



**FACULTY: Basic and Applied Sciences**

**DEPARTMENT: Physical and Chemical Sciences**

**FIRST SEMESTER EXAMINATIONS B**

**2019/2020 ACADEMIC SESSION**

**COURSE CODE: BCH 205**

**COURSE TITLE: CELL AND MOLECULAR BIOLOGY**

**DURATION: 2 Hrs**

**HOD's SIGNATURE**

**TOTAL MARKS:**

**Matriculation Number: \_\_\_\_\_**

**INSTRUCTIONS:**

1. Write your matriculation number in the space provided above and also on the cover page of the exam booklet.
2. This question paper consists of 1 page.
3. Answer all questions in the exam booklet provided.
4. More marks are awarded for problem solving method used to solving problems than for the final numerical answer.
5. Marks will be deducted for untidy work.
6. At the end of this examination, place the question paper inside the exam booklet.
7. **Attempt any three (3) of the five (5) questions**

- 1a) Write short notes on each of the components of the cell membrane 12 marks
- 1b) Explain the fluid mosaic model of the cell membrane 6 marks
- 2a) Explain the cell theory 6 marks
- 2b) Explain the important of lipid as a major constituent of cells 8 marks
- 2c) Explain why carbon is unique in its occurrence in almost all biomolecules and in its ability to generate complex structures in three dimensions. 6 marks
- 3) Briefly describe the following:
1. Bacteriophage
  2. Lysogenic cycle
  3. Asymptomatic infection.
  4. DNA Clone
  5. Plasmid
  6. Restriction Endonuclease
  7. DNA Ligase
  8. Fat soluble vitamins
  9. Metabolite coenzymes
  10. Vitamin-derived coenzymes
- 20 marks
- 4) Using a well labeled diagram differentiate between prokaryotic and eukaryotic cell. 20 marks
- 5) What is an enzyme? Enumerate the different classification of enzymes and describe their functions. 20 marks