

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 are regional ISPs, and where do they fit in the internet service provider hierarchy?
2. What is the role of local ISPs, and how do they connect to other ISPs?
3. Define the term 'protocol' in the context of computer networks.
4. What are the three key elements of a protocol, and what do they define?
5. Explain the concept of syntax in a protocol and provide an example.
6. What is semantics in a protocol, and how does it determine the meaning of data?
7. What does timing refer to in a protocol, and why is it important in data communication?
8. Define standards in the context of data and telecommunications technology.

Section B

1. What is the significance of standards in creating an open market for equipment manufacturers?
2. How do standards ensure national and international interoperability of data and telecommunications?

3. Discuss the differences between regional ISPs and local ISPs in terms of their scope and connectivity.
4. Explain the hierarchy of internet service providers, identifying the different levels and their relationships.
5. Describe the three key elements of a protocol: syntax, semantics, and timing.
6. Discuss the importance of standards in data and telecommunications technology, highlighting their benefits for equipment manufacturers and users.

Section C

1. Explain how standards facilitate national and international interoperability of data and telecommunications technologies and processes.
2. Discuss the advantages and disadvantages of having multiple local ISPs in a region.