### J & K BOARD OF TECHNICAL EDUCATION

**MJ23** 

Semester:-6<sup>th</sup> (New)

ROLL No:\_\_\_\_

(10\*2=20)

**Branch:- ELECTRONICS & COMM. ENGG** 

	Max Marks:-100 Time: 03 Hours	
	Instructions: 1. Attempt any Five Questions. ALL QUESTIONS CARRY EQUAL M	ARKS
7 a	Q 1(a)Write down the applications of Magic Tee?	(05)
15) (1)	Q 1(b) what are applications of microwaves?	(05)
์ไว	Q 1(e) Write down the operation of Travelling wave Tube	(10)
	Q 2 (a) What is an IMPATT diode explain its operation and applications?	(10)
	Q 2(b) Give the classification of microwaves in terms of frequency bands?	(10)
	Q 3(a) Explain in detail why the performance of tubes deteriorate at high frequency?	(10)
	Q 3(b) Explain TE,TM mode in a waveguide?	(10)
	Q 4(a) what is cutoff wavelength and guide wavelength of a rectangular waveguide?	(10)
	Q 4(b) What is a horn antenna and write down its features?	(10)
(2)	Q 5(a) Explain the phenomenon of tropospheric Duct propagation.	(10)
	Q 5(b) what is microwave Isolator? what is its usein microwave communication?	(10)
(B)	Q 6(a) Draw block diagram to explain the operation of Microwave communication link s	system? (10)
	Q.6(b) Draw the block diagram and explain the operation of M,TI Radar system?	(10)
	Q 7(a)Write down the radar range equation and explain its various parameters.	(10)
5	Q 245) Explain the application of VSAT	(5)
	Of Write down the characteristics of Dish Antenna?	(5)
	Q 8(a) Explain the operation of radar system?	(10)
1	Q 8(b) Draw the block diagram and explain the operation of basic pulsed radar system?	(10)
	Q 9 (a) what are microwave junctions?	(10)
	Q 9(b) What is an antenna and mention different types of antennas used at microwave	frequencies? (10)
$\wedge$	Q 10 Explain briefly any two of the following	(10)
(1)	a) Maximum unambiguous range.	
ب) ك	Troposphere and its properties.	
60	c) Applications of Gunn Diode.	
/	d) Microwave Circulator.	
		(10*2-20)

## J AND K BOARD OF TECHNICAL EDUCATION

**MJ23** 

ROLL No:\_\_\_\_\_

Semester:-6<sup>th</sup> (New)

Branch:- ALL (Except Civil Engg)

Subject:- BASICS OF MANAGEMENT

Max Marks:-100 Time: 03 Hours

Note:- Attempt any five Questions. All Questions carry equal marks.		
Q4(a) Explain the term 'Management'. What are the various functions of management	ent?	(12)
Q4(a) Explain the term initial agent of the state of the		(80)
(b) Explain the importance of departmentalization.		(12)
Q2(a) What are the various types of industrial organizations? Explain.		(80)
(b)Explain the Hierarchical Management Structure.		
(b)Explain the Hierarchical Management Culture. What is the significance of a Q3(a) State and explain the components of Culture. What is the significance of a		(15)
healthy work culture in an organization?		(05)
(b) Define Individual and group behaviour.		(12)
(b) Define Individual and group benefits.  Q4(a) Explain the need of Leadership. What are the qualities of a good leader?		(80)
And the transplant amanager and a leader.		
(b) Differentiate between a manager and solution and its characteristics. What are the factors that affect Q5(a)Define motivation and its characteristics.	象	(10)
motivation.		(10)
(b)Explain Maslow's Need Hierarchy Theory of Motivation.		(12)
O6(a) Define wage payment. What are the types of wage payment:		(08)
when the interpretation with the help of an example.		(12)
Q7(a) Define Purchasing. Explain the procedure followed for purchasing.		(08)
hotween marketing and selling.		•
(b)Differentiate between marketing the processes :Manpower Planning, recruitment and selection.		(15)
to the time (IIT)		(05)
(b)Define Just in time (317).  Q9(a) Explain the terms Income Tax, Sale Tax, Excise duty and Provident Fund.		(10)
(b)What is total quality management ? Explain		(10)
(b)What is total quality management		
Q10 Write short notes on any two.  (a)Intellectual property rights  (b)Customer Relationship Management	104	10-201
(c)Minimum Wages Act 1948 (d)Preventive Maintenance	(2X1	10=20)
(C)IVIII III TOO.		

