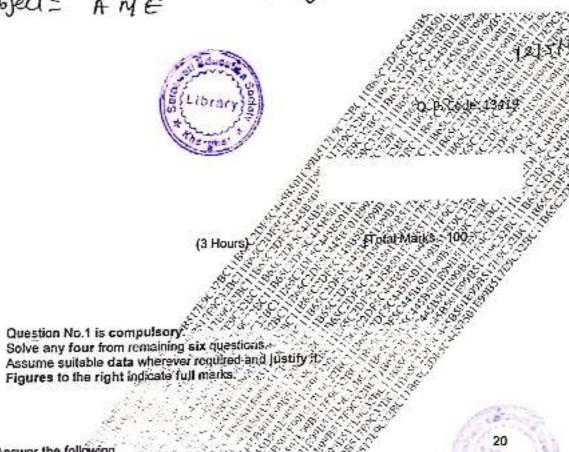
BE- Setn III - Extc-Rev / May June 2017 Subject= AME



1.	(a)	Answer the following Prove that scattering matrix is symmetrical and reciprocal:	17010
	(b)	Evolain 1-dB compression point.	3
	(c)	What are the characteristics of power amplifiers?	A 40
	(d)	Derive the expression of overall noise figure in three cascaded stages of amplifiers.	100
2.	(a)	Explain in detail stability criteria for microwave amplifier.	10
0.400		in the sale and appropriate desired	10
	(b)	Explain two methods of broadband amplifier design.	
		Title E-madration methods	10
3,	(a)	Discuss amplifier linearization methods. Discuss various mixer topologies. Compare performance of them.	10
	(p)	4PAPA 4PB 2PB 2PB 2PB 2PB 2PB 2PB 2PB 2PB 2PB 2	
4.		A GaAs FET has the following S-parameter and noise parameters at 1.0 GHz. ($Z_0 = 50 \Omega$), $S_{11} = 0.61 \angle -155^\circ$; $S_{12} = 0.52 \pm 0.00$, $S_{21} = 0.51 \angle -20^\circ$	20
28		$S(\Omega)$, $S_{11} = 0.61 \angle 1.00^\circ$, $S_{N} = 4\Omega$. Design a Low noise amplifier for a noise $F_{min} = 3dB$, $\Gamma_{min} = 0.45 \angle 180^\circ$, $S_{N} = 4\Omega$. Design a Low noise amplifier for a noise	
		figure of 3.5dB and power gain of 16dB.	

Turn Over

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Derive the transducer power gain as:

 $G_T = \frac{P_L}{P_{avg}} = \frac{|S_{21}|^2 (1 - |\Gamma_s|^2) (1 + |\Gamma_b|^2)}{|1 - \Gamma_s \Gamma_{in}|^2 |1 + |S_{22} \Gamma_b|^2}$

Compare microwave amplifiers with microwave oscillators

Discuss the steps of Microwave oscillator design using GaAs FE7.

Define and explain noise correlation metrix for general noise two port network What is congruence transformation?

Write short notes on (any two) Power distributed amplifiers Noise figure test equipment Microwave resonators.

(a) (b) 20



EXTC / TNM | CBSGS / Bern VIII / May 2017

[Time: Three Hours]

Q.P. Code:17001

[Marks:80]

		Affects of	
		Please check whether you have got the right question paper.	
		N.B: 1. Q.1 is compulsory	
		Solve any three questions out of remaining.	
		3. Assume suitable data if necessary stating it clearly	
Q.1.	al.	What is CIMAP in network managements)5
Q.1.	b)	What is MIB?)5
	c)	Compare between SNMPv1 and SNMPv3?)5
	d)	Describe Code Book Reasoning based event correlation technique?)5
Q.2	a)	You are administering the 24000 workstations in an organization. You are pinging each station periodically. The message size in both directions is 128 bytes long. The NMS you are using is on a 10-Mbps LAN, which functions with 30% efficiency. What would be the frequency of your ping if you were not to exceed 5% overhead?	10
	b)	List and describe SNMP various commands with command syntax.	10
Q.3	a)	With respect to ISO/OSI network management: Describe following terms: i. Scoping and Filtering ii. Linked Replies iii. GDMO iv. ACSE and ROSE	10
	b)	Draw a neat diagram of TMN functional architecture with interfaces	10
Q.4	a)	List and describe RMON2 MIB Groups and their functions.	10
	b)	What is SNMP proxy server?	10
Q.5	a)	What is ASN.1? Explain in detail.	10
	b)	Draw and describe SNMP message and PDU formats.	10
Q.6	a)	Explain the significance of Trap. Describe the different types of traps.	10
	b)	What is ATM Network management?	10

