SUBJECT: UNDERGRADUATE COURSE CURRICULUM2023-24

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PART-A: Introduction Program: Diploma Course Class: B. Sc. Semester- Year:2023 Session									
	-8-			III					
1	Cou	urse Code CSSE-1T							
2	Cou	arse Title	Computer Networks						
3	Cou	irse Type		Discipline Elective Course (DSE)					
4	Pre	re-requisite(if,any) As per Government norms / Institutional scheme							
5	Course Learning. Outcomes (CLO)		After completion of this course, the students will be able to:						
9			 Understand the basic computer network technology. Understand and explain the data communication system and its 						
			components.						
-			 Identify the different types of network topologies and protocols. Understand the layers of the OSI model and TCP/IP. Expose wireless and wired LANs. 						
6	Cre	dit Value	04(03	Theory & 01 Practical)					
7	Tot	al Marks	Max.	Marks: 100	Min Pa	ssing Mark	s: 40		
A	RT .	B: Content of t	he Cou	rse					
				No. of Teaching-learning -	Hours-45				
TI	nit			Topics (Course contents)	i		No. of Hour		
U.	mit	Introduction to o	omputer	network and physical laye					
		Computer network	k fundam	fundamentals and types of computer Networks(LAN, MAN,					
	1	WAN). Wireless	and wire	ed networks, broadcast and	d point to point networks, 12				
		direction of data	flow, Ne	flow, Network Topologies, ISO-OSI reference model, TCP/IP					
		model, Concept of Analog and Digital Signal, Transmission mode: Simplex, Half							
		Duplex, Full Duplex, Transmission Media: Twisted pair, Coaxial Cable, Fiber-							
		optics, Wireless transmission (radio, microwave, infrared).							
		Data link and Network layer:							
1	п	Functions at Data Link Layer, Framing, Error detection and correction codes: checksum, CRC, hamming code, Flow Control: Stop and Wait and Sliding Window							
		checksum, CRC, h	namming						
		Protocols, Data link protocols: HDLC and PPP, SLIP, Network Layer Design							
		issues, services provided to transport layer, internal organization of Network Layer,							
_		Functions of Network Layer. Common Network Architecture:							
		Common Networ	sport Layer, IP protocol, Internetworking basics, IP address,						
I	П	Introduction to 7	CP/UDF	protocols and their com	parison. Repea	ters, Hubs	bs, 11		
		Bridges Switche	TCP/UDP protocols and their comparison. Repeaters, Hubs, es, Router, Gateway, Protocol Stack for Example Networks,						
		Connection oriented and Connectionless N/Ws, Ethernet, Wireless LANs, Broad Band Networks: Integrated Service Digital Networks (ISDN), Broad Band ISDN,							
		ATM, Introduction to Very Small Aperture Terminal (VSAT).							
		Application layer: Features and functions of application layer, World Wide Web (www), Domain							
	IV								
	V	Name System (DNS), E-mail, File Transfer Protocol (FTP), Hyper Text Transfer Protocol (HTTP), Email Protocols: MIME and SMTP, POP, SNMP, IMAP, Telnet							
		Protocol (HTTP),	Email Pr	9					
		- Remote Communication Protocol, Proxy Server, Proxy Web Servers, Working of							
		Internet application	ns.						
еин	vords	Network, DNS, OS	SI. protoco	ols.					
-yn	0743	premorn, Ding, Oc	, protoct						

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PART-C (CSSE-1T)

Learning Resources: Text Books, Reference Books and Others

Text Books:

- Data Communications and Networking, B. A. Forouzan, TMH, (Latest Edition).
- Computer Networks, A. S. Tanenbaum, 4th Edition, Pearson Education/PHI.
- Data and Computer Communications, W. Stallings, 5th Edition, PHI/ Pearson Education.

Reference Books:

- Computer Networking -A top-down approach featuring the internet, Kurose and Rose, Pearson Education.
- Communication Networks, Walrand, TMH (Latest Edition).
- Internetworking with TCP/IP, vol. 1, 2, 3, Daglous E. Comer, 4th Edition Pearson Education/PHI.

Online Resources / e-learning resources:

- https://faculty.ksu.edu.sa/sites/default/files/computer_networks a tanenbaum -5th_edition.pdf
- https://csc-knu.github.io/sys-prog/books/Andrew%20S.%20Tanenbaum%20-%20Computer%20Networks.pdf

PART - D: Assessment and Evaluation

Maximum Marks:	ensive Evaluation (CCE):	Marks Marks Marks	
Internal Assessment: Continuous Comprehensive Evaluation (CCE)	Class Test : 02 of 10 Marks ea Assignment : 01 of 10 Marks	out of 10) ar out of 10) sh	the marks obtained in both tes and marks obtained in assignment all be considered against 20 ernal assessment
Semester End Exam (SEE):	Paper (Two section – A & B) Section A: Objective and Short a Section B: Descriptive answer ty	er type quest	ions : 10 + 10 = 20 Marks

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