

BIO 111

SCANNED PAST QUESTIONS, FUTMINNA



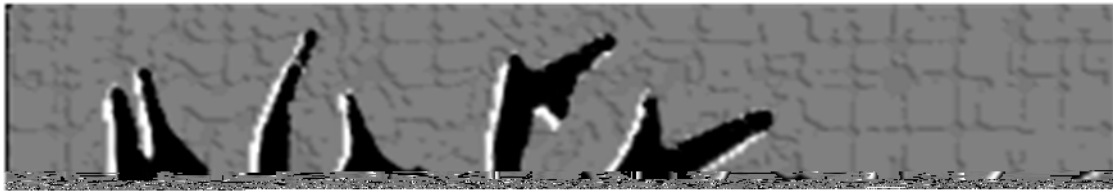
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SCANNED PAST QUESTIONS



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Signed

Nelly Tomilola

Content Developer

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P.S

uJuzi is Pronounced "You-Ju-Zi" and its Swahili for Knowledge

**FEDERAL UNIVERSITY OF
TECHNOLOGY, MINNA.
FIRST SEMESTER
COURSE: CELL BIOLOGY (BIO 111)**

1. The biggest disadvantages of light microscope is
 - a. Not readily available
 - b. Limited detail, it can show
 - c. Its length
 - d. Its resolution
2. The cell surface membrane
 - a. acts as barrier to the cell
 - b. acts as boundary to the cell itself
 - c. regulates membrane
 - d. gives structure to the plant
3. the nucleolus is an extra dense layer with almost pure
 - a. RNA
 - b. Chromosome
 - c. Chromatids
 - d. DNA
4. DNA is involved in producing
 - a. RNA
 - b. Chromosomes
 - c. Chromatids
 - d. Coloured nucleus
5. Chromosomes carry hereditary materials in the form of
 - a. RNA and DNA
 - b. RNA
 - c. DNA
 - d. Chromatin
6. Which of the following contains a system of parallel flattened cavities lined with a membrane
 - a. Endoplasmic reticulum
 - b. Golgi body
 - c. Nucleus
 - d. Lysosomes
7. Which of the following about reproduction is not true of ?
 - a. Formation of a bud in Hydra
 - b. Formation of sex cells
 - c. Increase in size in the cow
 - d. Development of sex cells
 - e. None of the above
8. The most important factor in cell division is the
 - a. Centrioles
 - b. Nucleolus
 - c. Chromosomes
 - d. Spindle fibres
 - e. None of the above
9. Mitotic division ends up with
 - a. The same amount of chromosomes
 - b. Same amount of Centrioles
 - c. Half the amount of chromosomes
 - d. Half the amount of DNA
 - e. None of the above
10. Which of these is the correct sequence of mitosis?
 - a. Prophase, Metaphase, Anaphase and Telophase

- b. Metaphase, Anaphase, Telophase and Prophase
 - c. Anaphase, Telophase, Prophase and Metaphase
 - d. Telophase, Prophase, Metaphase and Anaphase
11. Resting stage as also called because
- a. The cell produces carbon dioxide only
 - b. The cells activity is inhabited by cyanide only
 - c. The cell duplicates its organelles only
 - d. None of the above
12. Which of the following is true of mitosis interphase?
- a. Cell has the same appearance as none dividing cell
 - b. Chromosomes are visible as distinct bodies under the electron microscope.
 - c. The Chromatids arrange themselves at the poles
 - d. The chromosomes are normally haploid
 - e. None of the above
13. Chromatids are a pair of chromosomes
- a. True
 - b. False
14. The diagram shown is mitosis
- a. prophase
 - b. Metaphase
 - c. Anaphase
 - d. Telophase
 - e. None of the above
15. Which of the following is not true of telophase?
- a. Constriction of cell membrane ensues
 - b. Nuclear membrane and nucleolus reformed in each daughter cell
 - c. Spindle apparatus degenerates
 - d. Chromosomes eventually regain their threadlike form and the cells return to resting condition
 - e. None of the above
16. The region where the chromosomes exhibit the tightest coils are called
- a. Chromatids
 - b. Spindle fibres
 - c. Spindle apparatus
 - d. Centromere
 - e. Chromoplate
17. The part labeled B is
- a. cristae
 - b. matrix
 - c. chlorophyll
 - d. stalked particles
18. The part labeled C is
- a. cristae
 - b. matrix
 - c. chlorophyll
 - d. stalked particles
19. The part labeled D is
- a. cristae
 - b. matrix
 - c. chlorophyll
 - d. stalked particles
20. The diagram above is

