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GENESIS TUTORIALS

Institute For NEET UG & other competitive exams

ASSIGNMENT: CELL BIOLOGY FOR NEET UG EXAM

1. A student wishes to study the cell structure under a light microscope having 10X eyepiece and 45X objective. He should illuminate the object by which one of the following colours of light so as to get the best possible resolution?

(a) Blue (b) Green (c) Yellow (d) Red

2. Electron microscope has a high resolution power. This is due to

(a) electromagnetic lenses

(b) very low wavelength of electron beam

(c) low wavelength of light source used

(d) high numerical aperture of glass lenses used

3. Magnification of compound microscope is not connected with

(a) numerical aperture (b) focal length of objective

(c) focal length of eye piece (d) tube length

4. The concept of "*Omnis cellula-e-cellula*" regarding cell division was proposed by

(a) Aristotle (b) Rudolf Virchow

(c) Theodore Schwann (d) Schleiden

5. Names of Schleiden and Schwann are associated with

(a) protoplasm as the physical basis of life

(b) cell theory

(c) theory of cell lineage

(d) nucleus functions as control centre of cell

6. Angstrom (Å) is equal to:

(a) 0.01 mm (b) 0.001 mm (c) 0.0000001 mm (d) 0.00001 mm

7. Organelles can be separated from cell homogenate through

(a) chromatography

(b) X-ray diffraction
(c) differential centrifugation
(d) auto-radiography

8. Which of the following statements about inclusion bodies is incorrect?
(a) They are not bound by any membrane
(b) These are involved in ingestion of food particles
(c) They lie free in the cytoplasm
(d) These represent reserve material in cytoplasm

9. Select the wrong statement
(a) Bacterial cell wall is made up of peptidoglycan
(b) Pili and fimbriae are mainly involved in motility of bacterial cells
(c) Cyanobacteria lack flagellated cells
(d) Mycoplasma is a wall-less microorganism

10. Which of the following structures is not found in a prokaryotic cell?
(a) Mesosome (b) Plasma membrane
(c) Nuclear envelope (d) Ribosome

11. The structure that help some bacteria to attach to rocks and/or host tissues are
(a) mesosomes (b) holdfast (c) rhizoids (d) fimbriae

12. Which one of the following is not an inclusion body found in prokaryotes?
(a) Glycogen granules (b) Polysome
(c) Phosphate granule (d) Cyanophycean granules

13. Which structures perform the function of mitochondria in bacteria?
(a) Nucleoid (b) Ribosomes (c) Cell wall (d) Mesosomes

14. The motile bacteria are able to move by
(a) fimbriae (b) flagella (c) cilia (d) pili

15. A capsule is advantageous to a bacterium. The incorrect statement is
(a) it protects the bacterium from desiccation
(b) It provides means of locomotion

(c) It allows bacterium to "*hide*" from host's immune system

(d) It allows the bacterium to attach to the surface.

16. The term 'glycocalyx' is used for

(a) a layer present between cell wall and membrane of bacteria

(b) cell wall of bacteria

(c) bacterial cell glyco-engineered to possess N-glycosylated proteins

(d) a layer surrounding the cell wall of bacteria

17. Chromsomes in a bacterial cell can be 1-3 in number and

(a) are always circular

(b) are always linear

(c) can be either circular or linear, but never both within the same cell

(d) can be circular as well as linear within the same cell

18. Photosynthetic bacteria have pigments in

(a) chromoplasts (b) chromatophores

(c) leucoplasts (d) chloroplasts

19. Which is the important site of formation of glycoproteins and glycolipids in eukaryotic cells?

(a) Endoplasmic reticulum (b) peroxisomes

(c) Golgi bodies (d) Polysomes

20. The shorter and longer arms of a submetacentric chromosomes are referred to as

(a) m-arm and n-arm respectively (b) s-arm and l-arm respectively

(c) p-arm and q-arm respectively (d) q-arm and p-arm respectively

21. Which of the following pairs of organelles does not contain DNA?

(a) Nuclear envelope and Lysosomes

(b) Mitochondria and Lysosome

(c) Chloroplast and vacuoles

(d) Lysosomes and Vacuoles

22. Which of the following is true for nucleolus?

(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

23. The Golgi complex participates in

(a) fatty acid breakdown

(b) formation of secretory vesicles

(c) respiration in bacteria

(d) activation of amino acid

24. Which of the following events does not occur in rough endoplasmic reticulum?

(a) Protein folding (b) Protein glycosylation

(c) Cleavage of signal peptide (d) Phospholipid synthesis

25. Which of the following cell organelles is responsible for extracting energy from carbohydrates to form ATP?

(a) Ribosome (b) Chloroplast

(c) Mitochondrion (d) Lysosome

26. Select the mismatch

(a) Gas vacuoles- Green bacteria

(b) Large central vacuoles- Animal cells

(c) Protists- Eukaryotes

(d) Methanogens- Prokaryotes

27. A cell organelles containing hydrolytic enzymes is

(a) lysosomes (b) microsome (c) ribosome (d) mesosomes

28. Which of the following cell organelles is enclosed by a single membrane?

(a) Lysosomes (b) Nuclei (c) Mitochondria (d) Chloroplasts

29. Water soluble pigments found in plant cell vacuoles are-

(a) Carotenoids (b) anthocyanins

(c) xanthophylls (d) chlorophylls

30. Which of the following are not membrane bound?

(a) Lysosomes (b) Mesosomes (c) Vacuoles (d) Ribosomes

31. The structures that are formed by stacking of organized flattened membranous sacs in the chloroplasts are

(a) stroma lamellae (b) stroma (c) cristae (d) grana

32. The chromosomes in which centromere is situated close to one end are

(a) telocentric (b) sub-metacentric

(c) metacentric (d) acrocentric

33. The solid linear cytoskeletal elements having a diameter of 6 nm and made up of a single type of monomer are known as

(a) microtubules (b) microfilaments

(c) intermediate filaments (d) lamins

34. The osmotic expansion of a cell kept in water is chiefly regulated by

(a) mitochondria (b) vacuoles

(c) plastids (d) ribosomes

35. A major site for synthesis of lipids is

(a) symplast (b) nucleoplasm

(c) RER (d) SER

36. Which of the following types of plastid does not contain stored food material?

(a) chromoplasts (b) Elaioplasts (c) Aleuroplasts (d) Amyloplasts

37. What is true about ribosomes?

(a) The prokaryotic ribosomes are 80S, where "S" stands for sedimentation coefficient.

(b) These are composed of ribonucleic acid and proteins.

(c) These are found only in eukaryotic cells

(d) These are self-splicing introns of some RNA_s.

38. Which one of the following does not differ in E.coli and Chlamydomonas?

(a) Ribosomes (b) Chromosoaml organization

(c) cell wall (d) cell membrane

39. Which one of the following structures is an organelle within an organelle?

(a) ribosome (b) peroxisome (c) ER (d) Mesosome

40. Peptide synthesis inside a cell takes place in

(a) chloroplast (b) mitochondria

(c) chromoplast (d) ribosomes