Comment on candidates' performance and common mistakes, and guidelines for the classroom

Question 1

Although this question was answered well, candidates must be taught to read questions with more understanding. Answers were not always related to electrical technology applications.

Question 2

Candidates must be able to distinguish between the technological process (e.g. in manufacturing a product) and the flow diagram that describes a process (e.g. input – process – output).

Question 3

This question was answered well.

Question 4

Candidates did not know what a power factor is. The concept of different power components and the manipulation of formulas proved to be difficult. More practice in this regard is required.

Question 5

This question was answered well. However, candidates need to distinguish between voltage/current phasor diagrams and impedance phasor diagrams and remember not to use both sets of values/labels on the same diagram.

Question 6

This question was answered poorly. Candidates need to distinguish between the function/purpose of components (SCR, TRIAC, DIAC) and their working principles/operation. Candidates must be taught to draw symbols with the correct labels.

Question 7

This question was answered poorly. Operational amplifiers and their response curves need more attention from both candidates and teachers.

Question 8

This question was answered reasonably well. Some candidates still confused *star* and *delta*. Drawings can be used as an aid to understanding questions better.

Question 9

This question was answered poorly. Many candidates made no attempt to answer the question. More time needs to be spent on this section of the work. Candidates struggled to transfer values from truth tables or Boolean expressions to a Karnaugh map.

Question 10

This question was answered reasonably well. Teachers should show candidates what the inside of an electric motor looks like.