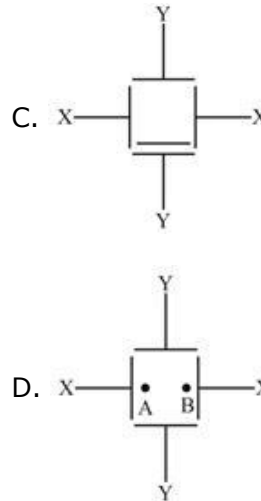
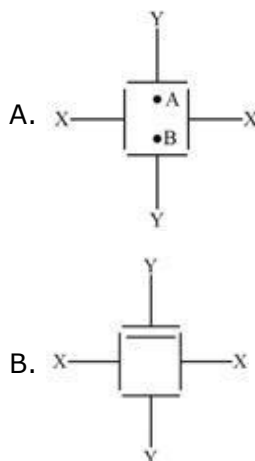


50 Most Expected Question for RRB JE 2019 Exam

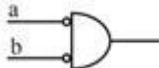


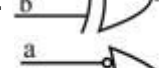


1. Given network is having N nodes and B branches, then number of twigs are
A. N B. $N - 1$
C. $B - N + 1$ D. $B - N - 1$
2. In balanced bridge, if the positions of detector and source are interchanged, the bridge will still remain balanced. This can be explained from which theorem
A. Reciprocity theorem
B. Thevenin's theorem
C. Norton's theorem
D. Compensation theorem
3. Instantaneous power in inductor is proportional to the
A. product of the instantaneous current and rate of change of current
B. square of instantaneous current
C. square of the rate of change of current
D. temperature of the inductor
4. To obtain a high value of capacitance, the permittivity of dielectric medium should be
A. low B. zero
C. high D. unity
5. How many coulombs of charge flow through a circuit carrying a current of 10 A in 1 minute?
A. 10 B. 60
C. 600 D. 1200
6. The resistivity of the conductor depends on
A. area of the conductor
B. length of the conductor
C. type of material
D. none of these
7. Phenomena in which signal transmitted in one circuit creates undesired effect in other circuit is known as
A. Crosstalk
B. signal attenuation
C. Sampling
D. Crosslinking
8. For improving soil condition and efficiency of earthing system, the pit area around GI pipe is filled with
A. mixture of copper and nickel
B. mix of chloride and sodium
C. mix of aluminium and sulphate
D. mix of salt and coal
9. Repeater is known for 3R's which among the following options are not valid about R.
A. Reshaping B. Reamplification
C. Retime D. Repeat
10. Nodal analysis can be applied for
A. Planar networks.
B. Non planar networks.
C. Both planar and non planar networks.
D. Neither planar nor non planar networks
11. Internal resistance of ideal voltage source is
A. zero B. Infinite
C. Finite D. 100 ohms
12. If P is the power of a star connected system then what will be power of an equivalent delta connected system?
A. P
B. $3P$
C. $P/3$
D. None of the above
13. If all the elements in a particular network are linear, then the superposition theorem would hold, when the excitation is
A. DC only
B. AC only
C. Either AC or DC
D. An Impulse
14. The downlink frequency in C band transponder is
A. 6 GHz B. 4 GHz
C. 14 GHz D. 11 GHz
15. A TV transmission is an example of which type of transmission
A. simplex
B. Half duplex
C. full duplex
D. none of the above
16. T1 stream has a data rate of
A. 1.544 Mbps B. 2.048 Mbps
C. 4 Mbps D. 1 Mbps
17. A quarter wave lossless transmission line is terminated by characteristic impedance Z_0 , the input impedance of line is
A. Z_0 B. $Z_0/2$
C. $2Z_0$ D. $Z_0/4$
18. A receiver is tuned to 1100 kHz station, IF is given by 500 kHz, the local oscillator frequency and image frequency are
A. 1600 kHz, 2100 kHz
B. 1600 kHz, 1600 kHz
C. 2100 kHz, 100 kHz
D. 600 kHz, 1600 kHz

19. Bandwidth of difference analog amplitude modulation scheme in ascending order is given by
 - A. SSB, VSB, AM
 - B. DSB, SSB, AM
 - C. DSB, VSB, SSB
 - D. SSB, DSB, VSB
20. If message signal amplitude doubles then for FM.
 - A. frequency deviation doubles
 - B. modulation index doubles
 - C. Bandwidth doubles
 - D. A and B are correct
21. Image station at super Heterodyne receiver is suppressed by
 - A. front end RF amplifier
 - B. IF amplifier
 - C. Mixer
 - D. AF amplifier
22. Ability of receiver to produce all possible frequency components of received audio signal is
 - A. fidelity
 - B. selectivity
 - C. sensitivity
 - D. Image rejection
23. Probability of error is least in
 - A. ASK
 - B. BPSK
 - C. QPSK
 - D. FSK
24. Which of the following error is constant, repetitive and permanent
 - A. gross error
 - B. environmental error
 - C. observational error
 - D. instrumental error
25. The percentage limiting error in calculation of power dissipated by resistor will be _____.
 Given value of $I = 2 \pm 5\%$ and $R = 100 \pm 0.2\%$
 - A. 10.2%
 - B. 1%
 - C. 1.2%
 - D. 9.8%
26. The trace on CRO if $X = \text{ground}$ and Y plate has positive voltage (DC).

