

# University of Mumbai

## Examination 2020 under cluster 4 (PCE)

Program: BE Electronics and Telecommunication

Curriculum Scheme: Rev2012

Examination: Final Year Semester VII

Course Code: ETC703 and Course Name: Optical Communication Network

Time: 1 hour

Max. Marks: 50

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Note to the students: - All the Questions are compulsory and carry equal marks.

Q1.	Connectors in optical fiber communication should have _____
Option A:	Low coupling Loss
Option B:	More coupling Loss
Option C:	Low strength
Option D:	High cost
Q2.	The angle of incident at which the refracted ray is travel along the surface and the angle of refraction is 90 degree ,then this angle is called
Option A:	Acceptance angle
Option B:	Angle of refraction
Option C:	Angle of reflection
Option D:	Critical angle
Q3.	When the light ray travels from one medium (air) to another medium (glass) then the bending of light ray takes place,phenomenon is called
Option A:	Angle of incidence
Option B:	Angle of reflection
Option C:	Angle of refraction
Option D:	Acceptance angle
Q4.	Splicing techniques is use for _____
Option A:	Permanent joinging between two fibers.

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Option B:	Temporary joining between two fibers.
Option C:	Joining between two Copper wires.
Option D:	Temporary joining between two Copper wires.
Q5.	The Linear scattering effects are
Option A:	Non- Elastic in nature.
Option B:	Elastic in nature.
Option C:	Electrical in nature.
Option D:	Mechanical in nature.
Q6.	Intermodal dispersion occurring in a large amount in multimode step index fiber causes
Option A:	Pulse broadening at output
Option B:	Attenuation of waves
Option C:	Microbending in the fiber
Option D:	Macrobending in the fiber
Q7.	The effects of intrinsic absorption can be reduced by
Option A:	Ionization
Option B:	Suitable choice of core and cladding components
Option C:	Radiation
Option D:	Melting
Q8.	Stimulated Raman scattering is normally a
Option A:	Forward process
Option B:	Backward process

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Option C:	Forward and backward direction
Option D:	Downward process
Q9.	Which amongst the following describes the energy-level occupation for a semiconductor in thermal equilibrium ?
Option A:	Boltzmann distribution function
Option B:	Probability distribution function
Option C:	Fermi-Dirac distribution function
Option D:	Cumulative distribution function
Q10.	How is p-n junction obtained to have Population Inversion?
Option A:	Heavy doping of p-type material
Option B:	Heavy doping of n-type material
Option C:	Light doping of p-type material
Option D:	Heavy doping of both p-type and n-type material
Q11.	What happens when optical emission takes place as electric fields are applied?
Option A:	Radiation
Option B:	Efficiency
Option C:	Electro-luminescence
Option D:	Magnetron oscillator
Q12.	How can extrinsic semiconductor be made?
Option A:	Refractive index is decreased
Option B:	Doping the material with impurities
Option C:	Increase the band-gap of the material

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Option D:	Stimulated emission
Q13.	As the collision of photon takes place with the excited atom and the stimulated emission of second photon takes place, what happens in the laser?
Option A:	Light amplification
Option B:	Attenuation
Option C:	Dispersion
Option D:	Population inversion
Q14.	Current transmission and multiplexing standard for high speed signals in North America.....
Option A:	SONET
Option B:	SDH
Option C:	TELNET
Option D:	PDH
Q15.	In SONET/SDH the service restoration time is
Option A:	less than 60 ms
Option B:	greater than 60 ms
Option C:	equal to 60 ms
Option D:	infinte
Q16.	In SONETthe term STS stands for _____
Option A:	synchronous Digital Hirearchy
Option B:	synchronous Transport Module
Option C:	Synchronous Transport Signal
Option D:	Basic SONET SPE

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Q17.	In optical network Optical layer OC (light path layer) are_____
Option A:	point- to-point connections
Option B:	end-to-end connections
Option C:	point- to- multipoint connections
Option D:	Multi end-to-single end connections
Q18.	Due to simplicity ---- are used
Option A:	Star network
Option B:	Bus network
Option C:	Ring network
Option D:	T network
Q19.	Which of the following are not the element of Access Network
Option A:	Hub
Option B:	Remote Node
Option C:	Network Interface Unit
Option D:	EDFA
Q20.	The network connecting Remote Node RN and Network Interface Units NIU is called as
Option A:	Frame Network
Option B:	Distribution Network
Option C:	Exchange Network
Option D:	Guiding Network

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Q21.	A common example of broad cast network is
Option A:	Cable network
Option B:	Radio Network
Option C:	Telephone Network
Option D:	Marketing Network
Q22.	The goal of performance management is to enable service providers to provide guaranteed .....to the users of their network.
Option A:	Quantity of service
Option B:	Quality of service
Option C:	Types of services
Option D:	No services
Q23.	What is essential to operate and maintain any network?
Option A:	Protocol management
Option B:	Account management
Option C:	Network management
Option D:	Bandwidth management
Q24.	Intermodal dispersion arises only....., where the different modes travel with different velocities.
Option A:	in multimode fiber
Option B:	in single mode fiber
Option C:	in step index fiber
Option D:	in graded index fiber
Q25.	Which of the following depends upon the amount of signal coupling from one channel to other?

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Option A:	Channel width
Option B:	Insertion loss
Option C:	Crosstalk
Option D:	Power penalty

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	A
Q2.	D
Q3.	C
Q4	A
Q5	B
Q6	A
Q7	B
Q8.	C
Q9.	C
Q10.	D
Q11.	C
Q12.	B
Q13.	A
Q14.	A
Q15.	A
Q16.	C
Q17.	B
Q18.	C
Q19.	D
Q20.	B
Q21.	A
Q22.	B
Q23.	C
Q24.	A
Q25.	C