

Engineering Triops Part 2A
Module 3F4. Data Transmission, May 2011 - Answers

1.

a)

$$b) (i) |H_R(\omega)| = \sqrt{\frac{T}{\sqrt{N_0}} \cos\left(\frac{\omega T}{2}\right)}$$

$$|H_T(\omega)| = k \sqrt{T \sqrt{N_0} \cos\left(\frac{\omega T}{2}\right)}$$

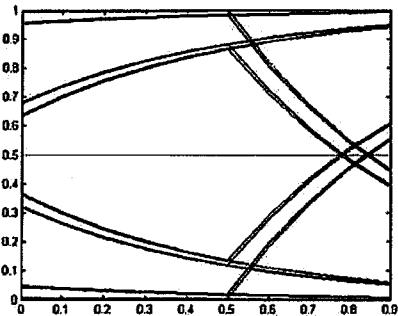
$$(ii) \frac{3\pi^2 T}{32N_0}$$

2.

a)

b)

c) (i)



$$(ii) 2.01 \times 10^{-3}$$

$$(iii) 0.5V, 1.31 \times 10^{-4}$$

3.

a)

b)

c)

d)

4.

a)

b)

c)

d)