



AFCAT EKT EE Previous Year Paper (Feb 2016)

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50 Questions

Que. 1 The value of $\sin \theta + \cos \theta$ will be greatest, when $\theta =$

1. 30
2. 45
3. 60
4. 90

Testbook Solution Correct Option - 2

Que. 2 Out of the following, which one is least commonly emitted by radioactive substance?

1. Electrons
2. Electromagnetic radiations
3. Alpha particles
4. Neutrons

Testbook Solution Correct Option - 4

Que. 3 Railway tracks are banked on curves

1. So that necessary centrifugal force may be obtained from the horizontal component & weight of the train
2. To avoid frictional force between the tracks and wheels
3. So that necessary centripetal force may be obtained from the horizontal component & weight of the train
4. So that the train may not fly off in the opposite direction

Testbook Solution Correct Option - 3

Que. 4 Sound produced at a point is heard by a person after 5 second, while the same sound is heard by another person after 7 seconds. If the speed of sound is 300 m/s, what could be the maximum and minimum distances between the two persons?

1. 1.8 km, 0.15 km
2. 2.2 km, 0.20 km
3. 2.8 km, 0.25 km
4. 3.6 km, 0.60 km

Testbook Solution Correct Option - 4

Que. 5 The most abundant of the **rare gases** in the atmosphere is _____.

1. Helium
2. Argon
3. Neon
4. Nitrogen

Testbook Solution Correct Option - 2

Que. 6 Quantizing noise occurs in

1. PCM
2. TDM

3. FDM
4. PPM

Testbook Solution Correct Option - 1

Que. 7 Which of the following antenna is best excited from a wave guide?

1. Bi-conical
2. Helical
3. Di-conical
4. Horn

Testbook Solution Correct Option - 4

Que. 8 The peak transmitted power in a radar system is increased by a factor of 16 the maximum range will be increased by a factor of

1. 2
2. 4
3. 8
4. 16

Testbook Solution Correct Option - 1

Que. 9 In a modulation system, if modulating frequency is doubled, the modulation index also becomes double, the system is

1. FM
2. AM
3. PM
4. Both FM and AM

Testbook Solution Correct Option - 3

Que. 10 The bandwidth requirement of a telephone channel is

1. 3 kHz
2. 5 kHz
3. 10 kHz
4. 15 kHz

Testbook Solution Correct Option - 1

Que. 11 In class A operation of an amplifier the current flows through the active device for

1. Whole of the input cycle
2. Half of the input cycle
3. More than half of the input cycle
4. More than three fourth of the input cycle

Testbook Solution Correct Option - 1

Que. 12 A p-type semiconductor is _____.

1. positively charged
2. negatively charged
3. electrically neutral

4. not used in semiconductor devices

Testbook Solution Correct Option - 3

Que. 13 The target cross section is changing, the best system for accurate tracking is

1. Monopulse
2. Conical scanning
3. Sequential locking
4. Lobe switching

Testbook Solution Correct Option - 1

Que. 14 Waveguides are not used for frequencies below

1. 1 GHz
2. 10 GHz
3. 100 GHz
4. 500 MHz

Testbook Solution Correct Option - 1

Que. 15 Schmitt trigger can be used as a

1. Comparator
2. Square wave generator
3. Flip flop
4. All of these

Testbook Solution Correct Option - 4

Que. 16 Subtracting 0101 from 1110 in binary terms, we get

1. 0110
2. 1010
3. 1001
4. 0011

Testbook Solution Correct Option - 3

Que. 17 Which of the following is a universal gate?

1. AND
2. OR
3. XOR
4. NAND

Testbook Solution Correct Option - 4

Que. 18 The TWT is sometimes preferred to magnetron as a radar transmitter output tube because it is:

1. Capable of a larger duty cycle
2. A more efficient amplifier
3. More broadband
4. Less noisy

Testbook Solution Correct Option - 1

Que. 19 Modulation system used for video modulation in TV transmission is

1. DSB
2. VSB
3. SSB
4. SSBBC

Testbook Solution Correct Option - 2

Que. 20 A Yagi antenna produces

1. Figure of eight pattern
2. Broadside pattern
3. End fire array
4. Helical pattern

Testbook Solution Correct Option - 2

Que. 21 Medium frequency waves travel mainly as

1. Sky waves
2. Surface waves
3. Space waves
4. Ground wave

Testbook Solution Correct Option - 4

Que. 22 In a two cavity klystron, the input cavity resonator is also known as

1. Velocity modulator
2. Catcher cavity
3. Buncher cavity
4. Accelerator

Testbook Solution Correct Option - 3

Que. 23 Which of the following can measure pressure directly?

1. LVDT
2. Strain guage
3. Rotameter tube
4. Bourdan tube

Testbook Solution Correct Option - 4

Que. 24 _____ is an active filter

1. RC filter
2. Notch filter
3. Butterworth filter
4. Band pass filter

Testbook Solution Correct Option - 3

Que. 25 If the area of the square is increased by 69% the side of the square increase by

1. 13%
2. 30%
3. 39%
4. 130%

Testbook Solution Correct Option - 2

Que. 26 In 8085 microprocessor _____ is the highest priority interrupt

1. INTR
2. RST5.5
3. RST
4. TRAP

Testbook Solution Correct Option - 4

Que. 27 Crossover distortion occurs in _____ Amplifiers.