- a. Chlorophyll
 - b. Mitochondrion
 - c. Chloroplast
 - d. Golgi apparatus
21. Which of these organelles consist of stalks of flattened cavities lined with numerous vesicles containing secretory granules
- a. Rough endoplasmic reticulum
 - b. Cytoplasmic matrix
 - c. Golgi body
 - d. Smooth endoplasmic reticulum
22. This organelle function in the conjugation of carbohydrate and protein to form glycoprotein
- a. Golgi body
 - b. Mitochondria
 - c. Nucleus
 - d. Glycogen
23. The shape of the organelle that is referred to as the power house of the cell is
- a. Parallel flattened cavities
 - b. Stalks of flattened cavities
 - c. Tubular
 - d. Sausage shape
24. The chemical reaction of respiration takes place at the of the mitochondria
- a. Matrix
 - b. Cristae
 - c. Inner membrane
 - d. outer membrane
25. lysosomes are dark spherical bodies in the cytoplasm which contains
- a. splitting molecules
 - b. digestive enzymes
 - c. embryonic tissues
 - d. soluble products
26. the main function of the nucleus in the cell is
- a. organizing the activities of the cell
 - b. controlling the vital activities of the cell
 - c. involved in assimilation
 - d. involved in respiration
27. which is not a function of the nucleus
- a. involved in assimilation and respiration
 - b. takes direct part in reproduction
 - c. takes the initiatives in cell division
 - d. controlling movement of materials
28. the stage at which materials are needed for cell division is called
- a. mid-phase
 - b. interval phase
 - c. interphase
 - d. intermediate phase
 - e. none of the above
29. chromosomes carry hereditary materials in form of
- a. RNA and DNA
 - b. RNA
 - c. DNA
 - d. Chromatin

30. Which of the following contains a system of parallel flattened cavities lined with a thin membrane
- Endoplasmic reticulum
 - Golgi body
 - Nucleus
 - Lysosomes
31. Which of this organism uses flagella for locomotion
- Paramecium
 - Trichomonas
 - Spermatozoon
 - Amoeba
32. Structures in plant and animal cells are called
- Organs
 - Cells
 - Tissues
 - Organelles
33. Mitochondria are found in large numbers in
- During cell division
 - Tail of motile spermatozoa
 - During fighting
 - During pregnancy
34. This organelle is associated with cell division
- Microfilament
 - Microtubules
 - Microvilli
 - Microneme
35. Microfilament is associated with cell motility such as
- Cell division
 - Small intestine
 - Cytoplasm streaming
 - Muscle evolution
36. This organelle is found mainly in the epithelial lining of the small intestine and convoluted tubules of the kidney
- Microvilli
 - Microfilament
 - Microtubules
 - Microneme
37. Which of the following statement is correct
- Both cilia and flagella are used for feeding
 - Only flagella is used for feeding
 - Only cilia is used for feeding
 - Both cilia and flagella are used for locomotion
38. The cell theory in its modern form includes the following except
- Cells are formed from the big bang theory
 - All organisms are composed of one or more cells
 - Cells are the basic unit of life
 - Cells arise only by division of previously existing cell
39. Plant and animal cells have this in common
- Cellulose cell wall
 - Rigid shape
 - Chloroplast
 - Vacuole

40. cellulose cell wall confers rigidity in
- human cell
 - plant cell
 - animal cell
 - all cells
41. the fluid mosaic model applies to
- physical membrane
 - biological membrane
 - plasma membrane
 - cell membrane
42. according to the fluid mosaic model, the proteins are present to give
- strength
 - enzymes
 - for locomotion
 - assimilation
43. according to Danielli & Davson model the bimolecular layer is sandwiched
- 3 2 layer of proteins
 - 2 layer of lipids
 - 2 layer of proteins
 - 3 layer of lipids
44. Which is odd among the options
- Centriole
 - Lysosomes
 - Food stored as starch
 - Large cell vacuole
45. Nucleus was discovered by
- Robert Hooke
 - Robert Brown
 - Jansen
 - Leeuwen hock
46. The dark spots visible on the chromosomes during prophase of mitotic cell division is called
- Centrioles
 - Centromere
 - Centrosome
 - Centrospheres
 - Centroscope
47. The pairing of homologous chromosomes during the prophase 1 meiotic cell division is called
- Paratypic
 - Synapsis
 - Homologous chromosomes
 - Paired chromosomes
48. The stage at which materials needed for cell division is synthesized is called
- Mid-phase
 - Interphase
 - Intermediate
 - Interval phase
 - None of the above
49. The number of chromosomes remaining after meiosis is
- Only one
 - Only two
 - The original number that the mother cell has

