

M1.(a) upper audio frequency maximum 15–20kHz ✓  
sampling frequency must be higher ✓ than  $2\times$  ✓ highest audio frequency 3

(b) 65536 ✓  
*allow 65535* 1

(c)  $5 / 65535$  ✓ =  $76\mu\text{V}$  ✓  
*allow 65536*  
*ecf from (b)* 2

(d) high & low frequencies are lost *or* reduced bandwidth ✓  
reference to perceived quality, e.g. lack of bass / treble in the music, 'tinny', or similar ✓ 2

[8]