Class Test - 01

Yakeen NEET 2.0 2026
Cell Cycle and Cell Division & The Living World

Duration : 30 Min.

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1. ICBN and ICZN :
(1) Represents a set of rules and recommendations governing botanical and zoological names
(2) Governs and gives name to microbes
(3) Are botanical and zoological parks
(4) All of the above

2. Animals, mammals and dogs represent :
(1) Taxa at different levels
(2) Taxa at same level
(3) Different levels of same taxa
(4) All are correct

3. Each genus :
(1) Always has one specific epithet
(2) May have one or more specific epithets
(3) Is a group of many families
(4) Is always monotypic

4. Which of the following organisms do not reproduce?
(1) Infertile human beings
(2) Worker bees
(3) Mules
(4) All are correct

5. Biological museums :
(1) Are generally set up in the educational institutes like schools and colleges
(2) Have collections of live plants and animals
(3) Have collections of animal species only
(4) Contains only stuffed animals without skeleton

6. In a taxonomical hierarchy as we go from species to kingdom :
(1) The number of similar characters goes on decreasing
(2) The number of similar characters goes on increasing
(3) The number of characters may increase or decrease
(4) All are incorrect

7. A housefly belongs to which genus, family and order?
(1) Domestica, Diptera, Muscidae
(2) Muscidae, Diptera, Musca
(3) Muscidae, Diptera, Domestica
(4) Musca, Muscidae and Diptera

8. Arrange the Following categories in descending order for the classification of mango.
I. Dicotyledonae II. Anacardeaceae
III. Angiospermae IV. Sapindales
(1) I → II → IV → III
(2) III → I → II → IV
(3) III → I → IV → II
(4) II → IV → I → III

9. Polymoniales include:
(1) Group of organisms belonging to related genera
(2) Group of organisms belonging to related families
(3) Group of organisms belonging to related species
(4) Group of organisms belonging to related order

10. The correct sequential steps of taxonomy for a newly discovered organism is :
(1) Description → Nomenclature → Identification → Classification
(2) Classification → Nomenclature → Description → Identification
(3) Identification → Nomenclature → Description → Classification
(4) Description or Characterisation → Identification → Classification → Nomenclature

11. If a mitocyte has 10 pg of DNA and 16 chromosomes in G_1 then which of the following is correct ?
(1) S-phase will have 5 pg of DNA
(2) The Cell at anaphase stage will have 20 pg of DNA and a total of 32 chromosomes
(3) G_2-phase will have 8 chromosomes in a cell
(4) The cell at metaphase will have 10 pg of DNA and a total of 16 chromosomes

12. The movement of duplicated centrioles occur towards opposite poles of the cell in :
(1) Prophase
(2) G_1-phase
(3) G_2-Phase
(4) Anaphase

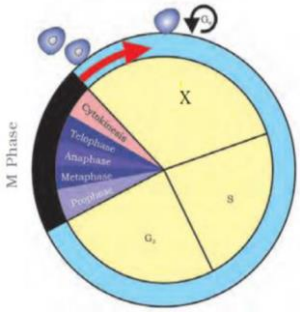
13. The different shapes of chromosomes, i.e., I, J, L,V Can be clearly studied during :
(1) The alignment of chromosomes at the equator
(2) The poleward movement of chromosomes
(3) The phase when Golgi complex and ER disappears
(4) The phase when synthesis of amino acids of histone protein occurs

14. The haploid cells divide by mitosis in:
(1) Algae and fungi
(2) Honey bee
(3) Some colonial and social insects
(4) All are correct

15. During metaphase :
(1) Centrioles move towards the metaphase plate
(2) Chromosomes move towards the opposite poles
(3) Spindle fibres attach to kinetochores of chromosomes
(4) All of the above can be seen

16. Cytokinesis :
(1) In animal cell occur centrifugally whereas in plant cells it occur centripetally
(2) In plant cells occur by furrow or cleavage formation in the protoplast
(3) Is not a part of telophase
(4) Is universally followed by karyokinesis

17. Which of the following is true for the phase marked X in the diagram give below ?



(1) The Cell is metabolically inactive
(2) The content of DNA is half in comparison to S-phase
(3) The number of chromosomes is half in comparison to S-phase
(4) Lasts for more than 95% of the duration of cell

