FACULTY OF ENGINEERING
B.E. CSE (AI & DS) IV–Semester (AICTE) (Main & Backlog) (New) Examinations,
September / October 2023

Subject: Computer Networks

Time: 3 Hours   Max. Marks: 70

Note: (i) First question is compulsory and answer any four questions from the
remaining six questions. Each questions carries 14 Marks.
(ii) Answer to each question must be written at one place only and in the same
order as they occur in the question paper.
(iii) Missing data, if any, may be suitably assumed.

1. (a) What are the components of a data communication system?
   (b) What is the significance of the twisting in twisted-pair cable?
   (c) Write about Piggybacking Protocol.
   (d) Write a short notes about IPV4 Header.
   (e) Given a fragmented datagram (in IPv4) with an offset of 120, how can you determine
       the first and last byte numbers?
   (f) Are both UDP and IP unreliable to the same degree? Why or why not?
   (g) Write a short notes about SNMP

2. (a) What is transmission medium? What are the different types of transmission medium?
   (b) How do the layers of the Internet model correlate to the layers of the OSI model?

3. (a) Write about Redundancy, Detection versus Correction, Forward Error Correction
       versus Retransmission.
   (b) Write about ALOHA Protocols.

4. (a) What are the functions of a RIP message?
   (b) Why do OSPF messages propagate faster than RIP messages?

5. (a) What is congestion ?Explain the concept of Improving techniques.
   (b) In cases where reliability is not of primary importance, UDP would make a good
       transport protocol. Give examples of specific cases.

6. (a) Explain the RSA Algorithm?
   (b) What is an FQDN?

7. Write short notes on the following
   (a) Microwaves and Infrared.
   (b) Stop and Wait protocol.
   (c) Token bucket algorithm.

******