Ral No : 63375

# J & K BOARD OF TECHNICAL EDUCATION

**MJ23** 

ROLL No:\_

10x2

Subject:- WIRELESS AND MOBILE COMMUNICATION  Wax Marks:-100  Time: 03 Hours  Instructions: 1. Attempt any Five Questions. ALL QUESTIONS CARRY EQUAL MARKS  (A) (a) Draw the frequency spectrum of wireless communication. 08 (b) Describe the paging system in cellular communication. 05 (c) List four applications of wireless communication. 05 (d) (a) Describe Doppler effect with regard to propagation of a signal in cellular communication. 08 (d) (a) Give the concept of frequency reuse in cellular mobile communication. 08 (d) (e) Define cell splitting. 04 (e) Define cell splitting. 04 (f) Describe Frequency Polysion of improvement of coverage and capacity in mobile communication. 05 (g) (a) Explain with example cell sectoring for improvement of coverage and capacity in mobile communication. 05 (g) (a) Give a comparative study of CDMA and FDMA techniques used in mobile communication. 05 (e) What function does BTS do? 06 (f) (a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication. 06 (d) Define a PN code. 06 (e) What function of wi-Fi. 07 (f)	Rranch:-ELECTRONICS & COMM. EN	Branch:-ELECTRONICS & COMM. ENGG			
Instructions: 1. Attempt any Five Questions. ALL QUESTIONS CARRY EQUAL MARKS    1	Comester:-6" (New)				
Instructions: 1. Attempt any Five Questions. ALL QUESTIONS CARRY EQUAL MARKS    1	AND MORILE COMMUNICATION				
Instructions: 1. Attempt any Five Questions. ALL QUESTIONS CARRY EQUAL MARKS  01/a) Draw the frequency spectrum of wireless communication.  b) Describe the paging system in cellular communication.  c) List four applications of wireless communication.  b) What is fading? Explain  03. a) Give the concept of frequency reuse in cellular mobile communication.  b) How does power control help in reducing the interference in cellular communication?  c) Define cell splitting.  04. a) Explain with example cell sectoring for improvement of coverage and capacity in mobile communication.  b) What is co-channel interference? Explain  b) Escribe Frequency Division Multiple Access Techniques in detail.  b) Describe Frequency Division Multiple Access Technique in detail.  c) Define a PN code.  c) What function does BTS do?  05.  c) What function does BTS do?  07. a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  b) Define Soft Handoff.  08. a) Explain briefly DTH with regard to mobile communication system.  b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  09. a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication.  Cordless Telephone System	Max Marks:-100				
b) Describe the paging system in cellular communication. c) List four applications of wireless communication. list four decidence of the propagation of a signal in cellular communication. list four applications of wireless in cellular mobile communication. list four decidence of the propagation of a signal in cellular communication. list four decidence of communication. list four decidence of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of suppl	THE CAPPY FOUAL MARKS				
b) Describe the paging system in cellular communication. c) List four applications of wireless communication. list four decidence of the propagation of a signal in cellular communication. list four applications of wireless in cellular mobile communication. list four decidence of the propagation of a signal in cellular communication. list four decidence of communication. list four decidence of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of coverage and capacity in mobile communication. list four decidence of supplier in the propagation of suppl	Instructions: 1. Attempt any Five Questions. ALL QUESTIONS CARRY	07			
b) Describe the paging system in cellular distributions of wireless communication.  c) List four applications of wireless communication.  2) a) Describe Doppler effect with regard to propagation of a signal in cellular communication.  8) b) What is fading? Explain  3. a) Give the concept of frequency reuse in cellular mobile communication.  8) How does power control help in reducing the interference in cellular communication?  9) Copefine cell splitting.  9) A a) Explain with example cell sectoring for improvement of coverage and capacity in mobile communication.  13 communication.  14 b) What is co-channel interference? Explain  15 communication.  16 b) Describe Frequency Division Multiple Access Techniques.  16 c) What function does BTS do?  17 communication.  18 c) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  19 c) Define soft Handoff.  10 c) What function of GPRS system  11 c) What does GSM and GPS stand for?  12 c) what does GSM and GPS stand for?  13 c) What is the range of a pager?  14 c) Explain any two of the following with regard to wireless communication.  15 communication.  16 c) Cordless Telephone System		08			
