Additional Topics

(a) (i) Briefly describe the purpose of broadband fixed wireless access (FWA) and give typical situations where it could be deployed. [4 marks]

(ii) What advantages does radio offer over traditional wired access? [2 marks]

(b) Explain how intersymbol interference (ISI) arises in a wireless communication system and its effect on system performance. [2 marks]

(c) (i) Describe how

- linear equalisation
- orthogonal frequency division multiplexing (OFDM)

...can be used to combat ISI. [4 marks]

(ii) Highlight a problem which can occur when using linear equalisation and describe an alternative equalisation approach that can overcome this problem. What problem can occur with this alternative approach? [4 marks]

(iii) Highlight problems that arise with the use of OFDM. In what situation is OFDM preferred over the use of equalisation? [4 marks]