FACULTY OF SCIENCES
DEPARTMENT OF BIOLOGICAL SCIENCE

SECOND SEMESTER END OF COURSE EXAMINATION 2008/2009 SESSION

COURSE CODE: BIO 203

INSTRUCTION: Answer all questions in Sections A and B

Section A

1. The discovery of cell and cell organelles became possible with the aid and use of .....
2. The term "Wretched beasties" was coined after the discovery of ..... And ..... In 1667
3. Von Mohl (1805-72) proposed ..... To the granular semi fluid substance that fills the cellular cavity of living organisms
4. The .....of a cell was discovered by Robert Brown in 1831.
5. The inheritance of character from parents to offspring as suggested by Strasburg and Weismann (1834-1914) and other workers is an exclusive concern of .....
6. Cells are ..... and ..... units of plant or animal body.
7. The protoplasm and the nucleus compose the..... of a cell
8. The protoplast consists of,..... And .....
9. Young cells are ..... in shape.
10. The smallest cell is .....
11. The cell wall is composed of
    a. Middle lamella, from any wall and inner lamella
    b. Middle lamella, outer primary wall and secondary wall
    c. Middle lamella, primary cell wall and secondary wall
12. The function of the cell wall is for
    a. Definite shape and protection
    b. Rigid structure and shape
    c. Osmosis and Permeability
13. The fluid mosaic model shows that the plasma membrane consists of
    a. Single, smooth layer (b) Double, smooth layer
    c. Bilayer of ampiphathic lipids,
14. In the plant cells, the chloroplasts are
    a. Sites of pigments only b. Pigments and photosynthesis processes
    c. Photosynthesis only
15. Chloroplasts consist of
    a. stroma, stroma camella and grana lamella
    b. Lumen, Loculus and thylakoids
    c. Partisions, Stroma and fret Chanarels
16. Cellular respiration takes place in.
    a. Chloroplalsts (b) Thylakoids (c) Mitochondria
17. The aqueous ground phase of the mitochondiia is called
    a. Liquid phase b. Viscows phase
    c. Matrix
18. The enzymes necessary for Kreb's Cyele found in Mitochondria care
    a. Cytochrome enzymes Citric acid cyele enzymes and fatty acids

SECTION: B

Choose the Letter and Word(s) that best answer to the question or completes the statement

1. In many cells, the structure that controls the cell's activities is the
   a. Cell membrane (b) Organelle (c) Nucleolus (d) Nucleus

2. Despite differences in size and shape, all cells must have cytoplasm and a nucleus, the organism is a (an)
   a. Cell wall (b) Cell membrane (c) Mitochondrion (d) Nucleus

3. If a cell of an organism contains a nucleus, the organism is a (an)
   a. Plant (b) Eukaryote (c) Animal (d) Prokaryote

4. Distinct threadlike structures containing genetic information are called
   a. Ribosomes (b) Nuclei (c) Chromosomes (d) Mitochondria

5. The organelle that makes energy available for the cell is the
   a. Nucleolus (b) Chromosome (c) Mitochondrion
   (d) Chloroplast

6. Cell membranes are constructed mainly of
   (a) Lipid layers (b) Protein pumps (c) Carbohydrate gates
   (d) Free-moving proteins

7. The movement of water molecules across a selectively permeable membrane is known as
   a. Exocytosis (b) Phagocytosis (c) Endocytosis
   (d) Osmosis

8. A tissue is composed of a group of
   (a) Similar cells (b) Related organelles (c) Organ systems
   d. Related organs

9. Animal cells have all of the following EXCEPT
   a. Mitochondria (b) Chloroplasts (c) Cell membrane
   d. Golgi apparatus

10. The nucleus includes all of the following structures EXCEPT
    (a) Cytoplasm (b) Nuclear envelope (c) DNA
    d. Nucleolus (d) Chromatin

11. In a typical cell placed into fresh water osmotic pressure produces
    a. Active transport (b) A net movement of water out of the cell
    (c) A net movement of water into the cell d Protein synthesis (f) No change

12. Which of the following are sometimes found attached to the endoplasmic reticulum
    (a) Chloroplasts (b) Mitochondria (c) Vacuoles (d) Nuclei
    (e) Ribosomes

13. Which process always involves the movement of materials from inside the cell to outside the cell
    (a) Phagocytosis (b) Endocytosis c. Exocytosis (d) Osmosis

