

OFFICE OF THE CENTRAL EXAMINATION RAJARSHI JANAK UNIVERSITY End Semester Examination, 2022

Bachelor of Science in Computer Science and Information Technology

Course Title: Data Communication and Computer Network

Year/Semester: Second/ III Course Code: SCIT-205

Full Marks: 60 Pass Marks: 24 Time: 3 hours Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

[Group A]

[5x2 = 10]

Very short answer questions:

What is attenuation?

Define CSMA

What is pure ALOHA and Slotted ALOHA?

Differentiate between IPV4 and IPV6.

Define Cryptography

[Group B]

Short answer questions: (Attempt any Six)

[6x5 = 30]

Differentiate between Go-Back-N-ARQ and Selective-Repeat-ARQ.

Explain about leaky bucket algorithm.

Differentiate between Packet Switching and Circuit Switching.

List and explain the two basic types of ISDN Services.

18. Define Data Communication. Explain different types of Guided media with examples.

1 L'Explain various error detection and correction mechanism used in computer network.

2. Write short notes on:

Distance Vector Routing Protocol

b. Multiplexing

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[Group C]

Long answer questions: (Attempt any Two)

[2x10=20]

3. Draw and explain the OSI reference model for network.

14. What is framing? List all methods used for framing and explain any two methods used for framing in detail.

18. Subnet the class C IP address 195.1.1.0 so that you have at least 2 subnets each subnet must have room for 48 hosts. What are the two possible subnet masks?



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Full Marks: 60 Pass Marks: 24

Candidates are required to give their answers in their own words as far as practicable. The figures Time: 3 hours Year/Semester: Second /III

Group B

[6x5=30]

Shory odestions (any six):

A Distinguish between IPV4 and IPV6.

Man is IP address? Find out the class Network ID, Host ID for the given IP address 12. State and explain security mechanism related to data confidentiality and data integrity. A56,26.30.32).

A Priceentiate between Guided Media and Unguided Media.

What is Distance Vector Routing Protocol? Explain with example.

16. Describe the role of SMTP and HTTP U

7, Write short notes on:

Packet Switching

of Checksum,

[Group C]

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[2x10=20]

Long questions (any two):

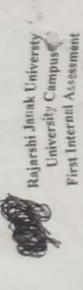
What is Classful addressing? Discuss Class A, Class B, Class D and Class E address with its range in decimal dotted notation and example.

19. What is Sliding Window? Explain Go back N protocol in detail

Why layered architecture is preferred in communication? Explain OSI model in detail.

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Second Year/First Semester

Program: BSc.CSIT

Full Marks; 30 Pass Marks: 12 Subject: Data Communication and Computer Networking Tine: 1:30 hrs

Vear: 2076

Group A

Very short Questions:

Attempt all Questions

The data link layer takes the packet from this layer and encapsulates them into frame for 5x1=5 transflussion

Which of the following task is not done by data link layer?

Framing.

c. Error Control

Flow Control CRC stands for

3

d_Channel Coding

3 Cyclic Redundancy Check

d. Cyclic Repeat Check c. Code Repeat Check

Code redundancy Check

Which data communication method is used to send data over a serial communication link?

c half-duplex

d, all of these

Full duplex Simplex

In OSI network architecture, the routing is performed by c-Network layer d. Session Layer

Transport layer Data link layer

Group B

Short Questions:

5x3=15

Why computer network is important? Differentiate between Go-Back-N-ARQ and Selective-Attempt all Questions

What are the services provided by data link layer? Explain any one methods of framing and flow

Explain the working principle of different types of network devices Repeater, Switch and Router. in

What is bit stuffing? Why it is done explain with an example. 4 0

2x5=10

Long Questions:

Explain the guided and unguided transmission media and compare it with examples 1. What do you mean by OSI model? Explain functionalities of each layer. Attempt any Two

What is multiplexing? Explain about TDM and FDM.