


Botany By Rupesh Chaudhary Sir

1. The structure present inside the nucleus responsible for ribosomal unit formation is
 (1) Mesosomes (2) Nucleoplasm
 (3) Nucleolus (4) DNA
2. Chromatin found in nucleus was discovered by
 (1) Flemming (2) Schleiden
 (3) Schwann (4) Robert Brown
3. Chromatin is essentially composed of
 (1) DNA only (2) DNA and histones
 (3) RNA only (4) RNA and ribosomes
4. The chromatids of a chromosome are held together at a point called
 (1) Centrosome (2) Centriole
 (3) Satellite (4) Centromere
5. An elaborate network of filamentous proteinaceous structure present in the cytoplasm which helps in the maintenance of cell shape is called
 (1) Thylakoid
 (2) Endoplasmic reticulum
 (3) Plasmalemma
 (4) Cytoskeleton
6. The chromosomes having centromere at terminal end are called
 (1) Sub-metacentric
 (2) Metacentric
 (3) Telocentric
 (4) Acrocentric
7. Satellite chromosomes have
 (1) Primary constriction only
 (2) Secondary constriction only
 (3) Tertiary constriction only
 (4) Both primary and secondary constriction
8. Microbodies are
 (1) Membrane bound minute vesicles
 (2) Non-membrane bound organelles
 (3) Present only in animals
 (4) Present only in plants
9. Incorrect statement in relation to nucleolus is
 (1) It is a spherical structure
 (2) It is separated from nucleoplasm by nuclear envelope
 (3) It is the site of rRNA synthesis
 (4) They are larger and more numerous in cells actively engaged in protein synthesis
10. Microfilaments perform all the following functions, except
 (1) Provide support to plasma membrane
 (2) Involved in cyclosis
 (3) Help in cell plate method during cell division
 (4) Help in pseudopodia formation
11. Find the correct match.

(1)	Metacentric chromosome	-	Centromere forming two unequal arms of chromosome
(2)	Telocentric chromosome	-	Centromere close to its end
(3)	Acrocentric centromere	-	Terminal centromere
(4)	Sub-metacentric chromosome	-	Centromere slightly away from middle
12. Match the following.

(i)	Plasmodesmata	(a)	Nuclear matrix
(ii)	Kinetochore	(b)	Thick and tough glycocalyx
(iii)	Nucleoplasm	(c)	Disc shaped structure on centromere
(iv)	Capsule	(d)	Cytoplasmic connections

 - (1) (i)-(d), (ii)-(a), (iii)-(c), (iv)-(b)
 - (2) (i)-(c), (ii)-(a), (iii)-(d), (iv)-(b)
 - (3) (i)-(d), (ii)-(c), (iii)-(a), (iv)-(b)
 - (4) (i)-(b), (ii)-(c), (iii)-(a), (iv)-(d)
13. The site for r-RNA synthesis is
 (1) Nuclear matrix (2) Nucleus
 (3) Nucleolus (4) Perinuclear space



- 14.** On a chromosome, site for attachment of spindle fibres is
- (1) Secondary constriction
 - (2) Primary constriction
 - (3) Kinetochore
 - (4) Satellite
- 15.** Larger and more numerous nucleoli are present in cells which are actively carrying out
- (1) Protein synthesis
 - (2) Lipid synthesis
 - (3) Steroidal hormone synthesis
 - (4) Carbohydrate synthesis
- 16.** Identify the statements as true (T) or false (F)
- I. Cells actively involved in protein synthesis have larger and more numerous nucleoli along with RER
- II. Animal cells differ from plant cells in possessing a large central vacuole
- III. Lysosomes are reservoirs of hydrolytic enzymes
- IV. Chromatin contains DNA and histones
- | | I | II | III | IV |
|-----|----------|-----------|------------|-----------|
| (1) | T | F | T | T |
| (2) | F | F | T | T |
| (3) | F | T | F | F |
| (4) | T | F | F | T |
- 17.** Find the correct set of structures/organelles not surrounded by membrane.
- (1) Ribosome, centrosome, lysosome
 - (2) Peroxisome, nucleolus, ribosome
 - (3) Ribosome, nucleolus, centriole
 - (4) Nucleolus, sphaerosome, ribosome
- 18.** Consider the following statements and choose the incorrect option
- a. Large and more numerous nucleoli are present in cells actively carrying out protein synthesis.
 - b. Nuclear pores allow bidirectional movement of molecules.
 - c. Cytoskeleton is a glycolipid structure for mechanical support, motility and maintenance of the shape of the cell.
 - d. Steroidal hormones are synthesized by Golgi complex.
- (1) a and b
 - (2) b and c
 - (3) c and d
 - (4) a and d
- 19.** Eukaryotic cells have a well organised nucleus and
- a. Both 70S and 80S types of ribosomes
 - b. Flagella associated with 9 + 2 organisation
 - c. Shows cytoplasmic streaming
 - d. Their DNA is complexed with histones to constitute the chromatin
- (1) All are correct
 - (2) Only a is incorrect
 - (3) Only c and d are correct
 - (4) Both b and c are incorrect



ANSWER KEY

1. (3)
2. (1)
3. (2)
4. (4)
5. (4)
6. (3)
7. (4)
8. (1)
9. (2)
10. (3)

11. (4)
12. (4)
13. (3)
14. (3)
15. (1)
16. (1)
17. (3)
18. (3)
19. (1)



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