14. The following is an example of connective tissue
    a. Muscle (b) Skin (c) Nerve (d) Blood

15. The following is an example of epithelial tissue
    a. Cartilage (b)Muscle (c) Skin (d) Nerve (e) Blood

16. Which of these is peculiar to heart muscle
a. Nuclei (b) Spindle (c) Fiber (d) Intercalations

17. Which cell is best suited to transmit information through the human body?
a. Muscle cell (b) Blood cell (c) Neuron (d) Fat

18. The rate at which materials enter and leave through the cell membrane depends on the cell's
a. Volume (b) Weight (c) Mass (d) Surface area

19. The process of cell division results in
a. Sister chromatids (b) Mitosis (c) Two daughter cells
d. Unregulated growth

20. Pairs of identical chromatids are attached to each other at an area called the
(a) Centriole (b) centromre (c) Spindle (d) Chromosome

21. If a cell has 12 chromosomes, how many chromosomes will each of its daughter cells have after mitosis?

a. 4 (b) 6 (c) 12 (d) 24

22. At the beginning of cell division, a chromosome consists of two
a. centromeres (b) centrioles (c) chromatids (d) Spindles

23. The phase of mitosis during which chromosomes become visible and the centrioles separate from one another is
(a) Prophase (b) Anaphase (c) Metaphase (d) telephone

24. In the cell cycle, external regulators direct cells to
(a) speed up or slow down the cycle (b) proceed and then stop the cycle
c remain unchanged (d) grow uncontrollably

25. Which of the following is not related to a cells ratio of surface area to volume?
a Cell size (b) Rate of growth
b. Number of nuclei (c) Efficiency of cells transport of oxygen
c. Efficiency of cell's transport of nutrients

26. Which of the following is not a phase of mitosis
a. Anaphase (b) Metaphase (c) Telephone
d. Prophase (e) interphase

27. Chromatids are attached to each other at the
a. Nucleus (b) Centriole (c) Centro mere
d. Cell plate (e) Cell membrane

28. In the cell cycle, the period between cell divisions is called
(a) Interphase (b) Prohase (c) G3 phase (d) Teuphase
e. Cytokinesis

29. The division of the cell nucleus is called
(a) Mitosis (b) Cell cycle (c) cytokinesis
d Cancer (e) interphase

30. A process of cytoplasmic division is
a. Mitosis (b) Cell cycle (c) Cytokinesis
d. Caner (e) interphas

31. A series of events that cells go through as they divide and grow is
a. Mitosis (b) cell cycle (c) cytokinesis (d) Cancer
(e) interphase

b. Enzymes of DNA, RNA and fatty acids
c. Enzymes of RNA, fatty acids and phosphorylating enzymes

19. The cellular ribosomes functions as
a. Sites of amino acid polymeriztion during protein synthesis
b. They play a role in formation of cell plate during cell division.
c. The final stage of oxidation of organic material to H20and C02

20. Golgi apparatus or golgi vesicles are concerned with:
a. Elaboration of Secretory materials
b. Connection of one cell with the other
c. Distribution of proteinous substances

21. Golgi body plays an important role in:
a. Disposition of pectic substances in the cell
b. Formation of the cell plate during cell division
c. Synthesis of enzymes

22. The nucleus contains
a. DNA, RNA, Proteins and lipids
b. Carbohydrates, enzymes and proteins
c. DNA, Proteins and lipids

23. Nucleolus is formed during
a. Telophase of mitosis (b) Anaphase of mitosis
c. Metaphase of meiosis

24. Chromosomes are:
a. Spherical substances containing genes
b. Spindle, double layered shaped with genes
c. Thread or rod shaped, consisting of a specific linear factors called genes

25. Chromosomes reduplicate in
a. Telophase (b) Interphase (c) Metaphase

26. The long fibrils of the chromosome contain various structures such as
(a) Centromere, Nucleolus organizer, Chromomeses, en-chromation etc.
b. Paracentric and Pericentric Components
c. Fibrilins, Chromatins, vacuolar saps etc.

27. Chromosomal aberrations include
a. Deletion, Duplication, Inversion and Translocation
b. Twisting, reduplication, meiosis and translocation
c. Inversion, translocation, replication and deletion.

28 In the sline mould, the bulk of the organic matter of the protoplasm are:
a. Proteins, and nitrogenous compounds
b. Lipids and pectic substances (c) Proteins and enzymes

29. Animal and Plants cells differ in several structures except in
d(a) Cell wall and Vacuole (c) Chloroplast and cell wall
e(b) Centrosomes and centrioles

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