c) List four applications of wireless communication.  Q2 a) Describe Doppler effect with regard to propagation of a signal in cellular communication.  8 b) what is fading? Explain  Q3. a) Give the concept of frequency reuse in cellular mobile communication.  8 b) How does power control help in reducing the interference in cellular communication?  9 c) Define cell splitting.  Q4 a) Explain with example cell sectoring for improvement of coverage and capacity in mobile communication.  9 b) What is co-channel interference? Explain  9 b) Explain with example cell sectoring for improvement of coverage and capacity in mobile communication.  9 b) What is co-channel interference? Explain  9 b) Explain Explain Solution Multiple Access Techniques.  9 b) Describe Frequency Division Multiple Access Technique in detail.  9 c) Describe Frequency Division Multiple Access Technique used in mobile communication.  9 c) Describe a PN code.  9 c) What function does BTS do?  9 c) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  9 c) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  9 b) List all functions of wi-Fi.  9 c) what does GSM and GPS stand for?  9 a) Give an introduction of GPRS system  b) List daily use applications of RFID  10 c) What is the range of a pager?  11 Cordless Telephone System	L) Describe the paging system in cellular community	05			
Describe Doppler effect with regard to proposed to be what is fading? Explain  Q3. a) Give the concept of frequency reuse in cellular mobile communication.  Describe cell splitting.  Q4. a) Explain with example cell sectoring for improvement of coverage and capacity in mobile communication.  Describe Explain with example cell sectoring for improvement of coverage and capacity in mobile communication.  Describe Frequency Division Multiple Access Techniques.  Describe Frequency Division Multiple Access Techniques used in mobile communication. Of the Describe application of CDMA and FDMA techniques used in mobile communication. Of the following Spread Spectrum Technique as used in cellular communication.  Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  Define Soft Handoff.  Q8. a) Explain briefly DTH with regard to mobile communication system.  Describe in detail functions of wi-Fi.  C) what does GSM and GPS stand for?  Q9 a) Give an introduction of GPRS system  b) List daily use applications of RFID  C) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  O8  Describe Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  O9  O9  O9  O9  O9  O9  O9  O9  O9  O	c) List four applications of wireless communication.	12			
Define a PN code.  C) What is requency Division Multiple Access Techniques used in mobile communication.  Of a) Give a comparative study of CDMA and FDMA techniques used in mobile communication.  Of a) Define a PN code.  C) What function does BTS do?  Of a) Explain briefly DTH with regard to mobile communication system.  D) List all functions of wi-Fi.  C) what does GSM and GPS stand for?  Of Silve a range of a pager?  Of Silve a range of a pager?  Of Cordless Telephone System	Describe Doppler effect with regard to propagation of a signal in condition	08			
<ul> <li>Q3. a) Give the concept of frequency reuse in centual many does b) How does power control help in reducing the interference in cellular communication?  c) Define cell splitting.  Q4 a) Explain with example cell sectoring for improvement of coverage and capacity in mobile communication.  b) What is co-channel interference? Explain  Describe Frequency Division Multiple Access Technique in detail.  b) Describe Frequency Division Multiple Access Technique in detail.  Q6) a) Give a comparative study of CDMA and FDMA techniques used in mobile communication. Opposition as PN code.  c) What function does BTS do?  Q7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  D) Define Soft Handoff.  Q8) a) Explain briefly DTH with regard to mobile communication system.  b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  Q9) a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  13</li> </ul>	What is fading? Explain	08			
