Chettinad College of Engineering & Technology
Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

Department of Electronics and Communication Engineering

EC8008 PHOTONIC NETWORKS

Multiple Choice Questions Bank

UNIT-IV: PACKET SWITCHING AND ACCESS NETWORKS

1. A local telephone network is an example of a _____ network.
a) Packet switched
b) **Circuit switched**
c) Bit switched
d) Line switched
Answer: (b)

2. Most packet switches use this principle _____
a) Stop and wait
b) **Store and forward**
c) Store and wait
d) Stop and forward
Answer: (b)

3. If there are N routers from source to destination, the total end to end delay in sending packet P(L-> number of bits in the packet R-> transmission rate) is equal to _____
a) N
b) **(N*L)/R**
c) (2N*L)/R
d) L/R
Answer: (b)

4. What are the Methods to move data through a network of links and switches?
a) Packet switching and Line switching
b) Circuit switching and Line switching
c) Line switching and bit switching
d) **Packet switching and Circuit switching**
Answer: (d)

5. Integrated technology for optical devices is developed within optical fiber communication.
a) True
b) False
Answer: (a)

6. When both active and passive devices are integrated on a single chip, in multilayered form, then these devices are known as _____
a) **IP devices**
b) IO devices
c) Wavelength converters
d) Optical parametric amplifiers
Answer: (a)

7. Using SOI integration technique _____ components can be coupled to IP devices.
a) Passive
b) Layered
c) Demounted
d) Active
Answer: (d)

8. Compositional and structural differences between photonic and electronic devices _____
a) Provide high efficiency
b) Provide low efficiency
c) Highly used
d) **Create problems**
Answer: (d)

9. An optical power splitter integrated with optical waveguide amplifier is more useful.
a) True
b) False
Answer: (a)

10. When there is M number of WDM channels present at N input ports, then the output port 1 produces a _____
a) CW signal
b) WDM signal
c) Amplified signal
Answer: (b)

11. _____ are the array of switches which forms circuit switching fabrics.
a) Packet arrays
b) **Optical cross connects**
c) Circuit arrays
d) Optical networks
Answer: (b)

12. _____ provides efficient designation, routing, forwarding, switching of traffic through an optical packet-switched network.
a) Label correlation
b) **Multiprotocol label switching**
c) Optical correlation
d) Routing
Answer: (b)

13. A strategy used for increasing the bitrate of digital optical fiber systems beyond the bandwidth capabilities of the drive electronics is known as _____
a) **Optical time division multiplexing**
b) Electrical time division multiplexing
c) Frequency division multiplexing
d) Code division multiplexing
Answer: (a)

14. _____ are the devices which are employed to eliminate the laser chirp.
a) **Optical intensity modulators**
b) Demodulators
c) Circulators
d) Optical Isolators
Answer: (a)

15. In _____ the microwave frequency are modulated with an optical carrier and transmitted using a single wavelength channel.
a) **Subcarrier multiplexing**
b) TDM
c) FDM
d) Code division multiplexing
Answer: (a)

16. A Multiplexer _____ several transmission streams while a demultiplexer _____ them
a) Combines, separates
b) Combines, encrypts
c) Separates, encrypts
Answer: (a)

17. HFC contains _____
a) Fiber cable
b) Coaxial cable
c) **A combination of Fibre cable and Coaxial cable**
d) Twisted Pair Cable
Answer: (c)

18. Among the optical-distribution architectures that are essentially switched Ethernet is _____
a) AON
b) PON
c) NON
d) MON
Answer: (a)

19. Home Access is provided by _____
a) DSL
b) FTTP
c) Cable
d) **All of the mentioned**
Answer: (d)

20. ONT is connected to splitter using _____
a) High speed fiber cable
b) HFC
c) **Optical cable**
d) Twisted pair cable
Answer: (c)

21. What are the two topologies for broadcast networks?
a) Bus, star
b) Star, m*esh*
c) Bus, mesh
d) Bus, ring
Answer: (a)

22. In OTDM network the interleaving done by
a) Bit by bit basis
b) Packet by packet basis
c) **Both a & c**
d) None of the above
Answer: (c)

23. What is the operation of Synchronization?
a) Aligning of two pulses
b) Measuring of pulses
c) Modulation of pulses
Answer: (a)

24. What are the functions of routing node?
a) Synchronization
b) Headed Recognition
c) Buffering
d) **All the above**
Answer: (d)

25. Which are the types of OTDM Testbeds
a) ATMOS
b) AON
c) TBON
d) **All the above**
Answer: (d)

26. What are the elements of access network?
a**) Hub, RNs, NIUs**
b) Hub, RNs
c) RNs, NIUs
d) Hub, Switch, NIU
Answer: (a)

27. The Network between the hub and RN is called
a) **Feeder network**
b) Distribution network
c) Switched network
Answer: (a)

28. The Network between the RN and NIU is called
a) Feeder network
b) Distribution network
c) Switched network
Answer: (b)