

22.1 PAPER 1 (448/1)

Question 7

- (a) State how the polarity of a diode is identified. (1 mark)
- (b) Explain the effect of connecting two diodes of the same rating in parallel. (2 marks)
- (c) State **four** practical applications of diodes in electric circuits. (2 marks)

Candidates were required to state how the polarity of a diode is determined and how diodes are used in electric circuits and also explain the effect of connecting diodes in parallel in a circuit.

Weaknesses

Most of the candidates did not know that the cathode of a diode has a band around it and a taper at the end and these are the features to look for in order to identify a diode. Connecting diodes of the same rating in parallel doubles the current handling ability while the total voltage remains the same candidates were also expected to know that diodes are used as rectifiers, switches, demodulators and light indicators.

Question 8

- (a) State the finishing method which would give the best protection for each of the following materials:
 - (i) aluminium
 - (ii) copper
 - (iii) steel
 - (iv) wood (2 marks)
- (b) A domestic house is fitted with ten 60 W lamps and a 2 KW water heater. All the lamps are switched on for 6 hours a day and the water heater for 4 hours. Calculate the customers charge in a month of 30 days if the standing charge is 75 shillings and the charge per unit is 5 shillings. (3 marks)

In part (a) of this question candidates were expected to give the best finishing method to guarantee protection of various materials.

Weaknesses

The majority of the candidates were not able to determine suitable finishing methods for each material listed but instead they gave vague answers like painting. Candidates were expected to give specific answers like polishing for aluminum, coating for copper, galvanizing for steel and varnishing for wood.