- d. half the number that the mother cell has
 - e. None of the above
50. The divisions of the cell in cell division is called
- a. Cyoldnesis
 - b. Karyokinesis
 - c. Mitosis
 - d. Melosis
 - e. None of the above
51. Prophase stage of mitosis ends with dissolution of the nuclear membrane
- a. True b. False
52. Four arms of the paired chromosome are arranged at the metaphase stage iin meiosis division
- a. True b. False
53. At late metaphase in mitosis chromosomes draw apart/repel each other from the centromere region in metotic division
- a. True b. False
54. In cell wall the carbohydrate matrix is cross linked by a short
- a. Polypeptide units
 - b. Poymer
 - c. Protein matrix
 - d. Polythene units
55. The nucleus and the cytoplasm are responsible for the
- a. Life of the cell
 - b. Death of the cell
 - c. Shape of the cell
 - d. Nature of the cell
56. The function of lamella in the chloroplast is to
- a. Help in photosynthesis
 - b. Hold chlorophyll molecules
 - c. Has light
 - d. Liberate oxygen
57. Chlorophyll is the pigments in plants
- a. Green
 - b. Yellow
 - c. Coloured
 - d. Red
58. Food is stored as starch in plants and as In animals
- a. Glycogen
 - b. Carbohydrates
 - c. Glycoprotein.
 - d. Glucagon
59. All the organisms on earth are cells or aggregate of cells and are all descendants of
- a. First cells
 - b. Last cells
 - c. Middle cells
 - d. Intermediate cells
60. Life processes of metabolism and heredity occurs in the
- a. bacteria
 - b. cells
 - c. Amoeba
 - d. Living things
61. Danielli and Daveson proposed that the

- a. Nucleus is made up of protein
 - b. Nucleus controls the movement of materials in and out of the cell
 - c. Plasma membrane is made up of 3 layers
 - d. Nucleus is covered by a nuclear membrane
62. The model above confirms that protein does not form a continuous layer covering both sides of the plasma membrane
- a. Danielli and Daveson
 - b. Fluid mosaic
 - c. Mosaic
 - d. Both a & b
63. Transport of materials takes place through the Of the nucleus
- a. Sides
 - b. Pores
 - c. Outer layer
 - d. Inner layer
64. The dark spots found chromosomes as they coil are called
- a. Centromere
 - b. Centromere
 - c. Centromere
 - d. Nucleolus
 - e. None of the above
65. The spindle fibers normally attach at the To pull the chromosomes to the poles.
- a. Centrosomes
 - b. Centromere
 - c. Genes
 - d. Chromatid
 - e. None of the above
66. The chromosomes are normally arranged at the During the metaphase stages of mitosis
- a. Poles
 - b. Equator
 - c. Center
 - d. Centromere
 - e. Centromere
67. The division of chromosomes is
- a. Cytokinesis
 - b. Karyokinesis
 - c. Centrioles
 - d. Kinetecore
 - e. None of the above
68. In meiosis the pairing or the association of homologous chromosomes occurs at the
- a. Leptotene
 - b. Zygotene
 - c. Pachytene
 - d. Diplotene
 - e. Diakinesis
69. Paired chromosomes split open into four arms in the zygotene stage
- a. True b. False
70. Physical exchange of genetic material occurs at the pachytene stage
- a. True b. False
71. An example of prokaryotic cell is
- a. Plant cell

- b. Cheek cell
- c. Amoeba cell
- d. Bacterial cell

72. Eukaryotic cell have

- a. Only the nucleus bounded by a unit membrane
- b. Only the mitochondrion bounded by a unit membrane
- c. All the organelles are bounded by a unit membrane
- d. None of the above

Which of the following is not true?

73. The Danielli Davsons model of the plasma membrane is:-

- a. Made of a monolayer
- b. Made up of a bimolecular layer
- c. Made up of 2-lipid layers sandwich between 2-layer of protein layers
- d. Made up of 2-protein layers sandwich between 2-layers of lipid layers

Which of the following is not true?

