INSTRUCTIONS:

1. Answer Question 1 (Compulsory) and ANY other two questions
2. Candidates are advised not to write on the question paper
3. Candidates must hand in their answer booklets to the invigilator while in the examination room
QUESTION ONE: (30 MARKS)

a) In your own way, explain how data traverses from one end to another in a network. (2 marks)
b) Data Communication channels are present in a number of platforms. Enumerate them (2 marks)
c) “Performance of network depends on the channel”. Discuss it with different transmission media. (5 marks)
d) Differentiate between a protocol and an interface in regard to data communication (4 marks)
e) Explain the following:-
   i. Synchronous Transmission. (2 marks)
   ii. Asynchronous Transmission (2 marks)
   iii. Ethernet (2 marks)
f) Discuss any two types of errors that occur during digital transmission. (2 marks)
g) Explain the various Network topologies with aid of neat diagrams in each case (9 marks).

QUESTION TWO: (20 MARKS)

a) Distinguish between Internet and intranet (3 marks)
b) Discuss all the six basic hardware components used in construction of any network. (6 marks)
c) Discuss the protocols employed in packet switching (9 marks)
d) What is a Packet sniffer (1 mark).

QUESTION THREE: (20 MARKS)

a) What are some of the security concerns of conducting business on the e-platform (10 marks)
b) How would you encounter these stated concerns technologically or otherwise (10 marks)

QUESTION FOUR: (20 MARKS)

a) Define routing? (2 mark)
b) Discuss Shortest path and equal distance measure routing algorithms (9 marks)
   i. How do you enforce the following (9 marks)
      ii. Availability
      iii. Confidentiality
      iv. Integrity
QUESTION FIVE : (20 MARKS)

1. Discuss the following giving illustration on how they interrelate:-

   a. HTTP  
   b. WWW  
   c. DNS  

   a) Discuss ANY FOUR document management centre’s or libraries you are aware of that inappropriate information security almost brought the business its knees  

   (11 marks)