

END SEMESTER EXAM 2024

SEMESTER 3 : INTEGRATED M.Sc. PROGRAMME COMPUTER SCIENCE

COURSE : 21UP3CPSTA01 :PROBABILITY AND STATISTICS

Time: 2 hours

Marks: 100

Section A

1. What is the name given to the smaller ISPs connected to one or more national ISPs?
2. In the hierarchy of internet service providers, at which level do regional ISPs reside?
3. What is the primary function of local internet service providers?
4. Can local ISPs establish connections directly with national ISPs?
5. What type of network does a local ISP typically provide services to?
6. List the three main types of local ISPs.
7. How many marks protocol define what is communicated?
8. what are the two characteristics of timing in protocol?

Section B

1. What does syntax refers to?
2. How fast can the data be transferred to the receiver?
3. Differentiate between regional and local internet service providers in terms of their position within the ISP hierarchy and the scope of services they offer.
4. Explain the purpose of each of the three key elements of a protocol: syntax, semantics, and timing, and provide an example for each.

5. Describe the benefits and challenges associated with having an open and competitive market for equipment manufacturers in the field of data and telecommunications technology.
6. Highlight the significant roles of standards in ensuring the national and international compatibility of data and telecommunications technology and processes.

Section C

1. Contrast the roles of regional and local internet service providers in providing internet connectivity to end users and discuss the factors that influence the choice of ISP for an individual or organization.
2. Compare and contrast the concepts of protocol and standard, explaining how a standard is derived from a protocol and the role of organizations like IEEE and IETF in the standardization process.