Examination report – December 2013 series

2730-012 Communication systems and digital networks 2

Section 1 – Areas of good performance
Syllabus reference: 1.9, 1.14 - Data formats, switching methods, coding methods. All parts answered reasonably well, although some candidates demonstrated a weakness in these areas. Syllabus reference: 2.6 - OSI model. Most candidates answered this part very well. Syllabus reference: 3.16, 3.22 - IP classes. Answered quite well by most candidates, although the explanations for the reason for the allocation of the loopback reserved Internet Protocol (IP) address was sometimes very vague. Syllabus reference: 3.9, 3.13 - TCP/IP, IP version 4 datagram. These parts were answered reasonably well, sometimes a weakness prevailed with regard to the function of datagram fields. Syllabus reference: 3.23, 3.24, 4.7, 4.12 - DHCP/DNS, Shannon capacity, DTE/DCE. Answered well by approximately half of candidates, others lacked knowledge in this area. Syllabus reference: 4.20, 4.22 - X.25, IEEE 802.3 format. This part was answered reasonably well, although stating the three operational levels used in the X.25 packet switching protocol gave some candidates problems with incorrect answers. Syllabus reference: 5.6, 5.21, 5.22 - Loops, static / dynamic routing. Again these parts were answered reasonably well, although some candidates simply gave a statement rather than an explanation to how loops are prevented in switched networks. Syllabus reference: 5.4, 5.8 - LAN switching methods, VLAN interconnection device. These parts were generally answered well. Syllabus reference: 5.9, 5.15, 5.24 - Trunking, routing metrics, router configuration files. These parts were generally answered well by most candidates, but some candidates gave incorrect answers to all parts.
Section 2 – Areas for development
Syllabus reference: 2.3, 2.6 - OSI. Both parts of this section were answered very poorly showing a lack of understanding in these areas. For the explanation of the peer-to-peer communication concept of the layers between adjacent systems, candidates often simply gave a diagram of the OSI structure. Syllabus reference: 3.21 - IP address subnetting. Very few candidates gave correct answers here showing a lack of knowledge in these areas. Syllabus reference: 4.20 - X.25 Answers were very vague and mostly incorrect showing a lack of understanding of X.25.

Syllabus reference: 4.21 - ATM/VCI. The answers given were poor, vague and not very accurate. Syllabus reference: 5.27 - Link state routing. Quite often the answers referred to distance vector routing instead of link-state routing. Syllabus reference: 5.5 - Layer2 switching. Whilst some candidates answered this part well, most answered incorrectly.
Section 3 – Tips
Always read the question carefully, especially where a description or explanation is required. Ensure that answers do not simply repeat the question wording only.
Section 4 – Additional comments
Where diagrams are required, candidates should ensure that they are clear.