A1 A2 Mix……..

- A 10kw carrier is sinusoidally modulated by two carriers corresponding to modulation index of 30% and 40% respectively. The total radiated power is?

11.25 kw

12.5kW

15kw

17kw

- Suppose we wish to transmit the signal x(t) = sin 200 πt + 2 sin 400πt using a modulation that create the signal g(t) = x (t) sin 400 πt. If the product g(t) sin 400 πt is passed through an ideal LPF with cut-off frequency 400π and pass band gain of 2, the signal obtained at the output of the LPF is—

sin 200 πt

1 2 sin 200 πt

2 sin 200 πt

0

- The bandwidth of TV video plus audio signal is 4.5 MHz. If this signal is converted into PCM bit stream with 1024 quantization levels and the signal is sampled at the rate 20% above Nyquist rate, then the number of bits/sec of the resulting signal is

a)196 M bits/sec

b)108 M bits/sec

c)88 M bits/sec

d)216 M bits/sec

- A carrier is simultaneously modulated by two sine waves with modulation indices of 0.4 and 0.3. The resultant modulation index will be

a)1.0

b)0.7

c)0.5

d)0.35

- A message signal m(t) = sinct + sinc(t) modulates the carrier signal (t) = acos2pift. bandwith of modulated signal is?

2 fc

1/2 fc

2

- which one of the following is not true with respect to SSB

less power

carrier is suppressed

detection/demodulation is diffficult

very low range

- what is peak envelop power(pep) if rms voltage of 187V and 50ohm load

670 W

700 W

324 W

321 W

- ___ has highest modal dispersion

graded index single mode

step index single mode

step index multimode

graded index multimode

- received power of an antenna is 20db lower than the transmitted signal power of 10dbm. what is the received power in MW

10mW

1mW

0.1mW

0.01mW

- Which of the following gives minimum probability of error

ASK

BFSK

BPSK

DPSK

- IF the baud rate of QPSK system is 100. then the bit rate is

100

200

400

800

- the rearrangement of data sequence is called

line encoding

scrambling

.

- the output SNR of a 10 bit PCM was found to be 30 db. the desired SNR is 42 db. it was decided to increase the SNR to the desired value by increasing the number of quantization levels. the percentage increase in the transmission bandwidth required for the SNR is

20%

15%

10%

5%

- In M-array FSK, M tends to infinity, the probability of error tends to

Infinity

unity

zero

none

- __ is the most suited index profile for single mode fibres

step index

graded index

both step and graded index

none

- the bandwidth requirement is high in

PAM

PPM

PWM

- in PWM

synchronization is not required btw transmitter and receiver

amplitude of the carrier pulse is varied

instantaeous power at the transmitter is constant

none

- Drawback of using PAM method is

bandwidth very large compared to modulating signal

varying amplitude of carrier varies the peak power required for transmission

due to varying amplitude of carrier it is difficult to remove mnoise at receiver

all

- Pulse spreading in single mode fibre occurs due to

material dispersion

intermodal dispersion

intramodal dispersion

both b and c

- what is white in WGN

PSD

PDF

CDF

PMF

- received power at an antenna is 20db lower than the transmitted signal power of 10dbm what is received power in mW

10mW

1mW

0.1mW

0.01mW