

**R16****Code No: 136 FT****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, May - 2019****PRINCIPLES OF COMPUTER COMMUNICATIONS AND NETWORKS****(Common to CE, EEE, ME, CSE, IT)****Time:3 hours****Max.Marks:75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A**(25 Marks)**

- 1.a) What is computer communication system? [2]
- b) List the uses of computer in communication. [3]
- c) What are the advantages of multiplexing? [2]
- d) Give a note on application layer protocol. [3]
- e) How are analog signals transmitted? [2]
- f) What is analog signal in data communication? [3]
- g) Write the main functions of the data link layer. [2]
- h) List the different types of wireless communication with applications. [3]
- i) What are connectors? [2]
- j) Draw the bridge protocol architecture. [3]

PART-B**(50 Marks)**

- 2.a) List and explain the types of computer networks. [5+5]
- b) Explain the telephone system and data communications. [5+5]

OR

- 3.a) Give a brief note on network standards. [5+5]
 - b) Describe the applications of networks. [5+5]
4. List and explain the OSI Reference models in detail. [10]

OR

- 5.a) Explain the communication service methods and data transmission modes. [5+5]
 - b) Discuss the analog and digital communications. [5+5]
6. List and explain the characteristics of analog signals. [10]

OR

- 7.a) Why are digital signals better than analog signals? Explain. [5+5]
- b) How do you convert an analog signal to a digital signal? Discuss. [5+5]

8.Explainthephysicaland electricalcharacteristicsofwire. [10]

OR

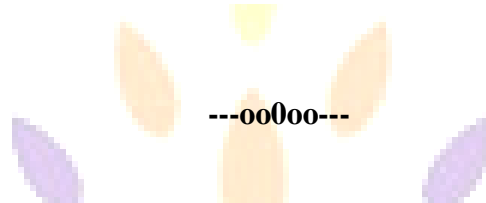
9.Draw andexplainthefiberoptic media. [10]

10.a)CompareandcontrastSwitchesVsRouters.

b)Giveabrief noteonrepeaters. [5+5]

OR

11.Listandexplainthetypesof In-DeviceandInter-DeviceConnectors.[10]



Q.P Code: EC41210E

Hall Ticket No.:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NARSIMHAREDDY ENGINEERING COLLEGE
(UGC AUTONOMOUS)

IV B.Tech I Semester (NR20) Supplementary Examination, May/June 2025

PRINCIPLES OF COMPUTER COMMUNICATIONS AND NETWORKS

(Common to CSE, CSE (CS), CSE (AI&ML), CSE (DS))

Time : 3 hours

Maximum marks: 75

- Note:**
- This question paper contains two parts A and B
 - Part A is compulsory which carries 25 marks (1st 5 sub questions are one from each unit carry 2 Marks each & Next 5 sub questions are one from each unit carry 3 Marks). Answer all questions in Part A
 - Part B Consists of 5 Units. Answer any one full question from each unit. Each question carries 10 Marks and may have a, b sub questions

Part-A (25 Marks)
Answer all questions

Q.No	Question	M	CO	BL
1)	a. Define computer communication system.	2	CO1	L1
	b. Recall the terms reliability and interoperability.	2	CO1	L1
	c. Give brief note on application layer protocol.	2	CO1	L1
	d. Explain data transmission modes.	2	CO1	L2
	e. Define data rate.	2	CO2	L1
	f. Compare analog and digital systems.	3	CO2	L2
	g. Mention the electrical characteristics of wire.	3	CO2	L1
	h. What is the medium access control sub layer?	3	CO2	L1
	i. Recall the usage of repeater in networking.	3	CO3	L1
	j. Write a short note on PC cards.	3	CO3	L1

Part-B (50 Marks)
Answer all the Units
All Questions carry equal Marks

Q.No	Question	M	CO	BL
UNIT-I				
2)	a. Describe the telephone system and data communications.	5	CO1	L2
	b. Write a note on computer communications and networking.	5	CO1	L2
OR				
3)	a. Brief out the network addressing and routing.	5	CO1	L2
	b. Explain the network standards.	5	CO1	L3
UNIT-II				
4)	Illustrate the network architecture and the OSI reference model with suitable sketches.	10	CO1	L3
OR				
5)	a. Give a brief note on communication service methods and data transmission modes.	5	CO1	L2
	b. Discuss about computer applications.	5	CO1	L2

Page 1 of 2

UNIT-III					
6)	a.	How do you represent a data as digital signals? Explain.	5	CO2	L2
	b.	Explain the concept of representing data as an analog signal.	5	CO2	L2
OR					
7)	With neat diagram explain the digital carrier systems.			10	CO2 L3
UNIT-IV					
8)	a.	Discuss the data link layer and its applications in detail.	5	CO2	L2
	b.	Outline the concept of wireless communications.	5	CO2	L2
OR					
9)	Write a short note on the following: (i) Copper media (ii) Fiber optic media.			10	CO3 L3
UNIT-V					
10)	a.	Give a brief note on repeaters.	5	CO3	L2
	b.	Compare switches and routers.	5	CO3	L4
OR					
11)	a.	Discuss about transceivers and media converters used in network establishment.	5	CO3	L2
	b.	Analyze the various connectors used in networking.	5	CO3	L4

--oo0oo--