

# Engineering Studies

## Section II (continued)

Marks

**Question 16 — Telecommunication (15 marks)**

- (a) (i) The telecommunications industry uses copper and fibre optics for transmission of data. State a different application for each of these materials, and explain, in terms of their properties, why they are used for this application. 4

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- (ii) Cold drawing is used to form copper into electrical wire. Describe TWO problems associated with the use of the process. Describe a subsequent process that will reduce these problems. 3

*The wire drawing out the copper it can break in half. It could get stretched out alot.*

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Question 16 continues on page 26

Question 16 (continued)

- (b) Identify TWO technological changes in the telecommunications industry. Discuss the effects that these changes have had on society. 4

the society than have to keep up with the changes to communicate with others

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- (c) (i) Describe the transmission of data from a mobile phone to another mobile phone. 2

when you ring from a mobile phone it reaches to a central tower nearest to you and then it transmits to another mobile phone

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- (ii) Explain the effect that mobile phone communications may have on other electronic systems. State TWO situations where this effect could endanger lives. 2

on aeroplane it cause an interference with the plane and it can endanger lives.

Brain scans probe pump - the mobile phone can sent radiation which can affect the pump.

End of Question 16