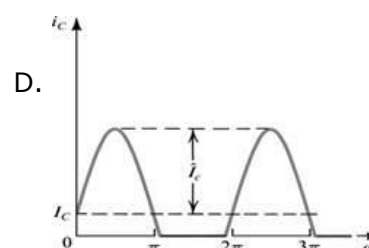
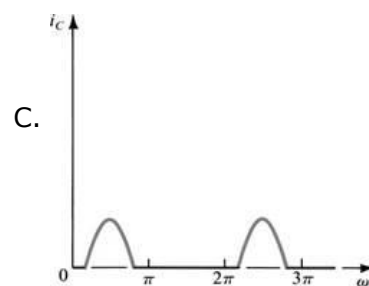
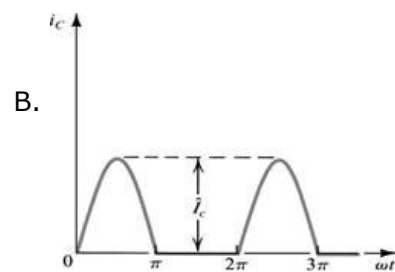
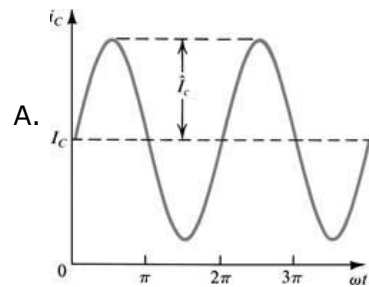


27. Strain gauge is a passive transducer and converts mechanical displacement into a change in
 - A. Temperature
 - B. Resistance
 - C. Inductance
 - D. Capacitance
28. An instrument with high precision implies
 - A. Low accuracy
 - B. High accuracy
 - C. doesn't imply about accuracy
 - D. None of the above
29. Instruments used to measure RMS value of high frequency waveform:
 - A. Hot wire ammeter
 - B. PMMC meter
 - C. Moving iron meter
 - D. Electrostatic instruments
30. In the indicating instruments the readings are always taken near full scale because
 - A. controlling torque reduces
 - B. Relative error is least
 - C. Absolute error is least
 - D. Environment error is reduced
31. In an intel 8085 microprocessor, why is READY signal used?
 - A. To indicate to user that the microprocessor is working and is ready for use.
 - B. To provide proper WAIT states when the microprocessor is communicating with a slow peripheral device.
 - C. To slow down a fast peripheral device so as to communicate at the microprocessor's device.
 - D. None of the above

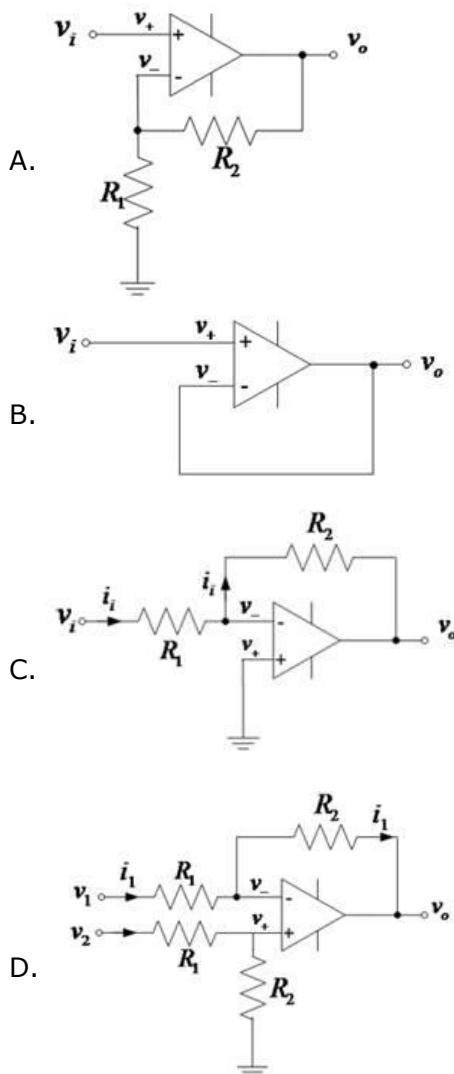
32. In an intel 8085, which is the first machine cycle of an instruction?
 A. An op-code fetch cycle
 B. A memory read cycle
 C. A memory write cycle
 D. An I/O read cycle
33. In Intel 8085 microprocessor ALE signal is made high to
 A. Enable the data bus to be used as low order address bus
 B. To latch data D0-D7 from data bus
 C. To disable data bus
 D. To achieve all the functions listed above
34. The use of negative feedback
 A. reduces the voltage gain of an Op-amp
 B. makes the Op-amp oscillate
 C. makes linear operation possible
 D. answers (A) and (C)
35. Find the slew rate of the op amp having gain of 100 and frequency of input signal = 100 rad/sec and peak to peak voltage = 10 V
 A. 0.05 V/sec B. 0.5 V/sec
 C. 0.5 V/ μ sec D. 0.5 V/msec
36. The Zener diode works as voltage regulator under
 A. forward biased
 B. Reverse biased
 C. Breakdown region
 D. forward blocking region
37. Number of NAND gates required to implement $Y = AB + CD$
 A. 3 B. 5
 C. 4 D. 6
38. The decimal equivalent of a 2's compliment number 1000 is given by
 A. -8 B. 8
 C. 7 D. -7
39. The following operation leads to $(37)_H + (29)_H = ()_H$
 A. 60 B. 66
 C. 56 D. 50
40. Match the following
- | | |
|--|---------------------|
| i.  | a. $\overline{a+b}$ |
| ii.  | b. $a.b$ |
| iii.  | c. $a \odot b$ |
| iv.  | d. $a \oplus b$ |

