For Questions involving code, do NOT write FULL programs- write main code segments and associated declarations (Format: 15 marks theory, 10 marks programming)

Answer more than one question on each page of your booklet

1. What is meant by physical communication in the Internet protocol stack? Give an
    example.   [2]

2. In RDT FSM diagrams, why are two packet numbers (0,1) used for the case where BOTH the data
    and ACKS, NAKS can get corrupted? Explain.   [3]

3. (a)   Briefly describe the following TWO fields of an IPV4 packet:

        (i) flags (ii) type of service.   [4]

    (b) In a class A network, explain how the number of possible networks and the number of
         valid hosts are calculated. Show your working. Do not use a calculator.   [4]

4. Explain the concept of time division multiplexing (TDM) for communication.   [2]

5. (a) Write a small section of code to show how a **UDP** socket can be set up on port 1210 at a
        server.   [3]

    (b) Assume that a server program has been created using **UDP** on port 1210. An integer variable,
         ans is being sent from the client to the server.

         Write a small section of code to receive the client message and do some processing. Add one to
         a counter called **valid** whenever the value of **ans** is 10. If **ans** is not 10, add one to the variable
         invalid.   [7]

End of CW Test 2 (Total Marks 25)