

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2025
(Fourth Semester)

Branch – **COMPUTER TECHNOLOGY**

COMPUTER NETWORKS

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 List the uses of Computer Networks.
- 2 Define Network structure.
- 3 What is the difference between circuit switching and packet switching?
- 4 List the types of transmission in networking.
- 5 What is the function of the Medium Access Control (MAC) sublayer?
- 6 What are the main functions of the Data Link Layer?
- 7 State any two functions of the Network Layer.
- 8 Differentiate between TCP and UDP.
- 9 What is the role of the Presentation Layer?
- 10 What are the main components of an email system?

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Explain the various types of network structures with examples.
OR
b Explain the various types of network services with examples.
- 12 a Discuss the different types of transmission media used in networking.
OR
b Enumerate the theoretical basis for data communication.
- 13 a Explain the design issues in the Data Link Layer.
OR
b Describe the ALOHA protocol and its types.
- 14 a Explain the working of Remote Procedure Call (RPC)
OR
b Explain the techniques used in congestion management.
- 15 a Discuss Abstract Syntax Notation and its use in network communication.
OR
b Discuss the components of Electronic Mail (Email).

Cont...

SECTION - C (30 Marks)

Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Explain the OSI Reference Model.
- 17 Explain the key components, techniques, and advantages of Digital Transmission in communication systems.
- 18 Describe how Error detection and correction is performed.
- 19 Discuss the steps involved in establishing and managing the connection.
- 20 Explain the various techniques used in data compression.

Z-Z-Z

END