaryotes
- (3) Gas vacuoles – Green bacteria
- (4) Protists – Eukaryotes

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Q.9 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.

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Q.10 The structures that help some bacteria to attach to rocks and/or host tissues are [AIPT 2015]

- (1) mesosomes (2) holdfast
- (3) rhizoids (4) fimbriae.

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Q.11 Chromatophores take part in [AIPMT 2015]

- (1) movement (2) respiration
(3) photosynthesis (4) growth.

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Q.12 Which of the following structures is not found in a prokaryotic cell? [AIPMT 2015]

- (1) Mesosome (2) Nuclear envelope
(3) Ribosome (4) Plasma membrane

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Q.13 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

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Q.14 Which structures perform the function of mitochondria in bacteria? [AIPMT 2014]

- (1) Nucleoid (2) Ribosomes
(3) Cell wall (4) Mesosomes

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Q.15 The motile bacteria are able to move by [AIPMT 2014]

- (1) fimbriae (2) flagella (3) cilia (4) pili.

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Q.16 Pigment containing membranous extensions in some cyanobacteria are [NEET 2013]

- (1) pneumatophores (2) chromatophores
(3) heterocysts (4) basal bodies.

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Q.17 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.

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Q.18 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

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Q.19 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

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Q.20 In eubacteria, a cellular component that resembles eukaryotic cell is [AIPMT 2011 (Prelims)]

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

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Q.21 Membrane-bound organelles are absent in [AIPMT 2010 (Prelims)]

- (1) *Saccharomyces* (2) *Streptococcus*
(3) *Chlamydomonas* (4) *Plasmodium*

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Q.22 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

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Q.23 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.

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- Q.24** In bacteria, plasmid is [AIPMT 2002]
 (1) extra chromosomal material
 (2) main DNA
 (3) non functional DNA
 (4) repetitive gene.

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- Q.25** Difference in gram positive and gram negative bacteria is due to [AIPMT 2001]
 (1) cell wall (2) cell membrane
 (3) ribosome (4) cytoplasm

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	1	3	3	3	1	3	2	1	1	4	3
Ques.	12	13	14	15	16	17	18	19	20	21	22
Ans.	2	3	4	2	2	3	3	4	1	2	1
Ques.	23	24	25								
Ans.	1	1	1								