

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

mobile phone - it can ~~be~~ ~~sent~~ received a signal and

telephone -> can send and receive signal or voices

- (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

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

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

- ~~From the~~ mobile phone, people like to use it because we can talk everywhere we want and we could take it everywhere we want to go.

- Police radia / ~~com~~ communicator, can adjust the station and ~~the~~ and talk.

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

the wave it's sending, need to go to a antenna first then it will go to another mobile phone.

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

- cancer could be the problem because of the Radiation of the waves.

- people could also get the signal out of your mobile and listen.

End of Question 16