18. Which of the following is correct for G_1-phase ?
(1) Corresponds to the interval between mitosis and initiation of DNA replication
(2) Histone protein is synthesized
(3) Centriolar duplication occurs
(4) All of these

19. The formation of recombination nodules and terminalisation of chiasmata occur respectively during:
(1) Pachytene and diakinesis
(2) Leptotene and zygotene
(3) Zygotene and diakinesis
(4) Diplotene and diakinesis

20. Which of the following occur more than once in meiotic cell division in animal meiocytes ?
(1) DNA replication, chiasmata formation
(2) Bivalent formation
(3) Crossing over, chiasmata formation and DNA, replication
(4) Chromatin condensation, centriolar duplication, karyokinesis and cytokinesis

21. Choose the correct statement :
(1) The first two subphases of prophase-I are relatively short lived as compared to pachytene
(2) Bivalent chromosomes clearly appear as tetrads during zygotene
(3) Crossing-over is enzyme-less mediated process
(4) Crossing-over is the exchange of sister chromatids of homologous pairs of chromosomes

22. How many chromosomes will be found in a cell at anaphase –II having 2n = 50 ?
(1) 50 (2) 40
(3) 100 (4) 25

23. During anaphase – I

(1) Disjunction of homologous chromosomes occurs
(2) Each chromosome possesses one chromatid
(3) Separated chromosomes move towards equator
(4) Splitting of centromere

24. The Daughter cells formed as a result of meiosis differ not only from parent cell in having half the number of chromosomes but also differ among themselves qualitatively in genetic constitution as a result of :

(1) Crossing over only
(2) Segregation and crossing over
(3) Crossing over, independent assortment and segregation
(4) Metaphasic arrangement of chromosomes

25. Microtubules are not present in:

(1) Centriole (2) Lysosomes
(3) Flagella (4) Spindle fibres

26. Read the following statements:

(i) Prophase is marked by the initiation of condensation of chromatin material
(ii) The chromosomal material becomes untangled during the process of chromatin condensation
(iii) In the S and G_2 phase the new DNA molecules formed are not distinct but interwound
(iv) Nuclear envelope remains intact throughout the prophase
(v) At the end of prophase, when viewed under microscope, a cell shows distinct Golgi, ER and nucleolus

How many of the above statements are correct ?

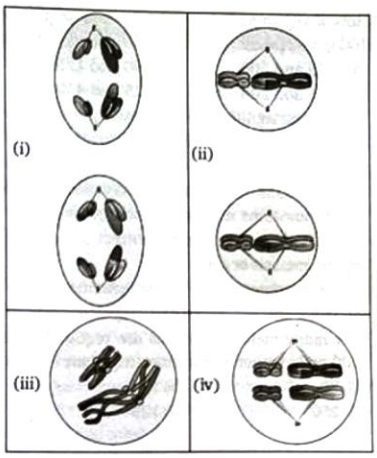
(1) Three (2) Four
(3) Two (4) One

27. Match the columns :

	Column-I		**Column-II**
A.	Prophase	(i)	Spindle fibres gets connected to the kinetochores.
B.	Metaphase	(ii)	Initiation of condensation of chromosomal material.
C.	Anaphase	(iii)	Centromeres of chromosomes lie towards pole while arms trail behind.
D.	Telophase	(iv)	Nucleolus, Golgi and ER reform.

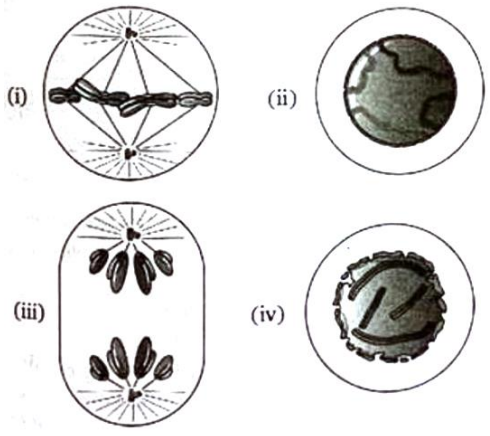
(1) A = (ii), B = (i), C = (iv), D = (iii)
(2) A = (i), B = (ii), C = (iii), D = (iv)
(3) A = (ii), B = (i), C = (iii), D = (iv)
(4) A = (iv), B = (ii), C = (i), D = (iii)

