

8251

M.SC. (IT) IIIrd SEMESTER EXAMINATION, 2019

COMPUTER NETWORKS

Paper – I

Time: Three Hours

Maximum Marks: 80

PART – A (खण्ड – अ)

[Marks: 20]

Answer all questions (50 words each).

All questions carry equal marks.

सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न का उत्तर 50 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART – B (खण्ड – ब)

[Marks: 40]

Answer five questions (250 words each).

Selecting one from each unit. All questions carry equal marks.

प्रत्येक इकाई से एक-एक प्रश्न चुनते हुए, कुल पाँच प्रश्न कीजिए।

प्रत्येक प्रश्न का उत्तर 250 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART – C (खण्ड – स)

[Marks: 20]

Answer any two questions (300 words each).

All questions carry equal marks.

कोई दो प्रश्न कीजिए। प्रत्येक प्रश्न का उत्तर 300 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART – A

- Q.1 (i) What is a protocol?
- (ii) List various types of communication medium.
- (iii) Differentiate between half duplex and full duplex.
- (iv) What is Parity Check?
- (v) What is Multiplexing?
- (vi) What is circuit switching?
- (vii) What is Ethernet?
- (viii) Differentiate between a Bridge and a Switch?
- (ix) What is multicasting?
- (x) What is MIME?

PART – B

UNIT –I

- Q.2 (a) List and explain various design issues in a typical Network Architecture.
- (b) Differentiate between connectionless and connection oriented services giving suitable examples.

- Q.3 (a) What is Nyquist Bandwidth? What does it convey about the channel capacity?
- (b) Discuss Transmission Impairments.

UNIT -II

- Q.4 (a) List various methods of transmitting digital data using analog signals. Explain any one in detail giving suitable examples.
- (b) Explain Asynchronous and Synchronous transmission giving suitable examples.
- Q.5 What is flow control? Explain various flow control techniques giving suitable examples.

UNIT -III

- Q.6 Explain the concept of Circuit Switched Networks and their working?
- Q.7 Explain the working of Packet Switching giving suitable examples.

UNIT -IV

- Q.8 Explain the IEEE 802 Reference Model giving suitable examples.
- Q.9 What are the drawbacks of L2 Switch? How are they overcome in L3 Switch? Explain.

UNIT -V

- Q.10 Explain Connectionless Internetworking.
- Q.11 Explain IPv6 and its main features.

PART – C

Q.12 Explain the OSI reference model giving suitable illustration. How is it different from TCP/IP Model?

Q.13 List various methods of Error Control in data transmission and explain any one in detail.

Q.14 Write short notes on –

(a) SS7

(b) X.25

Q.15 List and explain various LAN protocols giving suitable illustrations.

Q.16 Write short notes on –

(a) SMTP

(b) UDP

(c) HTTP