1. Push-pull
2. Class-A
3. Class-B
4. Class-AB

Testbook Solution Correct Option - 1

Que. 28 Voltmeter is used in _____

1. Series with the circuit
2. Parallel to the circuit
3. Either of the two combination
4. None

Testbook Solution Correct Option - 2

Que. 29 One Coulomb passing a point in one second is one _____.

1. Ohm
2. Charge
3. Ampere
4. Volt

Testbook Solution Correct Option - 3

Que. 30 Which part of an atom has no electrical charge?

1. Electron
2. Neutron
3. Proton
4. Positron

Testbook Solution Correct Option - 2

Que. 31 If Current in a circuit is zero ampere, it is likely that

1. Circuit is open
2. Circuit is closed

3. Resistance is too low
4. Voltage is too high

Testbook Solution Correct Option - 1

Que. 32 Voltage source which converts chemical energy to electrical energy is called

1. Solar cell
2. Electrical power supply
3. Electrical generator
4. Battery

Testbook Solution Correct Option - 4

Que. 33 Piezoelectric effect is carried out in

1. Composite filter
2. Constant K prototype filter
3. Crystal filter
4. Ceramic filters

Testbook Solution Correct Option - 3

Que. 34 The most common modulation system used for telegraphy is

1. FSK
2. Two tone modulation
3. PCM
4. Single tone modulation

Testbook Solution Correct Option - 1

Que. 35 Logic gates required to built up a half adder circuit are,

1. Ex – OR gate and NOR gate
2. Ex – OR gate and OR gate
3. Ex – OR gate and AND gate
4. Ex – NOR gate and NAND gate

Testbook Solution Correct Option - 3

Que. 36 The breakdown that occurs in reverse bias conditions in a narrow junction diode is known as

1. Zener breakdown
2. Avalanche breakdown
3. Either of the above
4. Reverse breakdown

Testbook Solution Correct Option - 1

Que. 37 In case of satellite communication.

1. Uplink frequency > Downlink frequency
2. Downlink frequency > Uplink frequency
3. Downlink frequency = Uplink frequency
4. None of the above

Testbook Solution Correct Option - 1

Que. 38 The change in the value of an analog signal during the conversion from analog to digital produces _____.

1. Quantization error
2. Resolution error
3. Nyquist error
4. Sampling error

Testbook Solution Correct Option - 1

Que. 39 If a signal passing through a gate is inhibited by sending a LOW into one of the inputs, and the output is HIGH, the gate is:

1. AND
2. NAND
3. NOR
4. OR

Testbook Solution Correct Option - 2

Que. 40 The Logic gate that will have HIGH or "1" at its output when one of its inputs is high is

1. NOT
2. OR
3. NOR
4. AND

Testbook Solution Correct Option - 2

Que. 41 In frequency modulation

1. Frequency of the carrier remains constant
2. Carrier frequency varies in accordance with the modulating signal amplitude
3. Carrier frequency varies in accordance with the modulated signal frequency
4. None of the above

Testbook Solution Correct Option - 2

Que. 42 Close loop control system is better than the open loop system due to

1. Highest levels of amplification
2. Feedback control
3. Robust design features
4. Easy to manufacture

Testbook Solution Correct Option - 2

Que. 43 A high PRF would

1. Increase the maximum range
2. Decreases the maximum range
3. Affect range ambiguity
4. Increase the efficiency of radar

Testbook Solution Correct Option - 3

Que. 44 The general characteristic of semi conductors is

1. Linear device
2. Non linear device
3. Parabolic characteristic devices
4. None of the above

Testbook Solution Correct Option - 2

Que. 45 The function of Schmitt trigger is

1. To divide frequency
2. To control frequency
3. To shape a wave
4. To give out a saw tooth wave

Testbook Solution Correct Option - 3

Que. 46 The disadvantage of two cavity klystron is

1. Its efficiency is low
2. output power is low
3. It can be used at only one operating frequency
4. None of the above

Testbook Solution Correct Option - 3

Que. 47 Use of RADAR for Military and civil application is to

1. Find the velocity of moving target
2. Detection of far off object in air
3. Surveillance of aircrafts/UAV
4. All of the above

Testbook Solution Correct Option - 4

Que. 48 Stars appear to move from east to west because the

1. whole universe is moving from east to west
2. earth is revolving round the sun
3. earth is rotating from east to west
4. earth is rotating from west to east

Testbook Solution Correct Option - 4

Que. 49 The most malleable metal is

1. Silver
2. Platinum
3. Gold
4. Iron

Testbook Solution Correct Option - 3

Que. 50 Which layer of the atmosphere is used the most for communication?

1. Stratosphere
2. Ionosphere
3. Mesosphere
4. Troposphere

Testbook Solution Correct Option - 2



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