

APRIL 2019  
EBS 114  
GENERAL BIOLOGY THEORY 1  
2 HOURS

CANDIDATE'S INDEX NUMBER
SIGNATURE:

UNIVERSITY OF CAPE COAST  
COLLEGE OF EDUCATION STUDIES  
SCHOOL OF EDUCATIONAL DEVELOPMENT AND OUTREACH  
INSTITUTE OF EDUCATION

COLLEGES OF EDUCATION  
FOUR-YEAR BACHELOR OF EDUCATION (B.ED) PROGRAMME  
FIRST YEAR, END-OF-FIRST SEMESTER EXAMINATION, APRIL 2019

APRIL 1, 2019      GENERAL BIOLOGY THEORY 1      9:00 AM – 9:30 AM

This paper consists of two sections, A and B. Answer all the questions in Section A and TWO questions from Sections B. Section A will be collected after the first 30 minutes.

SECTION A  
(20 MARKS)

Answer ALL the questions in this Section.

For items 1 to 20, each stem is followed by four options lettered A to D. Read each item carefully and circle the letter that corresponds to the correct or best option.

1. An epigynous flower is likely to have its ovary situated.....
  - A. above the floral parts.
  - B. at the same level with all the floral parts.
  - C. at the centre of the floral parts.
  - D. below the floral parts.
2. Monocotyledonous plants have the following features **except**.....
  - A. fibrous root system.
  - B. hollow and non-woody stem
  - C. vascular bundles that have cambium.
  - D. vascular bundles that are scattered.
3. A dog is classified as, Animalia, Chordata, Mammalia, Carnivora, Canidae, Canis, familiaris. Identify the Order of the dog.
  - A. Canidae
  - B. Carnivora
  - C. Chordata
  - D. familiaris

4. According to the modern system of classification, which of the listed organisms will *Bacillus cereus* closely resemble?
  - A. *Bacillus strigiformus*
  - B. *Cereus bacillus*
  - C. *Cereus strigiformus*
  - D. *Strigiformus bacillus*
  
5. Similarities in organisms are best seen among members at the..... taxon.
  - A. genus
  - B. kingdom
  - C. phylum
  - D. species
  
6. Which of the following groups of organisms are **not** chordates?
  - A. Amphibians
  - B. Birds
  - C. Mammals
  - D. Spiders
  
7. In which one of the following taxa do members have very similar features and are closely related but cannot produce fertile offspring?
  - A. Family
  - B. Genus
  - C. Order
  - D. Species
  
8. Unlike active transport, diffusion .....
  - A. allows movement of substances against concentration gradient.
  - B. allows movement of substances along concentration gradient.
  - C. ceases immediately due to lack of oxygen.
  - D. uses energy from the cell.
  
9. All the following are outputs of *Krebs cycle* per glucose molecule **except** .....
  - A. 2 ATP.
  - B. 4 CO<sub>2</sub>
  - C. 6 NAD<sup>+</sup>
  - D. 6 NADH.
  
10. All the following statements are true about aerobic respiration **except** .....
  - A. alcohol is produced as a by-product.
  - B. it takes place in the mitochondrion.
  - C. oxygen is required.
  - D. water is produced as by-product.
  
11. Sea water protozoans are.....to their environment.
  - A. hypertonic
  - B. hypotonic
  - C. isotonic
  - D. osmotic

12. The vascular tissue that conducts water and inorganic substances in plants is known as .....
- A. dermal tissue.
  - B. ground tissue.
  - C. phloem.
  - D. xylem.
13. Plants increase in length when .....at the tip of their roots or branches divide.
- A. dermal cells
  - B. meristem cells
  - C. parenchyma cells
  - D. sclerenchyma cells
14. Growth in trees can be described as.....
- A. annual.
  - B. biennial.
  - C. indeterminate.
  - D. Perennial.
15. Which type of meristem should divide if there is going to be outward growth in plants?
- A. Apical
  - B. Fascicular
  - C. Lateral
  - D. Lower
16. The strength and rigidity of bacteria cell wall is due to the presence of.....
- A. cellulose.
  - B. chitin.
  - C. murein.
  - D. mycelium.
17. The opening through which the testes descend into the scrotum is the.....
- A. ejaculatory duct.
  - B. germinal cavity.
  - C. inguinal canal.
  - D. vas deferens.
18. The diploid daughter cell that begins meiosis in sperm production is known as.....
- A. cowper's gland.
  - B. primary spermatocyte.
  - C. secondary spermatocyte.
  - D. Sertoli cells.
19. Which of the following can best be used to categorize angiosperms?
- A. Arrangement of leaves
  - B. Mode of nutrition
  - C. Number of seed leaves
  - D. Type of reproduction

20. A flowering plant with fibrous root system is likely to also have.....
- A. a distinct petiole.
  - B. floral parts of fours or fives.
  - C. parallel venation.
  - D. vascular cambium.