- A. i - a, ii - c, iii - d, iv - b
 B. i - b, ii - d, iii - c, iv - a
 C. i - a, ii - d, iii - c, iv - b
 D. i - b, ii - c, iii - d, iv - a

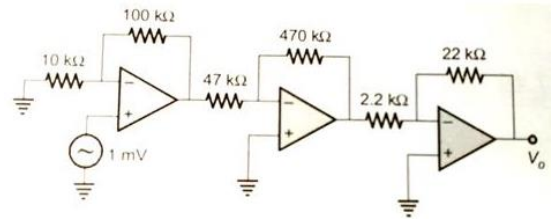
41. For a SCR
 i. It has 4 layers, 3 junction
 ii. It is used as switch
 iii. It is made of silicon
 A. i, ii B. ii, iii
 C. i, iii D. All of the above
42. The relative permeability of diamagnetic materials is
 A. very high
 B. very low (approximately 0)
 C. Equals to 1
 D. Slightly less than 1
43. Which among the following collector current waveforms for transistors shows Class A Amplifier?



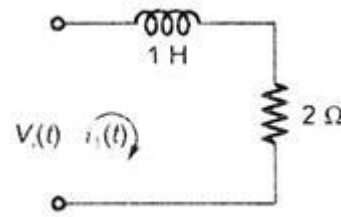
44. In BJT Common Base Configuration, in saturation region:
 A. Emitter Base Junction is forward-biased, Collector Base Junction is reverse-biased
 B. Emitter Base Junction and Collector Base Junction are forward-biased
 C. Emitter Base Junction reverse-biased, Collector Base Junction forward-biased
 D. Emitter Base Junction and Collector Base Junction are reverse-biased
45. Which among the following OPAMP circuit is used as line driver?



46. What is the output voltage V_o of the below circuit?



- A. -1.1V B. +1.1V
 C. 1.0V D. 10V
47. The reactances of a $10 \mu\text{F}$ capacitor at $f = 0 \text{ Hz}$ and $f = 50 \text{ Hz}$ are respectively. (Take $\pi=3.14$)
 A. ∞ and 318.47Ω
 B. 10.0Ω and 318.47Ω
 C. ∞ and 300.4Ω
 D. 0.01Ω and 31.84Ω
48. For the R-L circuit shown, the current $i(t)$ for unit step input voltage will rise to 0.63 in



- A. 1 s B. 2 s
 C. 0.5 s D. 1.5 s
49. A series R-L circuit ($r = 4 \Omega$ and $L = 0.01 \text{ H}$) is excited by a voltage (in volt)
 $V(t) = 283 \sin(300t + 90^\circ)$
 The current in the circuit will be
 A. $40 \sin(300t + 53.1^\circ) \text{ A}$
 B. $40 \sin 53.1^\circ \text{ A}$
 C. $40\sqrt{2} \sin(300t + 53.1^\circ) \text{ A}$
 D. $40\sqrt{2} \sin 53.1^\circ \text{ A}$
50. Time constants of R-L and R-C circuits are respectively:
 $R = 1 \Omega; L = 1 \text{ H}$ and $C = 1 \text{ F}$
 A. 1 sec and 1 sec
 B. 1 sec and 2 sec
 C. 2 sec and 3 sec
 D. 2 sec and 4 sec

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