b) How does power control field in 1987 (2) Define cell splitting.  Q4 a) Explain with example cell sectoring for improvement of coverage and capacity in mobile communication.  b) What is co-channel interference? Explain  b) What is co-channel interference? Explain  communication.  b) What is co-channel interference? Explain  cost a) List all types of Multiple Access Techniques.  b) Describe Frequency Division Multiple Access Technique in detail.  Q6) a) Give a comparative study of CDMA and FDMA techniques used in mobile communication.  c) What function does BTS do?  Q7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  b) Define Soft Handoff.  Q8) a) Explain briefly DTH with regard to mobile communication system.  b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  c) what does GSM and GPS system  b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication	b) What is rounged of frequency reuse in cellular mobile communication?	80			
c) Define cell splitting.  Q4 a) Explain with example cell sectoring for improvement of coverage and capacity in House  (A) a) Explain with example cell sectoring for improvement of coverage and capacity in House  (B) What is co-channel interference? Explain  (B) What is co-channel interference? Explain  (B) A List all types of Multiple Access Techniques.  (B) Describe Frequency Division Multiple Access Technique in detail.  (C) B Define a PN code.  (C) What function does BTS do?  (D) Define Soft Handoff.  (D) Defi	b) How does nower control help in reducing the interference in cellular comments.	04			
communication.  b) What is co-channel interference? Explain  Q5 a) List all types of Multiple Access Techniques.  b) Describe Frequency Division Multiple Access Technique in detail.  c) Describe Frequency Division Multiple Access Technique in detail.  c) Define a PN code.  c) What function does BTS do?  Q7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  c) Define Soft Handoff.  Q8) a) Explain briefly DTH with regard to mobile communication system.  b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  Q9) a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  15  Cordless Telephone System  16  17  18  19  19  10  10  10  10  10  10  10  10	a) Define cell splitting.	3			
communication.  b) What is co-channel interference? Explain  Q5 a) List all types of Multiple Access Techniques.  b) Describe Frequency Division Multiple Access Technique in detail.  c) Describe Frequency Division Multiple Access Technique in detail.  c) Define a PN code.  c) What function does BTS do?  Q7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  c) Define Soft Handoff.  Q8) a) Explain briefly DTH with regard to mobile communication system.  b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  Q9) a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  15  Cordless Telephone System  16  17  18  19  19  10  10  10  10  10  10  10  10	OA a) Explain with example cell sectoring for improvement of coverage and days	13			
b) What is co-channel interference? Explain  05 05 a) List all types of Multiple Access Techniques.  b) Describe Frequency Division Multiple Access Technique in detail.  comparative study of CDMA and FDMA techniques used in mobile communication.  05 05 09 09 09 09 09 09 09 09 09 09 09 09 09	insting				
b) Describe Frequency Division Multiple Access Technique in detail.  Q6) a) Give a comparative study of CDMA and FDMA techniques used in mobile communication. 09  b) Define a PN code. c) What function does BTS do?  Q7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication. b) Define Soft Handoff.  Q8) a) Explain briefly DTH with regard to mobile communication system. b) List all functions of wi-Fi. c) what does GSM and GPS stand for?  Q9) a) Give an introduction of GPRS system b) List daily use applications of RFID  c) What is the range of a pager? Q10) Explain any two of the following with regard to wireless communication 3) Cordless Telephone System  Cordless Telephone System		05			
b) Describe Frequency Division Multiple Access  Q6) a) Give a comparative study of CDMA and FDMA techniques used in mobile communication.  Q5 b) Define a PN code.  C) What function does BTS do?  Q7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  Q8) Define Soft Handoff.  Q8) a) Explain briefly DTH with regard to mobile communication system.  D) List all functions of wi-Fi.  C) what does GSM and GPS stand for?  Q9 a) Give an introduction of GPRS system  b) List daily use applications of RFID  C) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  3) Cordless Telephone System	ps at the all types of Multiple Access recrimques.				