74. The hydrocarbon ends of the glycerol molecules are:-

- a. Water loving
- b. Lipid hating
- c. Water hating
- d. All of the above

75. Which of the following is not true?

- a. The nucleus is a spherical protoplasmic body
- b. It is usually oval or ovoid in shape
- c. It normally contain RNA only
- d. It is much more denser than the cytoplasm

76. Which of the following is not true?

- a. The nucleus contains nucleoplasm
- b. The cell dies immediately the nucleus is removed
- c. The cell will manufacture another nucleus if the former one is removed
- d. The nucleus takes part in sexual or asexual reproduction

77. The major food storage form of carbohydrate in plant cell is

- a. Glycogen
- b. Starch grains
- c. Chloroplast
- d. Glucose

78. Which of the following is not true?

- a. Ribosomes's are found in the cytoplasm of cells
- b. Ribosomes's are found attached to the endoplasmic reticulum
- c. Ribosomes's are synthesized from the cytoplasm
- d. Ribosomes's are sites of protein biosynthesis

79. Which of the following is not true?

- a. Endoplasmic reticulum is continuous with the plasma membrane
- b. Endoplasmic reticulum only synthesizes proteins
- c. Endoplasmic reticulum gives rise to the golgi bodies
- d. Product of endoplasmic reticulum is for export by the cell

80. Which of the following is not true?

- a. digestive enzymes and hormones are examples of products of rough endoplasmic reticulum
- b. smooth endoplasmic reticulum is only found in the liver
- c. lipids and steroids are examples of products from smooth endoplasmic reticulum
- d. endoplasmic reticulum are synthesized from the plasma membrane

81. products of golgi body include

- a. nucleus
 - b. cuticle of insects
 - c. lysosome
 - d. centrioles
82. Which of the following is not true?
- a. Pinched off vesicles from rough endoplasmic reticulum forms the golgi body
 - b. Golgi body only adds carbohydrate to proteins
 - c. Golgi body is not an arrangement point for materials for export
 - d. Golgi body produces secretory vesicles
83. Which of the following is not true?
- a. Mitochondria is found in the motile tail of spermatozoa
 - b. Mitochondria is the site of generation of ATP
 - c. Cristae in Mitochondria is to reduce the surface area
 - d. Mitochondria is made up of two folds
84. Depression found on the cell membrane through which the cell takes substances is called
- a. Micropinpinocytic vesicles
 - b. Endocytosis
 - c. Phagocytosi
 - d. All of the above
85. Disaccharides sugars are
- a. Sweet
 - b. Soluble in water
 - c. All of the above
 - d. None of the above
86. Which of the following is not a component of the nucleus?
- a. Nucleolus
 - b. Nucleolus
 - c. Endoplasmic reticulum
 - d. Chromatin
87. Organelle responsible for the absorption in cell is
- a. Convoluted tubules of the kidney
 - b. Microvilli
 - c. Golgi body
 - d. None of the above
88. Certain organelles drawn out of certain cells used for locomotion are called
- a. Cilia only
 - b. Flagella
 - c. All of the above
 - d. None of the above
89. is added in addition to the plasma membrane in plant cells
- a. Cell membrane
 - b. Cell wall
 - c. Plasma membrane
 - d. All of the above
90. Which of the following is not a component of the plant cell
- a. Starch
 - b. Glycogen
 - c. Cell wall
 - d. Sap vacuole
91. Which of the following is not found in the mitochondria
- a. Matrix

- b. Cristae
 - c. Sausage shape
 - d. Contain numerous chemicals for respiration
92. Which of the following is not a function of the nucleus
- a. Responsible for the death of the cell
 - b. Takes initiation in cell division
 - c. Responsible for respiration in the cell
 - d. None of the above
93. Mitosis is otherwise called
- a. Cell division
 - b. Somatic cell division
 - c. Multiplication of cells
 - d. None of the above
94. Which of the following is from mitosis?
- a. Budding
 - b. Fragmentation
 - c. Binary fission
 - d. All of the above
95. Which of the following is a difference between cilia and flagella?
- a. Cilia is fewer and longer and thicker
 - b. Cilia is only used to create a current of water into the mouth of the organism
 - c. Flagella is longer and fewer while cilia is shorter and numerous
 - d. None of the above
96. Mitosis is known to occur in
- a. Somatic cells only
 - b. Gonads only
 - c. Gametogenesis
 - d. None of the above
97. Daughter cells in mitosis normally end up with
- a. Haploid number of chromosomes
 - b. Half of the original chromosomes
 - c. Same chromosomes as the mother
 - d. A and B only
98. number of cells normally results from mitosis
- a. Two
 - b. Four
 - c. Three
 - d. Eight
99. Points with tightest coils in the chromosomes are called
- a. Synapses
 - b. Centromere
 - c. Chromomere
 - d. None of the above
100. Which of the following is synthesized in the interphase stage?
- a. Ribosomes
 - b. Mitochondria
 - c. Centrioles
 - d. All of the above
101. Which of the following is true of prophase in mitosis
- a. Spindle fibers is formed
 - b. This stage ends with the dissolution of the nuclear membrane

