



AFCAT EKT EE Previous Year Paper (Feb 2015)

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50 Questions

Que. 1 What is the next number in the series 1, 3, 11, 19, 37, _____

1. 55
2. 41
3. 56
4. None of the above

Testbook Solution Correct Option - 1

Que. 2 A car traveled 75% of way from town A to town B at an average speed of 50 mph. The car traveled at the average speed of S mph for remaining part of the trip. The average speed for the entire trip was 40 mph. What is S in mph?

1. 10
2. 20
3. 25
4. 30

Testbook Solution Correct Option - 3

Que. 3 If the area of the square is increased by 69% the side of the square increases by

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

Testbook Solution Correct Option - 2

Que. 4 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. 5 Out of the following pairs, choose the pair in which the physical quantities do not have identical dimension?

1. Pressure and Young's modules
2. Planck's constant and Angular momentum
3. Impulse and moment of force
4. Force and rate of change of linear Momentum

Testbook Solution Correct Option - 3

Que. 6 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. 7 Sound produced at a point is heard by a person after 5 seconds, while the same sound is heard by another person after 6 seconds. If the speed of sound is 300 m/s, what would 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. 3.3 km, 0.30 km

Testbook Solution Correct Option - 4

Que. 8 Which is the most electronegative element among the following?

1. Fluorine
2. Sodium
3. Chlorine
4. Oxygen

Testbook Solution Correct Option - 1

Que. 9 Which of the following nuclear particles are responsible for holding all nucleons together?

1. Electrons
2. Mesons
3. Positrons
4. Neutrons

Testbook Solution Correct Option - 2

Que. 10 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. 11 Quantizing noise occurs in

1. PCM
2. TDM
3. FDM
4. PPM

Testbook Solution Correct Option - 1

Que. 12 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. 13 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. 14 The energy stored will be least in

1. Coil
2. Capacitor
3. Resistor
4. Same energy will be stored in all

Testbook Solution Correct Option - 3

Que. 15 Thevenin's theorem is applied to networks with

1. DC source only
2. AC source only
3. Both AC and DC source
4. None of the above

Testbook Solution Correct Option - 3

Que. 16 The Shannon's Theorem sets limit on the

1. Highest frequency that may be sent over channel
2. Maximum capacity of a channel with a given noise level
3. Maximum number coding levels in a channel
4. Maximum number of quantizing levels in a channel

Testbook Solution Correct Option - 2

Que. 17 Maxwell's electromagnetic equations are valid under all conditions except one that is

1. they do not apply to non-isotropic media
2. they do not apply to non-homogeneous media
3. they do not apply to media which move with respect to system coordinates
4. they do not apply to non-linear-media

Testbook Solution Correct Option - 1

Que. 18 Given a carrier frequency of 100 kHz and a modulating frequency of 5 kHz, the bandwidth of AM transmission is

1. 5 kHz
2. 200 kHz
3. 10 kHz
4. 20 kHz

Testbook Solution Correct Option - 3

Que. 19 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. 20 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. 21 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. 22 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. 23 Hartley oscillator is

1. An inductively coupled oscillator
2. Capacitor coupled oscillator
3. Switchable for low frequencies
4. Resist mace coupled oscillator

Testbook Solution Correct Option - 1

Que. 24 h - parameters of a transistor

1. Are constant
2. Vary with temperature
3. Are dependent upon collector current
4. None of the above

Testbook Solution Correct Option - 2

Que. 25 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. 26 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. 27 The unit of magnetic susceptibility is

1. Tesla
2. H/m
3. J/m
4. Dimensionless

Testbook Solution Correct Option - 4

Que. 28 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. 29 For making a capacitor, it is better to select a dielectric having

1. High permittivity
2. Low permittivity
3. Same permittivity as that of air
4. Very low permittivity

Testbook Solution Correct Option - 1

Que. 30 If we double the value of resistor then how it affects the thermal noise power?

1. Gets doubled
2. Gets halved
3. Gets quadrupled
4. Remains unchanged

Testbook Solution Correct Option - 4

Que. 31 Subtracting 0101 from 1110 in binary terms, we get

1. 0110

2. 1010
3. 1001
4. 0011

Testbook Solution Correct Option - 3

Que. 32 Which of the following is a universal gate?

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

Testbook Solution Correct Option - 4

Que. 33 Fidelity in a communication receiver is provided by

1. Mixer stage
2. Detector stage
3. Various amplifier section
4. Audio stage

Testbook Solution Correct Option - 4

Que. 34 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. 35 Modulation system used for video modulation in TV transmission is

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

Testbook Solution Correct Option - 2

Que. 36 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. 37 Medium frequency waves travel mainly as

1. Sky waves
2. Surface waves
3. Space waves

4. Ground wave

Testbook Solution Correct Option - 4

Que. 38 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. 39 When the gate of a P-channel junction field effect transistor is more positive, the drain current

1. is increased
2. decreases
3. remains unaltered
4. None of the above

Testbook Solution Correct Option - 2

Que. 40 Multiplication of 2 binary numbers A and B yields 11001; if A is 101, then B is

1. 101
2. 111
3. 110
4. None of these

Testbook Solution Correct Option - 1

Que. 41 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. 42 The binary code of $(21.125)_{10}$ is

1. 10101.001
2. 10100.001
3. 10101.010
4. 10100.111

Testbook Solution Correct Option - 1

Que. 43 An op-amp zero crossing detector is basically _____ converter

1. Sine to square wave
2. Square to sine wave
3. Sine to sine wave
4. Sine to triangle wave

Testbook Solution Correct Option - 1

Que. 44 Which of the following is not an 8 bit microprocessor

1. INTEL8085
2. MOTOROLA6800
3. ZILOG280
4. FAIRCHILD9440

Testbook Solution Correct Option - 4

Que. 45 _____ is used for keeping oscillator frequency away from any drift

1. PLL
2. VCO
3. Comparator
4. Frequency synthesizer

Testbook Solution Correct Option - 1

Que. 46 _____ is an active filter

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

Testbook Solution Correct Option - 3

Que. 47 In 8085 microprocessor _____ is the highest priority interrupt

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

Testbook Solution Correct Option - 4

Que. 48 In standard TTL the totem pole stage refers to

1. The multi emitter I/p stage
2. Phase splitter
3. O/p buffer
4. Open collector o/p stage

Testbook Solution Correct Option - 3

Que. 49 The decimal equivalent of the hexadecimal number E5 is

1. 279
2. 229
3. 427
4. 3000

Testbook Solution Correct Option - 2

Que. 50 Crossover distortion does not occur in _____ amplifiers.

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

Testbook Solution Correct Option - 2



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