Sample Questions : Electronics and Communication Stream

Q. (1) The cut-off wavelength (in μm) of light that can be used for intrinsic excitationof a semiconductor material of bandgap Eg= 1.1 eV is__

        (a) 0.85

        (b) 1.125

        (c) 1.450

        (d) 2.250

Q. (2) If calls arrive at a telephone exchange such that the time of arrival of any call is independent of the time of arrival of earlier or future calls, the probability distribution function of the total number of calls in a fixed time interval will be____

        (a) Poisson

        (b) Gaussian

        (c) Exponential

        (d) Gamma

Q. (3) Which one of the following is not a guided medium of transmission

        (a) Fiber–Optic cable

        (b) The atmosphere

        (c) Coaxial cable

        (d) Twisted-pair cable

Q. (4) The even part of a signal x(t) is ____

        (a) x(t)+x(-t)

        (b) x(t)-x(-t)

        (c) (1/2)*(x(t)+x(-t))

        (d) (1/2)*(x(t)-x(-t))

Q. (5) For an antenna radiating in free space, the electric field at a distance of 1 km is found to be 12mV/m. Given that intrinsic impedance of the free space is 120 ohm, the magnitude of average power density due to this antenna at a distance of 2 km fromthe antenna (in nW/m^2) is _____

        (a) 50.7

        (b) 48.7

        (c) 45.7

        (d) 47.7

Sample Questions : Wireless and Optical Communications stream

(1) The cut-off wavelength (in μm) of light that can be used for intrinsic excitation of a semiconductor material of bandgap Eg= 1.1 eV is__?

 (a) 0.85
 (b) 1.125
 (c) 1.450
 (d) 2.250

(2) If calls arrive at a telephone exchange such that the time of arrival of any call is independent of the time of arrival of earlier or future calls, the probability distribution function of the total number of calls in a fixed time interval will be____?

 (a) Poisson
 (b) Gaussian
 (c) Exponential
 (d) Gamma

(3) Which one of the following is not a guided medium of transmission?

 (a) Fiber–Optic cable
 (b) The atmosphere
 (c) Coaxial cable
 (d) Twisted-pair cable

(4) The even part of a signal x(t) is?

 (a) x(t)+x(-t)
 (b) x(t)-x(-t)
 (c) (1/2)*(x(t)+x(-t))
 (d) (1/2)*(x(t)-x(-t))

Model Questions: VLSI Stream

1) A transistor is a …………… operated device
a) current
b) voltage
c) both voltage and current
d) none of the above

2) Switching threshold voltage of an ideal CMOS inverter is defined as
a) $Vth = VDD/3$
b) $Vth = VDD/2$
c) $Vth = VDD$
d) $Vth = VDD/4$

3) Which design allows the reuse of the software and the hardware components?
a) Memory Design
b) Input design
c) Platform-based design
d) Peripheral design

4) Reverse recovery time affect the switching operation of
(a) BJT   (b) FET
(b) MOSFET   (d) All of the above