- c. All of the above
 - d. None of the above
102. Arrangement of the chromosomes on the equator in mitosis occurs in
- a. Anaphase
 - b. Metaphase
 - c. Prophase
 - d. Telophase
103. The pairing of homologous chromosomes is called
- a. Synapsis
 - b. Bivalves
 - c. Centromere
 - d. Chromomere
104. The main important event occurring in pachytene stage in meiosis is
- a. Longitudinal splitting into four of chromatids
 - b. Chromosomes are still becoming thicker
 - c. Chromosomes are still continue to coil
 - d. None of the above
105. The main important event occurring in diplotene stage in meiosis is
- a. Formation of chiasmata points
 - b. Crossing over
 - c. All of the above
 - d. None of the above
106. Which of the following is true
- a. Homologous chromosomes are arranged at the equator of the cell in meiosis
 - b. Individual chromosomes are arranged at the equator of the cell in mitosis
 - c. All of the above
 - d. None of the above
107. Cell sap in plants is normally made up of
- a. Proteins and lipids
 - b. Lipids and glycerol
 - c. Sugars and salts
 - d. None of the above
108. The building blocks of lipids are
- a. Glycerol and fatty acid
 - b. Stearic acid and fatty acid
 - c. All of the above
 - d. None of the above
109. Condensation reaction involves
- a. Addition of water molecule
 - b. The removal of water molecule
 - c. All of the above
 - d. None of the above
110. difference between fats and oils are
- a. fats and oils are both solids at room temperature
 - b. fats and oils are both liquids at room temperature
 - c. fats are solids, while oils are liquid at room temperature
 - d. fats are liquids, while oils are solids at room temperature
111. an ester bond is formed between
- a. two hexose sugars molecules
 - b. fatty acid and a glycerol
 - c. All of the above

- d. None of the above
112. Which of the following is not true?
- a. Sucrose is formed by the union of glucose and fructose
 - b. Lactose is formed by the union of glucose and galactose
 - c. Maltose is formed by the union of two alpha glucose
 - d. All of the above
113. Homogenous mixture of two substances is called
- a. Suspension
 - b. Colloids
 - c. Solution
 - d. None of the above
114. Suspension of small particles dispersed in another substance
- a. Is called colloids
 - b. Form an aerosol
 - c. All of the above
 - d. None of the above
115. Which of the following explains/defines osmosis,
- a. Two solutions are separated by a membrane that will only let the solvent particles pass through
 - b. Overall movement of solvent molecules (often water) from a region where they are at a higher concentration to an area where they are at a lower concentration
 - c. All of the above
 - d. None of the above
116. Which of the following is true?
- a. Plasmolysis is the shrinking of protoplasm from cell wall
 - b. Inward pressure of the cell wall on the cytoplasm as it swells builds up until it cancels out the tendency for water molecules to move in by osmosis
 - c. Substances often move from an area of higher concentration to an area of lower concentration by diffusion, the result of random particle movement
 - d. All of the above
117. Which of the following is
- a. phagocytosis
 - b. pinocytosis
 - c. All of the above
 - d. None of the above
118. Which of the following is not a component of chloroplast
- a. granum
 - b. quantasomes
 - c. starch granules
 - d. None of the above
119. Major differences between mitosis and meiosis are
- a. Arrangement of chromosomes at metaphase stages
 - b. Number of daughter cells produced
 - c. Number of chromosomes each daughter cell will later have
 - d. All of the above
120. Main categories of chemical substance found in living cells are
- a. sugars
 - b. amino acids
 - c. nucleotides
 - d. All of the above