All the Multiple Choice Question and Answer (MCQs) have been compiled from the books of Data Communication and Networking by the well known author behrouz A forouzan.

This Data Communication and Networking – **SONET/SDH** multiple choice Questions and Answers (MCQ) PDF covers the below lists of topics.

1. Advanced Mobile Phone System (AMPS) Multiple Choice Question and Answer.
2. Digital AMPS (D-AMPS) Multiple Choice Question and Answer.
3. Global System for Mobile Communication (GSM) Multiple Choice Question and Answer.
4. Interim Standard 95 (IS-95) Multiple Choice Question and Answer.
5. satellite network Multiple Choice Question and Answer.
6. geosynchronous Earth orbit (GEO) Multiple Choice Question and Answer.
7. Global Positioning System (GPS) Multiple Choice Question and Answer.

Practice now to sharpen your concept.

1. _____ **is a standard developed by ANSI for fiber-optic networks.**
   A. SONET
   B. SDH
   C. either (a) or (b)
   D. neither (a) nor (b)

2. _____ **is a standard developed by ITU-T.**
   A. SONET
   B. SDH

C. either (a) or (b

D. neither (a) nor (b

3. **SONET has defined a hierarchy of signals called _____**

A. STSs

B. STMs

C. either (a) or (b)

D. neither (a) nor (b)

4. **SDH has defined a hierarchy of signals called _____.**

A. STSs

B. STMs

C. either (a) or (b)

D. neither (a) nor (b)

5. **An _____ signal is the optical modulation of an STS-n (or STM-n) signal.**

A. OC-n

B. TDM-n

C. FDM-n

D. none of the above

6. **SONET defines _____ layers.**

A. two

B. three

C. four

D. five

7. **SONET is a _____ TDM system**

A. asynchronous
B. synchronous
C. statistical
D. none of the above

8. **A SONET system can use _____**
A. STS multiplexers
B. regenerators
C. add/drop multiplexers
D. all of the above

9. **SONET sends _____ frames per second**
A. 1000
B. 2000
C. 4000
D. 8000

10. **In SONET each frame lasts _____ microseconds**
A. 20
B. 64
C. 128
D. none of the above

Answer key for MCQ SET- 1	
Q-1	Correct Answer :SONET
Q-2	Correct Answer :SDH
Q-3	Correct Answer :STSs
Q-4	Correct Answer :STMs
Q-5	Correct Answer :OC-n

Q-6	Correct Answer :four
Q-7	Correct Answer :synchronous
Q-8	Correct Answer :all of the above
Q-9	Correct Answer :8000
Q-10	Correct Answer :none of the above

SONET- SDH MCQ Set-2

1. An STS-1 frame is made of _____ rows
   A. 1
   B. 9
   C. 90
   D. none of the above

2. An STS-1 frame is made _____ columns
   A. 1
   B. 9
   C. 90
   D. none of the above

3. An STS-3 frame is made of _____ rows
   A. 1
   B. 9
   C. 27
   D. none of the above

4. An STS-3 frame is made of _____ columns
   A. 9

B. 90
C. 270
D. none of the above

5. **SONET network topologies can be _____**
   A. linear
   B. ring
   C. mesh
   D. all of the above

6. **A linear SONET network can be _____**
   A. point-to-point
   B. multipoint
   C. either (a) or (b)
   D. neither (a) nor (b)

7. **A ring SONET network can be _____**
   A. unidirectional
   B. bidirectional
   C. either (a) or (b)
   D. neither (a) nor (b)

8. **To make SONET backward-compatible with the current hierarchy, its frame design includes a system of**.
   A. OCs
   B. STMs
   C. STSs
   D. VTs

9. A _____ is a repeater
   A. regenerator
   B. ADM
   C. STS multiplexer/demultiplexer
   D. none of the above

10. _____ allow insertion and extraction of signals
   A. regenerators
   B. ADMs
   C. STS multiplexer/demultiplexers
   D. none of the above

