FEE OBJECTIVE TEST

SUB- FEE (EC-111)

Q.1 Two capacitors, each of 220 µF, are connected in parallel. The capacitance of the combination will be:

(a) 110µF (b) 220µF **(c) 440µF**

Q.2 If the resistance of a material falls with increasing temperature it is said to have:

(a) negative temperature coefficient (b) positive temperature coefficient
(c) zero temperature coefficient

Q.3 The third band of a four band resistor is marked in black. This indicates a multiplier of:

(a) 1 (b) 10 (c) 100

Q.4 The charge, Q, present in a capacitor is given by the relationship:

(a) Q = C / V **(b) Q = C V** (c) Q = ½ C V^2

Q.5 Which of the following systems is linear?

a) y(t) = sin(x(t)) b) y(t) = log(x(t)) c) y(t) = cos(x(t)) **d) y(t) = dx(t)/dt**

Q.6 State if the following system is periodic or not. y(t) = sin(sqrt(2)*x(t))

a) No b) Yes

Q.7 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 a(n):

(a) OR (b) NOR **(c) NAND** (d) AND

Q.8 The output will be a LOW for any case when one or more inputs are zero in a(n)

(a) NOR (b) OR **(c) AND** (d) NOT

Q.9 Which of the following logical operations is represented by the + sign in Boolean algebra?

A. inversion **B.** AND

C. **OR** **D.** complementation

Q.10 output of a NOR gate is HIGH if

A. all inputs are HIGH

B. any input is HIGH

C. any input is LOW

D. all inputs are LOW

Q 11 One of De Morgan's theorems states that $\overline{X + Y} = \overline{X} \cdot \overline{Y}$. Simply stated, this means that logically there is no difference between:

A NOR and an AND gate with inverted inputs

B a NAND and an OR gate with inverted inputs

C an AND and a NOR gate with inverted inputs

D a NOR and a NAND gate with inverted inputs

Q 12 The commutative law of Boolean addition states that $A + B = A \times B$.

A. True **B. False**

Q 13 The systematic reduction of logic circuits is accomplished by:

A using Boolean algebra

B symbolic reduction

C TTL logic

D using a truth table

Q 14 The total bandwidth required for Amplitude Modulation (AM) is

A. 2B
B. 2(1 + ?)B.
C. 2L
D. 2F

Q 15 A special band is assigned to Amplitude Modulation (AM) radio from

A. 500 to 1700 kHz
B. 530 to 1700 kHz
C. 600 to 1500 kHz

D. 200 to 2000kHz

Q 16 Frequency and period are

A. Equals to each other
B. Inverse of each other
C. totally different
D. None of Above

Q17. Black and white TV is an example of

A. non periodic composite signal
B. periodic composite signal
C. signal
D. periodic signal

Q 18 Transmission media are directly controlled by the

A. physical layer B. data link layer

C .network layer

D .session layer

Q 19 the maximum sideband suppression value using filter system is

A. 50 dB
B. 60 dB
C.40 dB
D.30 dB

Q 20 What produces the sidebands on FM?

A. signal amplitude
B. carrier harmonics
C. baseband frequency
D. broadband frequency

Q 21 Which test instrument displays the carrier and the sidebands amplitude with frequency to frequency?

A. oscilloscope
B. spectrum analyzer
C. frequency analyzer
D. amplitude analyzer

Q 22 Mixer is also known as

A. modulator

B. suppressor

C. converter

D. beate

Q 23 An FM receives signal

A. vary in amplitude with modulation

B. vary in frequency with modulation

C. vary in frequency and amplitude with wideband modulation

D. is not immune to noise

Q 24 The difference between the RF carrier and the modulating signal frequencies is called the

A. USB

B. LSB

C. Sideband

D. Carrier frequency

Q 25 The frequency of the unmodulated carrier in FM system is

A. modulating frequency

B. center frequency

C. carrier frequency

D. deviation frequency

Q 26 In cathode ray oscilloscope, the spots are formed on screen having

A.anode

B.cathode

C.grid

D.matrix

Q 27 CRO gives the visual representation of time varying signals. The display of the signal Is

A.One dimensional

B.Two dimensional

C.Three dimensional

D.Four dimensional

Q28.

A. AMETER
B. VOLTMETER
C. WATTMETER
D. ENERGY METER
E. Q 29 Which part is called as heart of CRO?

Q.29

A. CRT
B. Sweep generator
C. Trigger circuit
D. Amplifier

Q 30 The Lissajous patterns help in the measurement of

A. Phase difference between two sine wave
B. Frequency of one waveform if the frequency of other waveform is known
C. Both (a) and (b)
D. None of these

Q 31 Kelvin's double bridge is used to measure low resistances because

A. it has high sensitivity

B. there is no thermoelectric emf

C. resistance variation due to temperature

D. effect of contact and lead resistances is eliminated

Q 32 Considering cost of instruments, which is a better choice, active or passive?

A. Active instruments

B. Passive instruments

C. Cost of both active and passive instruments are approximately same

D. None of these

Q 33 In terms of usage, deflection type instruments are

A. More convenient than null type instrument

B. Less convenient than null type instruments

C. Both are equally convenient

D. None of these

Q 34 Which dynamometer type has uniform scale?

A. Wattmeter
B. Voltmeter
C. Ammeter
D. Ohmmeter

Q 35 An instrument in which the magnitude of the measured quantity is indicated by means of a pointer

A. Analog instrument
B. Digital instrument
C. Ammeter
D. Voltmeter

Q.36. The pointer of an indicating instrument is generally made of

A. Copper
B. Silver
C. Aluminum
D. Gold

Q.37.One that is based on forward biased PN junction is

A. photo diode
B. LED
C. photo voltaic cell
D. both a and b

Q.38. The diode characteristic curve is a plot between

A. current and time
B. voltage and time
C. voltage and current
D. both a and b

Q.39 The color of the light emitted by LED depends on

A. its forward bias
B. its reverse bias

C. forward current
D. semiconductor material

Q.40 A no - load condition means that

A. the load has infinite resistance
B. the load has zero resistance
C. Both A and B
D. the output terminal are open

Q.41 The process of adding an impurity to an intrinsic semiconductor is called

A. atomic modification
B. Ionication
C. doping
D. recombination

Q.42 Electrons that are responsible for current in semiconductors are

A. free electrons
B. valence electrons
C. outer electrons D. inner electron

Q.43 The breakdown voltage of the zener diode is controlled by the

A. impurities
B. doping level
C. voltage
D. Both a and b

Q.44 For the silicon atom the barrier potential is the

A. 0.2V
B. 0.4V
C. 0.7V
D. 0.3V

Q.45 The minority carriers in the n - type material are the

A. electrons
B. protons
C. holes
D. neutrons