EXTC/ VIII / REV/SC/ 18/5/17



Q.P. Code: 13560

Total Marks: 100

(Time: 03 Hours)

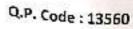
Note:- 1) Question No 1 is compulsory

- 2) Attempt any four questions from question No 2 to 7
- 3) Assume suitable Data Wherever necessary and justify the same
- 4) Draw neat sketches/diagrams wherever Necessary.

Q.No.1. Answer the following (any four)

(a) State and explain Keplerian Elements set?	
(b) What is meant by Station keeping? How it is different from "Attitude Control"? 5 (c) Give classification of satellites based on the satellites have described in the satellites based on the satellites have described in the satellites based on the satellites have described in the satellites based on the satellites and the satellites have described in the satellites and the satellites are satellites are satellites and the satellites are satellites are satellites and the satellites are satellites and the satellites are satellites are satellites are satellites and the satellites are satel	5
(c) Give classification of satellites based on their orbital positions?	
(d) Briefly explain Polarization techniques for satellite signals	5
(e) What are the differences between This R	5
(e) What are the differences between Thin Route and Thick route FDMA method?	5
Q.No.2. (a) What Are Look angles and how they are determined?	
(b) Draw block diagram of Double Convert	10
(b) Draw block diagram of Double Conversion Transponders and explain each block?	10
Q.No.3. (a) Explain 1) VSAT 2) DBS systems	
	10
(b) What are various antenna used in satellite communication and its T, T and C subsystems.	10
Q.No.4. (a) What is space qualification and reliability of satellite subsystems?	
(b) Compare	10
(b) Compare	
i) Power requirements of TDMA and FDMA	
ii) Geosynchronous and geostationary earth orbits	
	10
Q.No.5. (a) Why LNA is kept just behind the satellite receivers? Also discuss various losses in satellite communication system	e P
	10
(b) Explain with the help of block diagram block diagram of transmit receive earth station	
ansmit receive earth station	10
· In	TO

(P.T.O)



Q. No. 6. (a) Derive the overall [C/No] equation of combined uplink and downlink and discuss the effect of Intermodulation products on this overall C/No value.

(b) Discuss and draw channel arrangement and explain use of CSC for "SPADE" system

Q.no. 7. Write short notes on any two:

(a) Satellite launching methods

(b) Telemetry, tracking and command sub system

c) Explain TWTA



EXTC / VIII / CBSGS / SCN/24.05.2017

T4928 / T1826 SATELLITE COMMUNICATION & NETWORKS

Q.P. Code :16614

(Time 3 Hours)

[Total marks: 80]

			-
NB:	1) (Question number 1 is compulsory	
200		Answer any three questions out of remaining questions	
	3)	Answer the questions with suitable diagrams	
		Assume suitable data wherever necessary	7
	"	and surface during which eyes necessary.	
1	A -	ways and Phys	
, I	(a)	Why the 'Earth sensors' are not used for sensing the 'Yaw' axis in GEO satellites?	20
	(b)	The state of the s	1
	(c)	body stabilization, generate more power. Justify:	
	(d)	Differentiate between window & frame organization.	4
	(e)	the feeder cable?	
	(f)	Explain with diagram what is "Umbra" and "penumbra"? How it is affecting satellite operation?	
2	(a)	What are the different antenna tracking techniques of geostationary satellite?	10
	(b)	Discuss in detail Telemetry, tracking and command with necessary block diagram.	10
3	(a)	What are the main considerations in the design of an earth station? And how the earth stations are classified?	10
	(b)	Explain the need of placing LNA next to Antenna, Calculate over all C/N Ratio for satellite if [C/N], uplink = 25db & [C/N], downlink = 20db Intermodulation Noise = 12db	10
4	(a)	LINCHSS LICESTEIL COMMINGER CONTRACTOR OF COMMINGER CO	10
		for Transmit and receive earth station and explain. Compare Pre- assigned FDMA and Demand assigned FDMA	05
	b)	Explain TDMA frame structure.	05
3		Explain on board connectivity with Transparent processing.	10
	a)	and tradal for eatellites Network also discuss layoring principle.	05
1. 100	5)	Why TWT amplifier is Preferred for satellite communication?	05
V. +		Last series on any Four-	20
		Short notes on any Four- Optical satellite Transmitter and receiver	
(8)	Optical satellite Transmitter and Comparison of DS-CDMA, FH-CDMA and TH-CDMA.	1
(6)	Comparison of Do Comparison	13
(c) _3	Launching Mechanism Reliability and space qualification test	35