b) Define a PN code. c) What function does BTS do?  O7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication. b) Define Soft Handoff.  O8) a) Explain briefly DTH with regard to mobile communication system. b) List all functions of wi-Fi. c) what does GSM and GPS stand for?  O9) a) Give an introduction of GPRS system b) List daily use applications of RFID c) What is the range of a pager? O10) Explain any two of the following with regard to wireless communication 3) Cordless Telephone System	b) Describe Frequency Division Multiple Access Technique in detail.	on. 09			
b) Define a PN code. c) What function does BTS do?  O7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  O Define Soft Handoff.  O8) a) Explain briefly DTH with regard to mobile communication system. b) List all functions of wi-Fi. c) what does GSM and GPS stand for?  O9) a) Give an introduction of GPRS system b) List daily use applications of RFID c) What is the range of a pager?  O10) Explain any two of the following with regard to wireless communication  OCORDINATION OF THE PROPERTY OF THE PROPERT	OC) a) Give a comparative study of CDMA and FDMA techniques used in mobile	Q5			
c) What function does BTS do?  O7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  OB Define Soft Handoff.  O8) a) Explain briefly DTH with regard to mobile communication system.  b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  O9) a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  O10) Explain any two of the following with regard to wireless communication  3) Cordless Telephone System	b) Define a PN code.	06			
O7) a) Describe in detail Frequency Hopping Spread Spectrum Technique as used in cellular communication.  OB) Define Soft Handoff.  OB) Define Soft	c) What function does BTS do?				
communication.  Define Soft Handoff.  Q8) a) Explain briefly DTH with regard to mobile communication system.  b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  Q9) a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  Cordless Telephone System	To-beigne as used in cellular	15			
communication.  Define Soft Handoff.  Q8) a) Explain briefly DTH with regard to mobile communication system.  b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  Q9) a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  Cordless Telephone System	OZI 2 Describe in detail Frequency Hopping Spread Spectrum Technique as discussion				
Define Soft Handoff.  Q8) a) Explain briefly DTH with regard to mobile communication system.  b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  Q9) a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  Cordless Telephone System	communication.	05			
O8) a) Explain briefly DTH with regard to mobile communication (b) List all functions of wi-Fi.  c) what does GSM and GPS stand for?  O9) a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  O10) Explain any two of the following with regard to wireless communication  3) Cordless Telephone System	/	10			
b) List all functions of wi-Fi. c) what does GSM and GPS stand for? O9) a) Give an introduction of GPRS system b) List daily use applications of RFID c) What is the range of a pager? O10) Explain any two of the following with regard to wireless communication Cordless Telephone System	OS) a) Explain briefly DTH with regard to mobile communication system.	05			
c) what does GSM and GPS stand for?  O9) a) Give an introduction of GPRS system  b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  Cordless Telephone System	b) List all functions of WI-FI.	05			
b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  Cordless Telephone System	a) what does GSM and GPS stand for?	08			
b) List daily use applications of RFID  c) What is the range of a pager?  Q10) Explain any two of the following with regard to wireless communication  3) Cordless Telephone System	portal Give an introduction of GPRS system	07			
c) What is the range of a pager? Q10) Explain any two of the following with regard to wireless communication 3) Cordless Telephone System	b) List daily use applications of RFID	05			
Q10) Explain any two of the following with regard to wheless commences commences and two of the following with regard to wheless commences commences are commenced as a commence of the following with regard to wheless commences are commenced as a commence of the following with regard to wheless commences are commenced as a commence of the following with regard to wheless commences are commenced as a commence of the following with regard to which the following with regard to which the following with regard to the following with regard to which the following with regard to the follow		3,			
Cordless Telephone System	010) Explain any two of the following with regard to wireless comments				
a) co	Cordless Telephone System				
b) Adjacent channel interference	- hannal interference				
and the aboligue		10			

