

GURUDAS COLLEGE
DEPARTMENT OF BIOCHEMISTRY
UG INTERMEDIATE EXAMINATION, 2020
B.SC PART II BIOCHEMISTRY HONS.
PAPER IV MODULE VII

TIME 30 mins

FULL MARKS

25

**Answer all the questions:
Choose the correct answer:**

1. The function of the centrosome is
 - a) Formation of spindle fibres
 - b) Osmoregulation
 - c) Secretion
 - d) Protein synthesis

2. Which cell organelle is involved in apoptosis?
 - a) Lysosome
 - b) ER
 - c) Golgi
 - d) Mitochondria

3. Phosphatidylserine residues in the plasma membrane are located at
 - a) Inner leaflet of the plasma membrane
 - b) The outer leaflet of the plasma membrane
 - c) Evenly distributed in the inner and outer leaflet
 - d) None

4. Distribution of intrinsic proteins in the plasma membrane is
 - a) Random
 - b) Symmetrical

- c) Asymmetrical
- d) None

5. Glycolipids in the plasma membrane are located at

- a) Inner leaflet of the plasma membrane
- b) The outer leaflet of the plasma membrane
- c) Evenly distributed in the inner and outer leaflet
- d) It varies according to cell types

6. Lysosomes are known as “suicidal bags” because

- a) Parasitic activity
- b) Presence of food vacuole
- c) Hydrolytic activity
- d) Catalytic activity

7. This cell organelle does not contain DNA

- a) Nucleus
- b) Mitochondria
- c) Lysosomes
- d) Chloroplast

8. The organelle serving as a primary packaging area for molecules that will be distributed throughout the cell is

- a) Vacuole
- b) Plastids
- c) Mitochondria
- d) Golgi apparatus

9. Which of the following statements is the best definition of biogenesis?

- a. Non-living matter gives rise to living organisms.
- b. Living cells can only arise from pre-existing cells.
- c. A vital force is necessary for life.
- d. Air is necessary for living organisms.

10. Which of the following is *not* a characteristic of bacteria?

- a. are prokaryotic
- b. have peptidoglycan cell walls
- c. have the same shape
- d. grow by binary fission

11. Which of the following is the most important element of Koch's germ theory of disease? The animal shows disease symptoms when

- a. the animal has been in contact with a sick animal.
- b. the animal has a lowered resistance.
- c. a microorganism is observed in the animal.
- d. a microorganism is inoculated into the animal.

12. It has been said that bacteria are essential for the existence of life on Earth. Which of the following is the essential function performed by bacteria?

- a. control insect populations
- b. directly provide food for humans
- c. decompose organic material and recycle elements
- d. cause disease

13. Which of the following statements about *E. coli* is false?

- a. *E. coli* was the first disease-causing bacterium identified by Koch.
- b. *E. coli* is part of the normal microbiota of humans.
- c. *E. coli* is beneficial in human intestines.
- d. A disease-causing strain of *E. coli* causes bloody diarrhea.

14. You have isolated a motile, gram-positive cell with no visible nucleus. You can assume this cell has

- a. ribosomes.
- b. mitochondria.
- c. an endoplasmic reticulum.
- d. a Golgi complex

15. Which of the following types of media would not be used to culture aerobes?

- a. selective media

- b. reducing media
- c. enrichment media
- d. differential media

16. Which of the following cannot be used to sterilize a heat-labile solution stored in a plastic container?

- a. gamma radiation
- b. ethylene oxide
- c. supercritical fluids
- d. autoclaving

17. Name the site where digestion of proteins occurs.

- a. Pancreas
- b. Rectum
- c. Liver
- d. Ileum

18. Stomach epithelial cells in the body secrete _____

- a. Hydrochloric acid
- b. Oxytocin
- c. Adrenaline
- d. Testosterone

19. The right sequence of formation of urine is

- a. Secretion, reabsorption, filtration
- b. Reabsorption, secretion, filtration
- c. Filtration, reabsorption, secretion
- d. Filtration, secretion, reabsorption

20. The part of the alimentary tract where churning of food occurs and where the acid gastric juice is secreted is:

- (a) the stomach,
- (b) the ileum,
- (c) the colon,
- (d) the duodenum.

21. The hormone which affects the metabolic rate of the body is:

- (a) thyroxin,

- (b) insulin,
- (c) glucagon,
- (d) none of these.

22. Which of the following mineral is involved in protein metabolism and oxidation reactions?

- a) Molybdenum
- b) Manganese
- c) Magnesium
- d) calcium

23. Which of the following mineral deficiency may result into impaired growth and development, skin lesions and loss of appetite?

- a) Zinc
- b) Cobalt
- c) Iron
- d) Magnesium

24. A blood pH of 7.1 is said to be:

- a. neutral
- b. alkaline
- c. acidic
- d. homeostatic

25. As ventilation increases and more carbon dioxide is removed from the blood,

- a. $p\text{CO}_2$ will increase
- b. hydrogen ion concentration of the blood will decrease
- c. blood pH will decrease
- d. hydrogen ion concentration of the blood will decrease