Answer key for MCQ SET- 2	
Q-1	Correct Answer :9
Q-2	Correct Answer :90
Q-3	Correct Answer :9
Q-4	Correct Answer :270
Q-5	Correct Answer :all of the above
Q-6	Correct Answer :either (a) or (b)
Q-7	Correct Answer :either (a) or (b)
Q-8	Correct Answer :VTs
Q-9	Correct Answer :regenerator
Q-10	Correct Answer :ADMs

SONET- SDH MCQ Set-3

1. A _____ is the optical link connecting two neighbor devices.
   A. section

B. line
C. path
D. none of the above

2. A _____ is the portion of the network between two multiplexers.
A. section
B. line
C. path
D. none of the above

3. A _____is the end-to-end portion of the network between two STS multiplexers
A. section
B. line
C. path
D. none of the above

4. The _____ layer is responsible for the movement of a signal from its optical source to its optical destination
A. section
B. line
C. path
D. photonic

5. The ____ layer is responsible for the movement of a signal across a physical line.
A. section
B. line
C. path
D. photonic

6. The _____ layer is responsible for the movement of a signal across a physical section
    A. section
    B. line
    C. path
    D. photonic

7. The _____ layer corresponds to the physical layer of the OSI model
    A. section
    B. line
    C. path
    D. photonic

8. An STS multiplexer is a _____ device
    A. one-layer
    B. two-layer
    C. three-layer
    D. four-layer

9. An add/drop multiplexer is a _____ device
    A. one-layer
    B. two-layer
    C. three-layer
    D. four-layer

10. A regenerator is a _____ device
    A. one-layer

B. two-layer
C. three-layer
D. four-layer

Answer key for MCQ SET- 3	
Q-1	Correct Answer :section
Q-2	Correct Answer :line
Q-3	Correct Answer :path
Q-4	Correct Answer :path
Q-5	Correct Answer :line
Q-6	Correct Answer :section
Q-7	Correct Answer :photonic
Q-8	Correct Answer :four-layer
Q-9	Correct Answer :three-layer
Q-10	Correct Answer :two-layer

SONET- SDH MCQ Set-4

1. In SONET, for each frame, the bytes are transmitted _____
   A. from left to the right, top to bottom
   B. from right to the left, bottom to top
   C. from left to the right, bottom to top
   D. from right to the left, top to bottom

2. In SONET, for each byte, the bits are transmitted _____
   A. from least significant to the most significant
   B. from most significant to the least significant

C. two at a time
D. three at a time

3. Each _____ in a SONET frame can carry a digitized voice channel
   A. bit
   B. byte
   C. frame
   D. none of the above

4. The section overhead consists of _____ octets
   A. 1
   B. 6
   C. 9
   D. 18

5. Line overhead consists of _____ bytes
   A. 1
   B. 6
   C. 9
   D. 18

6. The path overhead consists of _____ bytes
   A. 1
   B. 6
   C. 9
   D. 18

7. In _____ APS, there are normally two lines: one working line and one protection line. Both lines are active all the time
    A. one-plus-one
    B. one-to-one
    C. one-to-many
    D. none of the above

8. In _____ APS, there is one working line and one protection line. The data are normally sent on the working line until it fails.
    A. one-plus-one
    B. one-to-one
    C. one-to-many
    D. none of the above

9. In _____APS, there is only one protection line for many working lines. When a failure occurs in one of the working lines, the protection line takes control until the failed line is repaired
    A. one-plus-one
    B. one-to-one
    C. one-to-many
    D. none of the above

Answer key for MCQ SET- 4	
Q-1	Correct Answer :from left to the right, top to bottom
Q-2	Correct Answer :from most significant to the least significant
Q-3	Correct Answer :byte
Q-4	Correct Answer :9
Q-5	Correct Answer :18

Q-6	Correct Answer :9
Q-7	Correct Answer :one-plus-one
Q-8	Correct Answer :one-to-one
Q-9	Correct Answer :one-to-many
Q-10	