

Examination report – Dec 2014 series

2730-014 Communication Systems and Digital Networks 3

Section 1 – Areas of good performance

Syllabus reference: 1.13 / 1.15 – Demonstrate an understanding of cable performance terminology. Describe link performance and state that link performance components and cables are defined as categories but that the link is defined as falling into one of the defined classes. All parts of this section were answered reasonably well.

Syllabus reference: 1.10 / 1.11 – Demonstrate familiarity with generic cabling terminology and their meanings as used in the ISO/IEC 11801 standard. Demonstrate knowledge of different media types recognised by the ISO/IEC 11801 standard. This section was answered fairly accurately by most candidates.

Syllabus reference: 2.12 / 2.17 – Describe LAN topologies. Identify the different transmission media deployed in LANs. This section was answered very well showing a good understanding in these areas.

Syllabus reference: 4.13 / 4.14 – Describe the possible issues which relate to the implementation of VOIP. Demonstrate an awareness of current and emerging technologies, which relate to end systems in various fields. A good understanding of VOIP was evident in this section, with good answers.

Syllabus reference: 2.10 / 2.22 – State the various shared media LAN technologies in use today and their operating speeds. Provide examples of MANs. Both sections were answered reasonably well by most candidates.

Syllabus reference: 3.5 / 3.12 – Explain the data carrying capacity provided by optical fibre and the potential that exists when Wavelength Division Multiplexing (WDM) is used. Describe types of traffic that can be transported over SONET/SDH. This section was answered reasonably well, although quite often WDM was answered with a simple repetition of the wording in the question.

Syllabus reference: 5.11 / 5.19 – Explain the function of MIBs. Cite examples of network management software. These sections were answered well, but sometimes candidates were very brief with explanations which did cost marks.

Syllabus reference: 5.16 / 5.20 / 5.23 – Explain the terms commonly associated with the reliability of systems. Outline the security issues that relate to network management. Explain that encryption is an example of a way of countering security threats. These sections were answered reasonably well by most candidates.

Syllabus reference: 6.8 / 6.9 / 6.15 – List and describe methods of improving security. Identify the facilities required by an IDC, which will enable efficient operation. Describe the factors that affect the continuity of services. Generally, these sections were answered accurately, but perhaps a lack of detail in descriptions and explanations cost marks.

Syllabus reference: 6.11 – Explain the function of a network firewall in an IDC. This section was answered well, showing a good understanding of a firewall.

Section 2 – Areas for development
<p>Syllabus reference: 4.6 – Compare command line based systems to GUI based systems. In this section there was a lack of correct answers, mainly because most candidates did not seem to distinguish between system complexity and the ease of use.</p> <p>Syllabus reference: 2.16 – List factors that will reduce the total throughput of data within a LAN or reduce the bandwidth available for each individual node. Mixed answers were given in this section, mostly incorrect regarding factors that could cause a reduction in LAN throughput.</p> <p>Syllabus reference: 2.13 – Describe the role of hubs, switches, routers and Network Interface Cards (NICs) in a LAN. This section was answered very insufficiently, lacking detail in most cases.</p> <p>Syllabus reference: 3.7 – Briefly explain the meaning of the terms ‘synchronous’, ‘asynchronous’ and ‘plesiochronous’ signals. Most candidates failed to explain accurately these systems. Quite often explanations were ‘crossed’.</p> <p>Syllabus reference: 5.7 – Describe the issues that relate to the management of a computer network. Many candidates simply repeated the wording in the question, rather than descriptions.</p> <p>Syllabus reference: 1.18 – List parameters that are tested in link performance tests and explain their meaning. Very poor answers to ELFEXT were given showing a lack of knowledge in this area.</p> <p>Syllabus reference: 6.13 – State different customer’s access methods to the IDC. Many candidates failed to identify correctly customer access methods to an IDC.</p>
Section 3 - Tips
<p>Read questions carefully and when diagrams are called for, produce them In a clear neat manner. If descriptions or explanations are required, make sure they are detailed enough.</p>