Part: A

1: The use of PIM as a multicast routing protocol provides for which one of the following services?
   A. Authentication
   B. Guaranteed Delivery
   C. Device Security
   D. Preventing packet forwarding loops
   E. Preventing Denial of Service attacks
   Correct Answers: D

2: An end station receiving a broadcast packet will always process the data up to which layer of the OSI stack?
   A. Layer 1
   B. Layer 2
   C. Layer 3
   D. Layer 4
   E. Layer 7
   Correct Answers: C

3: Choose the answer that best completes the statement: An end station on an Ethernet network receiving an IP multicast packet will:
   A. Determine at Layer 1 if it is interested in the frame
   B. Determine at Layer 2 if it is interested in the frame
   C. Determine at Layer 2 after reading the protocol ID field if it is interested in the frame
   D. Determine at Layer 3 if it is interested in the frame
   E. Determine at Layer 7 if it is interested in the frame
   Correct Answers: B

4: Which of the following are characteristics of the one to many model of multicast data delivery? (Choose two)
   A. Receivers are generally unknown by the source
   B. Well suited for applications in which the receivers provide feedback to each other and the source
   C. There is a single data flow, from the source to the receivers
   D. All devices are potentially capable of generating multicast data
   E. Receivers are generally known by each other since any receiver may be a source
   Correct Answers: A C

5: The OUI field of the MAC address for IP multicast frames is:
   A. 00-01-5e
   B. 01-01-53
   C. 01-01-5e
   D. 01-00-5e
6: Which MAC address will multicast address 224.128.0.1 translate to?
A. 01-00-5e-80-00-01
B. 01-00-5e-22-41-40
C. 01-00-5e-22-28-01
D. 00-01-5e-80-00-01
E. 01-00-5e-00-00-01
F. 01-01-5e-22-28-01
Correct Answers: E

7: Which two of the following addresses should not be used in a multicast network at the same time?
A. 233.44.12.35
B. 234.45.12.35
C. 235.46.12.35
D. 236.174.12.35
E. 237.171.12.35
Correct Answers: C D

8: Which MAC address will the IP multicast address 239.33.42.107 translate to?
A. 01-00-5e-a1-2a-6b
B. 01-00-5e-21-2a-6b
C. 01-00-5e-21-2c-6c
D. 00-01-5e-a1-2a-6b
E. 00-01-5e-21-2a-6b
F. 01-01-5e-a1-2a-6b
Correct Answers: B

9: What is the range of addresses allocated for SSM?
A. 239.0.0.0/8
B. 233.x.y.0/24
C. 224.0.0.0/24
D. 232.0.0.0/8
Correct Answers: D

10: How many bits of the IP multicast address are copied directly to the multicast MAC address?
A. 27
B. 5
C. 28
D. 9
E. 23
Correct Answers: E
11: Which protocol uses multicast address 224.0.0.22?:
A. PIM version 1
B. IGMP version 2
C. OSPF
D. IGMP version 3
E. PIM version 2
Correct Answers: D

12: Which two of the following addresses should not be used in a multicast network at the same time?
A. 224.192.12.35
B. 235.182.12.35
C. 226.172.12.35
D. 237.138.12.35
E. 238.64.12.35
Correct Answers: A E

13: If IGMP version 1 is in use, when is a Host Membership Report issued?:
A. The report is issued by the routers on the broadcast domain in response to a periodic query
B. The report is issued by all members of the multicast group on the broadcast domain in response to a periodic query
C. The report is issued by the receiver at startup of the multicast application.
D. The report is issued by one member of the group on the broadcast domain in response to a periodic query
E. (a) or (b)
F. (c) or (d)
Correct Answers: F

14: When forwarding a multicast frame, the normal behavior for a LAN switch with IGMP snooping enabled, is to forward the frame based on the same rules as if it were:
A. A unicast frame with a known destination in the forwarding table
B. A unicast frame with an unknown destination in the forwarding table
C. A unicast frame with a known source in the forwarding table
D. A unicast frame with an unknown source in the forwarding table
Correct Answers: A

15: A multicast receiver has joined multicast group 224.0.0.1. By default, how often will it issue IGMP Host Membership Reports for this group?
A. never
B. 30 seconds
C. 60 seconds
D. 120 seconds
E. 260 seconds
16: Who periodically sends IGMP Host Membership Queries?:
A. The router elected as Querier on a LAN
B. The first host to expire their local suppression timer
C. Only the multicast enabled hosts on a LAN
D. All routers on a LAN
E. All multicast enabled routers on a LAN
Correct Answers: A

17: How does IGMP snooping eliminate multicast flooding on the LAN?
A. The switch populates multicast source addresses into the forwarding table
B. The switch acts as an IGMP proxy for the receiver
C. The switch inspects IGMP activity between receivers and routers and populates the forwarding table with active multicast group addresses
D. The switch inspects all multicast traffic between receivers and routers and populates the forwarding table with active multicast group addresses
Correct Answers: C

18: Which of the following join multicast group 224.0.0.22 when IGMP version 3 is implemented?
A. Router
B. Switch
C. Host
D. Host and Router
E. Host and Switch
F. Router and Switch
Correct Answers: A

19: Refer to the following configuration. Choose the statement below that is true.

```
A:RouterA>config-router>igmp# info
--------------------------------------------
interface "toRouterB"
  static
    group 239.1.1.1
    Starg
  exit
  exit
interface "AccessLAN1"
interface "toCustomerX"
  exit
```

A. Three interfaces of this router have been enabled for IGMP
B. Only interface toRouterB has been enabled for IGMP
C. All interfaces of this router have been enabled for IGMP
D. There is insufficient information to answer

**Correct Answers: A**

20: Which features were introduced in IGMP version 3? (Choose two)
A. Leave group message
B. Report suppression was eliminated
C. IGMP snooping
D. TTL of 1 for IGMP messages
E. A modified membership report to include Source address

**Correct Answers: B E**