Examination report – December 2012 series

2730-013 Fundamentals of Electronic Communication 3

Section 1 – Areas of good performance
Syllabus reference: 4.10, 4.11. Both parts were answered too briefly for full marks in many cases. Syllabus reference: 2.18, 3.13, 5.25. Safe working practices for optical fibres were generally well known. The descriptions for a frame and a multiframe required specific values for PCM. The distinctions between synchronous and asynchronous working lacked detail in many cases.
Section 2 – Areas for development
Syllabus reference: 1.9. Few candidates had any real knowledge of power factor or its use in power supply systems. Syllabus reference: 2.9. The diagrams required varied considerably in the detail presented. Six marks required a fair amount of detail which was lacking in many cases. Syllabus reference: 3.10, 3.15. This section was an example of candidates not reading the question carefully. A.S.K is not used because of its susceptibility to noise compared F.S.K . and P.S.K. Most candidates lost marks because of lack of detail in the answers. Syllabus reference: 5.5. A simple circuit was called for in this section, not block diagrams. Descriptions were varied, from poor to very good. Syllabus reference: 5.31, 5.32. Identification of the units in the demultiplexer was clearly sheer guesswork for the vast majority of candidates. Apart from the odd one or two, the descriptions of a terminal repeater were far too sparse. Syllabus reference: 6.25, 6.26, 6.27. In general, the explanations of the Erlang as a statement of probability were poor. The use of the curves fared better, in both the description and the simple calculations. Syllabus reference: 6.36. Judging by the response to this question, far too many candidates had little or no idea of the ISDN. Syllabus reference: 4.20, 6.30. There were some comprehensive answers for the description of SPC, but once again statistical TDM was short on detail.

Section 3 – Recommendations
In comparison to previous Decembers, quite a good set of results. Candidates often do not read questions carefully enough. Marks are allocated for what is required, not what is not required.