d) Advantages of cellular mobile communication

## J & K BOARD OF TECHNICAL EDUCATION

#### MJ23

ROLL No:\_\_\_\_

Semester:-6 <sup>th</sup> (New) Branch:- ELEC	CTRONICS & COMM. ENGG
Subject:- OPTICAL FIBER COMMUNICATION (ELECTIVE)	
Max Marks:-100 Time: 03 Hou	urs
Instructions: 1. Attempt any Five Questions. ALL QUESTIONS CAR	RY EQUAL MARKS
Q.No Va. Draw block diagram of Fiber optic communication System	n 10
b. What are the advantages, applications of a optical fibe	er 10
O No 2 a Charaka Comparison between step index (ther with grad	ed index fiber, 10
b.What do you mean by an optical light source? How man	ly types of optical light source are there.
	10
Q No3, a. Explain working of SOA briefly	10
b. Write short note on Noise in Optical fiber	10
Q.N04. Write note on(any two)	10×2
& Photo Diode	
Principle of Penetration	
c. Graded Index Fiber	
Q.No5. a. What is numerical aperture? What is its significance in fil	ber optics? 10
b. How can we reduce the scattering losses	10
Q.No6. a. Explain the principle of operation of LASER diode.	10
b.Explain dispersion and its types in detail.	10
	й,
Q.No 7 a. Explain the Splicing techniques used in optical Fiber.	10
Q:No 7 a. Explain the Splicing techniques used in optical Fiber.  b. What is the operational difference between LED and LAS	SER 10
Q.No & a. What are the different modes of propagation used in op	otical fiber 10
	/ 10
bexplain the basic operation of optical amplifier.	,
Q. No. 2/a Explain the operation of Photo Diode	10
b.Explain scattering losses in detail,	10
Q.No. 10 Explain the terms briefly with respect to optical fibers (a	ny Two) 10x2

A. Noise in Detectors

b. Critical Angle

c. Effect of dispersion on the data rate

#### J & K BOARD OF TECHNICAL EDUCATION

**MJ23** 

ROLL No:\_\_\_\_

Semester:-6<sup>th</sup> (New)

Branch:- ELECTRONICS & COMM. ENGG

Subject:- COMPUTER NETWORKS

Max Marks:-100

Time: 03 Hours

·		
Instructions: 1. Attempt any Five Questions. ALL QUESTIONS CARRY EQUAL MARKS		
01 a) Explain LAN, MAN and WAN as used in computer networks.	80	
b) List 4 main network topologies? Briefly explain any two	08	
c) Define circuit switching	04	
O2)a) Describe the functions of Data-link and Network layer with regard to OSI model.		
b) Which layer is responsible for reliable connection? Explain	06	
c) Explain the need of IP address.	06	
a) Give the concepts of physical and logical addressing with regard to TCP/IP	10	
/ b) Define Sub netting.	05	
Give an example of one class of IP addressing.	05	
	03	
Q4 a) Explain the 1000 MBPS Gigabit Ethernet.	08	
b) What are the features of ISDN.	07	
c) Define Public switching telephone network.	05	
	05	
Q5 a) List all types of network connectivity devices.	05 <sup>4</sup> .	
b) Describe the functions of MODEMS and Routers.	10	
c) Where is multiplexer used? Explain	05	
	03	
Q6/a) What is Huffman coding and how is it used?	10	
b) What is RAID management? Explain	10	
	10	
a) Why do we use cryptography? Explain?	00.	
中, Briefly explain Wi-fi-? (	08	
d) Define a wireless JAN.	07	
	05	
Q8) a) List all network troubleshooting techniques.		
b) Describe in detail IPCONFIG and NETSTAT as troublesheeting to all the second	05	
-7.8	10	
c) What is a TRACEROOT?		
	05	
Q9) a) Explain the functions of ARC Net		
b) Describe in detail VOIP	10	
	10	
Q10) Explain any two of the following		
a) IPV6 packet format		
b) Server Management		
c) Bluetooth Technology		
d) Need and function of MODEMS		
, made and function of MODEMS	10x	