## FACULTY OF SCIENCE

## DEPARTMENT OF COMPUTER SCIENCE

2023_2 EXAMINATIONS—

**Course Code:** CIT423
**Course Title:** Computer Networks and Communication
**Credit:** 3 units
**Time allowed:** 2½ Hours
**Instruction:** Answer Question **ONE (1)** and any other **THREE (3)** Questions

1a. Briefly explain how ATM protocol works **(7Marks)**
 b. Describe how the following ATM switch interfaces operate **(5Marks)** (i) User-Network Interfaces (ii) Network-Node Interfaces (iii) Inter-Carrier Interface
 c. Explain the functions of a Virtual Path Identifier in ATM network **(5Marks)**
 d. What are the functions of Cell Loss Priorty in ATM cell header format **(4Marks)**
 e. List four (4) advantages of the small, fixed-sized cells of ATM network **(4Marks)**

2a. Outline the classes of service defined for ATM network **(5Marks)**
 b. Explain the provisions of available Bit rate as a service class of ATM network **(4Marks)**
 c. Distinguish between Constant Bit rate and Variable Bit Rate service classes of ATM network **(6Marks)**

3a. Explain what these ATM parameters estimate **(5Marks)**
 (i)  Cell Loss Ratio (ii) Cell Transfer Delay  (iii) Peak Cell Rate
 b. What is the usefulness of admission control scheme in a network **(6Marks)**
 c. Highlight the functions of Usage Parameter Control in ATM network **[4Marks]**

4a. When is a network said to experience congestion **(3Marks)**
 b. List seven (7) benefits of ATM network **(7Marks)**