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201-33-3335 Ans to the Ques No: 1

Given that,

$P_S = 14\,W$

$P_N = 2\,W$

We know,

$$SNR_{DB} = 10\log_{10}\frac{P_S}{P_N}$$

$$SNR_{dB} = 10\log_{10}\frac{14}{2}$$

$$SNR_{dB} = 8.45\,dB$$

(Ans)

Ans to the Ques No: 2

Given that,

$B = 12\,kHz$

$SNR_{dB} = 120\,dB$

$$SNR = 10\log_{10}(SNR)$$

$$= 100$$

$$C = (12\times10^3)\log_2(1+100)\ bits/s$$

$$C = 79.90\ kbps$$

(Ans)