EXTC / SEM VIII (REV.) / WN/30-5-17 EXTC / SEM VIII (REV.) / WN/30-5-17 T4918 / T1687 B.E.(ELECTRONICS & TELE COMMN)(SEM VIII) WIRELESS NETWORK.

Q.P. Code :09769

	25/23	[Marks : 100
	[Time: 3 Hours]	
	Please check whether you have got the right question paper.	
	N.B: 1. Question.No.1 is compulsory. 2. Attempt any four questions from remaining. 3. Assume suitable data if required.	\
	S Library S	.05
Q. 1		05
	b) Explain the term ESS & BSS in IEEE 802.11	
	c) What is CDMA 2000	05
	d) Discuss the role of 3G system	
	 a) Differentiate between frequency – hopping & direct sequence spread spectrum 	n 10
Q. 2		10
	b) Explain forward and Reverse link in CDMA – 2000	
Q. 3	a) Explain Zigbee technology and also discuss the N/W topology used in Zigbee	10
	b) What is UMTS? List important features & UMTS air interface.	10
Q. 4	a) Explain power control in CDMA	10
	Explain in detail various terms used in Bluetooth	10
2. 5	a) What is RFID? Discuss some of its application	10
*	b) What is Wi - MAX Differentiate between Wi - Fi & Wi - MAX	10
. 6	a) Write a note on Wireless sensor Network	10
	b) With diagram Explain Link budget analysis for GSM	10
7	a) Explain hidden and exposed node problem in WN	10
	b) Explain imode and what is different between WAP & imode.	10

EXTC/SEM WIII / CBSGS/IRVC/30-5-17

T4928 / T1827 B.E.(ELECTRONICS & TELE COMMN ENGG)(SEM VIII) (CBSGS) INTERNET & VOICE COMMUNICATION

Q. P. Code: 13298 (3 Hours) (Total Marks: 80 N.B. : (a) Question No.1 is compulsory. (b) Total 4 questions need to be solved. (c) Attempt any three questions from remaining five questions. (d) Assume suitable data wherever necessary, justify the same. Explain any one method to improve QoS. 1.a 1.b In the TCP state transition diagram, why do we have the TIME-WAIT state and [5] why is its value equal to 2MSL? [5] Why SSH is preferred over TELNET? Explain. 1.c Explain the fields that are related to fragmentation and reassembly of an IPv4 1.d [5] [5] Discuss how Hypertext Transfer Protocol (HTTP) is used to access data on the 2.a [10] 2.b Explain FTP in detail. Mention its limitation and justify how these limitations are overcome in TFTP. [10] 3.a Explain how TCP controls the congestion in the network using different strategies. An ISP is granted a block of addresses starting with 150.80.0.0/16. The ISP wants 3.b [10] to distribute these blocks to 2600 customers as follows: [10] The first group has 200 medium-size businesses; each needs approximately The second group has 400 small businesses; each needs approximately 16 The third group has 2000 households; each needs 4 addresses. Design the sub blocks and give the slash notation for each sub block. Find out how many addresses are still available after these allocations. Explain in detail RTP packet format. 4.a Explain the transition states of TCP with a neat diagram. 4.b [10] [10] Explain how voice is transmitted over packet switched network using H.323. 5.a Explain various characteristics of real-time audio/video communication. 5.b [10] [10] Discuss the different types of addresses used in the TCP/IP protocol. (a) The transport layer is responsible for process-to-process delivery of the (b) [5]

Discuss DHCP operation when the client and server are on the same

entire message. Justify your answer.

Discuss the two message access agents in brief

network or on different networks.

6

(c)

(d)

[5]

[5]

[5]