1.

In SDL the mode of communication used is:

a. Asynchronous message passing
b. Synchronous message passing
c. Broadcast
d. Semaphore

Ans. a (Asynchronous message passing)
Justification: In state chart Asynchronous message passing is use for communication.

2.

The advantage of SDL over state chart is:

a. Exception handling is absent in state chart
b. State chart is not suitable for distributed systems
c. State chart is non-hierarchical
d. One of the above

Ans. b (State chart is not suitable for distributed systems)
Justification: As SDL follows asynchronous message passing for communication, it is more suitable for distributed systems than state charts

3.

The root block in hierarchy of SDL is called:

a. Block
b. Root
c. Header
d. System

Ans. d (System)
Justification: The root block in hierarchy of SDL is called system.

4.

The construct that is used in SDL to fetch current time is:

a. Current
b. Live
c. Now
d. Real

Ans. c (Now)
Justification: The construct used in SDL to fetch current time is now.
Example: set (now +p, T) will set a timer t that is the current time + p unit

5.

A data flow model consists of:

a. Data model, process and link
b. Process, data store, external entities and data flow
c. Process, interrupts, data link and data store
d. Data model, data queue, data link, data mart

Ans. b (Process, data store, external entities and data flow)
Justification: A data flow model consist of process, data store, external entities and data flow. Process corresponds to activities that transform data. Data flows are routes though which data flows, data stores hold or stores the data.

6.

The tasks in KAHN processing networks communicate between themselves using:

a. Asynchronous message passing
b. Synchronous message passing
c. Blocking
d. FIFO

Ans. d (FIFO)
Justification: In KAHN processing network, the tasks communicate between themselves using FIFO where it is assumed that there will be no overflow. There is one sender and one receiver per FIFO.

7.

In KPN the channels transmit message in:

a. Unpredictable but finite amount of time
b. Predictable and finite amount of tie
c. Unpredictable and uncertain amount of time
d. Infinite amount of time

Ans. a (Unpredictable but finite amount of time)
Justification: In KAHN processing network the transmit messages for unpredictable but finite amount of time. So the execution time becomes unknown.

8.

The disadvantage of KPN is

a. The number of processes is static
b. It is difficult to analyze
c. All of the above
d. None of the above

Ans. c (All of the above)
Justification: The disadvantages of KPN is that the number of processes is static so whenever new tasks arrives it can not be handles by KPN. Also, it's also difficult to analyze because of buffering and accumulation of tokens

9.

In synchronous data flow the mode of message passing is:

a. Asynchronous message passing
b. Synchronous message passing
c. Shared memory
d. LIFO

Ans. a (Asynchronous message passing)
Justification: In synchronous data flow, the mode of message passing is asynchronous message passing. In this case the tasks do not have wait for the output to be accepted.

10.

In synchronous data flow the global clock is used for:

a. At clock ticks the message passing takes place
b. The nodes are fired at the clock tick
c. All of the above
d. None of the above

Ans. b (The nodes are fired at the clock tick)
Justification: In SDF (synchronous data flow) the global clock is used and at the tick of the clock the nodes are fired