28. Arrange the different stages of meiosis (i), (ii), (iii) and (iv) sequence :



(1) (i) → (iv) → (ii) → (iii)
(2) (iii) → (iv) → (ii) → (i)
(3) (iv) → (iii) → (ii) → (i)
(4) (ii) → (i) → (iii) → (iv)

29. Identify **correctly** the different phase of mitosis (i, ii, iii, iv) :



(1) (i) = Metaphase, (ii) = Late prophase, (iii) = Anaphase, (iv) = Early prophase
(2) (i) = Telophase, (ii) Late prophase, (iii) = Anaphase, (iv) Early prophase
(3) (i) = Anaphase, (ii) = Late prophase, (iii) = Metaphase, (iv) = Early prophase
(4) (i) = Metaphase, (ii) = Early prophase, (iii) = Anaphase, (iv) = Late prophase

30. Which of the following is not incorrect?
(1) Plants can show mitotic divisions in both haploid and diploid cells
(2) The major reorganisation of virtually all components of the cell occur during M-phase
(3) Both (1) and (2)
(4) The most dramatic phase of cell cycle is interphase

31. Which of the following is correct for anaphase?
(1) It is the shortest phase of mitosis
(2) Centromeres split and chromatids separate
(3) Chromatids move towards the opposite poles
(4) All of the above

32. Which stage is best to count the number and study?
(1) Metaphase (2) Prophase
(3) Anaphase (4) Telophase

33. The loose indistinct network of nucleoprotein fibres can be observed in :
(1) Anaphase
(2) G_1, S and G_2-phases
(3) Metaphase
(4) Late prophase

34. A homologous pair of chromosomes :
(1) Have exact same genes-although may have different alleles of these genes
(2) Are identical in size and appearance
(3) Both (1) and (2)
(4) Separate and move to opposite poles during mitotic cell division

35. A bivalent of meiosis-I consists of:
(1) Two chromatids and one centromere
(2) Two chromatids and two centromeres
(3) Four chromatids and two centromeres
(4) Four chromatids and four centromeres

36. Which of the following is true for telophase?
(1) Reformation of nuclear envelope, Golgi, nucleolus and ER occurs
(2) Chromosomes cluster at opposite spindle poles
(3) Chromosomes lose their identity as discrete units
(4) More than one option is correct

37. At which stage of meiosis does the genetic constitution of gametes is finally decided?
(1) Metaphase-I
(2) Anaphase-II
(3) Metaphase-II
(4) Anaphase-I

38. Select the correct statement related to mitosis:
(1) Amount of DNA in the parent cell is first halved and then distributed into two daughter cells
(2) Amount of DNA in the parent cell is first doubled and then distributed into two daughter cells
(3) Amount of DNA in the parent cell is first halved and then distributed into four daughter cells
(4) Amount of DNA in the parent cell is first doubled and then distributed into four daughter cells

39. During anaphase of meiosis:
(1) Homologous chromosomes separate
(2) Non-homologous chromosomes separate
(3) Sister chromatids of chromosomes separate
(4) Non-sister chromatids of chromosomes separate

40. The stage during which separation of the paired homologous chromosomes begins is :
(1) Pachytene
(2) Diplotene
(3) Diakinesis
(4) Zygotene

ANSWER KEY

1.	(1)	**11.**	(2)	**21.**	(1)	**31.**	(4)
2.	(1)	**12.**	(1)	**22.**	(1)	**32.**	(1)
3.	(2)	**13.**	(2)	**23.**	(1)	**33.**	(2)
4.	(4)	**14.**	(4)	**24.**	(3)	**34.**	(3)
5.	(1)	**15.**	(3)	**25.**	(2)	**35.**	(3)
6.	(1)	**16.**	(3)	**26.**	(1)	**36.**	(4)
7.	(4)	**17.**	(2)	**27.**	(3)	**37.**	(2)
8.	(3)	**18.**	(1)	**28.**	(2)	**38.**	(2)
9.	(2)	**19.**	(1)	**29.**	(4)	**39.**	(3)
10.	(4)	**20.**	(4)	**30.**	(3)	**40.**	(2)

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