Questões sobre: PON, GPON e XG(S)-PON

1. Compared with GPON, XGS-PON can cover more users and provide higher bandwidth without changing the ODN network architecture.

   A. TRUE

   B. FALSE

2. In a GPON network, the () management protocol is used between an OLT and ONT.

   A. HGMP

   B. OAM

   C. OMCI

   D. DHCP

3. A GEM port can carry one or more services.

   A TRUE

   B. FALSE

4. (Single Choice) Which one of the following protection schemes can protect branch fibers?

   A. GPON type A protection

   B. GPON type B single-homing protection

   C. GPON type B dual-homing protection

   D. GPON type C protection

5. When carrying services, the GEM port needs to map services to the T-CONT units for upstream service scheduling. Each ONU supports multiple T-CONTs, and different types of T-CONTs can be selected for different service types.

   A. TRUE

   B. FALSE

6. (Single Choice) In the 10G GPON system, XGEM frames are used to encapsulate data. In the XGEM header, PORT ID is defined as ( ) bits.

   A. 12

B. 14

C. 16

D. 18

7. (Single Choice) According to the ITU-T G.984.x series standards, the downstream transmission wavelength of the GPON network is () nm.

    A. 850

    B. 1310

    C. 1490

    D. 1550

8. (Multiple choices) In a GPON system, which of the following statements about T-CONTs are correct?

    A. Carrier that carries services in the GPON upstream direction

    B. All GEM ports must be mapped to T-CONTs.

    C. The OLT transmits services upstream in dynamic bandwidth assignment (DBA) scheduling mode.

    D. All ONUs/ONTs connected to the same PON port can use T-CONTs with the same Alloc-ID.

9. In a GPON system, the upstream bandwidth allocated to services by the () DBA cannot be released or shared.

    A. type1

    B. type2

    C. type3

    D. type4

10. Which of the following is the downstream wavelength of XGS-PON?

    A. 1290 nm

    B. 1310 nm

    C. 1490 nm

    D. 1577 nm

11. If a PON system is considered as a black box, the extemal intertaces of OLTs and ONU are mainly Ethernet Intertaces, and GEM encapsulation and decapsulation are performed inside the PON system.

A. TRUE

B. FALSE

12. The OLT supports multiple protection switching modes ror GPON lines. The () technology is supported by the OLT to protect the backbone and branch optical fibers at the same time.

A. Type A

B. Type B

C. Type C

D. Type D

13. The upstream frame length of the GPON is fixed to 125 us. Similarly, the downstream frame length is also fixed to 125 us

A. TRUE

B. FALSE

14. In the 10G GPON system, XGEM frames are used to encapsulate data. In the XGEM header, PORT ID is defined as () bits.

A. 12

B. 14

C. 16

D. 18

15. (Multiple choices) Which of the following statements about XGS-PON key technologies are incorrect?

A. To prevent data collision in the upstream direction, the OLT starts ranging when the ONU registers for the first time to allocate an equalization delay to the ONU. After that, the OLT retains this equalization delay parameters unchanged.

B. To avoid distortion caused by superposition of transmit signals, the optical module on the OLT side must support burst transmission.

C. The dynamic threshold adjustment function enables the OLT to adjust the threshold for once when receiving optical signals to ensure signal integrity.

D. To ensure data security, XGS-PON uses the AES encryption algorithm to encrypt an entire packet that is transmitted.

16. (Multiple choices) In GPON access mode, multiple traffic rate limiting methods are provided. Which of the following methods can be used to control the upstream and downstream rates?

    A. traffic-table traffic profile

    B. ACL-based rules

    C. DBA profile

    D. ONT service profile

17. (Multiple choices) In a GPON system, dynamic bandwidth assignment (DBA) needs to be configured for ONU upstream transmission. What are the functions of DBA?

    A. To improve the upstream bandwidth utilization of a PON port.

    B. To avoid optical signal conflicts on ODN links.

    C. To provide high-bandwidth services, especially services with burst bandwidth.

    D. To dynamicalty allocate the upstream bandwidth within microseconds or milliseconds.

18. The DBA can dynamically allocate upstream bandwidths within microseconds or milliseconds.

    A. TRUE

    B. FALSE

19. The GPON system adopts the TDMA mode in the upstream direction. Therefore, the optical module of the ONU must have the burst sending/receiving functions.

    A. TRUE

    B. FALSE

20. In a GPON network, the ( ) management protocol is used between an OLT and ONT.

    A. HGMP

    B. OAM

C. OMCI

D. DHCP

21. Which of the following optical modules has the most sufficient optical loss budget?

A. CLASS B+

B. CLASS C++

C. CLASS B

D. CLASS C+

22. In the 10G GPON system, XGEM frames are used to encapsulate data. In the XGEM header, PORT ID is defined as () bits

A. 12

B. 14

C. 16

D. 18

23. According to the ITU-T G.984.x series standards, the downstream transmission wavelength of the GPON network is () nm.

A. 850

B. 1310

C. 1490

D. 1550

24. Which of the following is the downstream wavelength in the 10G GPON system?

A 1310 nm

B. 1490 nm

C. 1270 nm

D. 1577 nm

25. (Multiple choices) The GPON application scenarios are as follows

A FTTH

B. FTTB

C. FTTC

D. FTTM