

NEET CELL: THE UNIT OF LIFE — NUCLEUS, CHROMATIN AND CHROMOSOMES — PYQS

Max. Marks: 64

Questions: 16

Section A (MCQ) — 16 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 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

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Q.3 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

List-I		List-II	
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

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Q.4 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)

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Q.5 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.6 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

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Q.7 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

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Q.8 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

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Q.9 Select the incorrect match.

[NEET 2018]

- (1) Allosomes – Sex chromosomes
- (2) Sub-metacentric chromosomes – L-shaped chromosomes
- (3) Lampbrush chromosomes – Diplotene bivalents
- (4) Polytenic chromosomes – Oocytes of amphibians

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Q.10 Ribosomes are produced in:

[AIPMT 2002]

- (1) Mitochondria
- (2) Golgi body
- (3) Nucleolus
- (4) Cytoplasm

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Q.11 Balbiani rings are sites of :

[AIPMT 2015]

- (1) Polysaccharide synthesis
- (2) Lipid synthesis
- (3) RNA and protein synthesis
- (4) Nucleotide synthesis

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Q.12 Nuclear envelope is a derivative of :

[AIPMT 2015 (Cancelled)]

- (1) Membrane of Golgi complex
- (2) Smooth endoplasmic reticulum
- (3) Rough endoplasmic reticulum
- (4) Microtubules

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Q.13 The chromosomes in which centromere is situated close to one end are : [AIPMT 2015 (Cancelled)]

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

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Q.14 Ribosomal RNA is actively synthesized in

[AIPMT 2012 (Prelims)]

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

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Q.15 Spindle fibres unite with which structure of chromosomes? [AIPMT 2000]

- (1) Chromocentre
- (2) Chromomere
- (3) Kinetochore
- (4) Centriole

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Q.16 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

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	1	1	4	1	2	2	4	4	4	3	3
Ques.	12	13	14	15	16						
Ans.	3	4	1	3	1						