

SHAKTHI ACADEMY

Increasing Confidence ; Reaching Goals

10, Jayammal Street, Shenoy Nagar (Near Metro) ,Chennai – 30

RRB JE Previous Year Question with Solution 2012

1. What is the value of knee voltage of silicon diode?

- 1) 0.3 V 2) 0.33 V 3) 0.7 V 4) 1.1 V

2. Which organisation has proposed first to constitute the Constitution Assembly to form the Indian Constitution?

- 1) Swaraj Party in 1928 2) Indian National Congress in 1936
3) Muslim League in 1942 4) By all parties convention in 1946

3. There is 20 volt across the inductor and 15 volt across the resistance in the a.c. supplied series R-L circuit. What would be the supply voltage?

- 1) 20 volt 2) 15 volt 3) 25 volt 4) 17.5 volt

4. A transformer mainly transforms _____

- 1) Current 2) Voltage 3) Frequency 4) Power

5. What is the power factor of a pure resistor circuit?

- 1) One 2) Zero 3) Leading 4) Lagging

6. Functions of N.S.D.L. are related to _____

- 1) Bearer bonds 2) GDRs 3) Electronic share 4) Debenture

7. There are rings around which of the following planets?

- 1) Uranus 2) mars 3) Jupiter 4) Saturn

8. _____ is used to heat the non-conductors.

- 1) Eddy current heating 2) Arc heating 3) Induction heating 4) Dielectric heating

9. What is the S.I. Unit of magnetic flux density?

- 1) Gauss 2) Tesla 3) Oersted 4) Weber

10. Which type of oscillator is most stable in simple circuit?

- 1) Crystalline oscillator 2) Clapp oscillator 3) Colpitts oscillator 4) Armstrong oscillator

11. Where is the headquarters of Geological Survey of India located?

- 1) Patna 2) Dehradun 3) Kolkata 4) Agra

12. What is the proper use of signal generator?

- 1) Designing 2) Testing 3) Repairing 4) All the above

13. Nasik is situated on the bank of which river?

- a) Godavari 2) Narmada 3) Tapti 4) Shipra

14. Who started the Shaka era?

- 1) Ashoka 2) Chandragupta-II 3) Kanishka 4) Harsha

15. If one cylinder of a diesel engine receives more fuel than the others, then for that cylinder the

- _____
- 1) exhaust will be smoky 2) piston rings would stick into piston grooves
3) scavenging occurs 4) engine starts overheating

16. The information is sent by CW transmitter by _____

- 1) Changing the audio frequency 2) Interrupting radio signal
3) Using microphone 4) Using camera

17. Moisture can be removed from lubricating oil using _____

- 1) Tubular centrifugal 2) Clarifier 3) Sparkler filter 4) Vacuum leaf filter

18. The rank of the following matrix is _____

1	1	0
1	1	0
1	1	0

- 1) 0 2) 1 3) 2 4) 3

19. Germanium possesses _____

- 1) Two valence electrons 2) Three valence electrons 3) Four valence electrons
4) Five valence electrons

20. Share of export from India is the maximum to the following country _____

- 1) U.S.A. 2) U.K. 3) U.A.E. 4) Japan

21. Which of the following is not a property of difference amplifier?

- 1) Capacitor is used in it
- 2) It is used to compare two signals
- 3) Difference amplifier yields more than the direct couple amplifier
- 4) Frequency of difference amplifier remains flat from zero to high frequency

22. Where are the caves of Ajanta located?

- 1) Orissa
- 2) Kerala
- 3) Maharashtra
- 4) Madhya Pradesh

23. Calorie value is the least of the following materials _____

- 1) Coal gas
- 2) Producer gas
- 3) Steam fiery gas
- 4) Oil gas

24. The value of $\int x/\cos^2 x$ is equal to which of the following?

- 1) $x \tan x$
- 2) $\log \cos x$
- 3) $x \tan x + \log \cos x$
- 4) $x \tan x - \log \cos x$

25. The colonial system of the company was formalized by _____

- 1) Battle of Plassey
- 2) Battle of Buxar
- 3) Battle of Panipat
- 4) Battle of Wandiwash

26. Natural rubber is polymer of _____

- 1) Isobutane
- 2) Isoprene
- 3) Propane
- 4) Isopropene

27. For generating large currents on D.C. generators which winding is generally preferred?

- 1) Progressive wave winding
- 2) Lap winding
- 3) Retrogressive wave winding
- 4) Current depends on design

28. A.C. servomotor is basically a/an _____

- 1) Universal motor
- 2) Single phase induction motor
- 3) Two phase induction motor
- 4) Three phase induction motor

29. co-efficient of velocity as compared to the coefficient of discharge is _____

- 1) Less
- 2) More
- 3) Equal
- 4) Less or more depending on flow

30. The capacitance, in force-current analogy, is analogous to _____

- 1) Momentum
- 2) Velocity
- 3) Displacement
- 4) Mass

31. _____ signal will become zero when the feedback signal and reference signs are equal.

- 1) Input
- 2) Actuating
- 3) Feedback
- 4) Reference

32. Most of the weather phenomena take place in the _____

- 1) Stratosphere
- 2) Troposphere
- 3) Tropopause
- 4) Ionosphere

33. Motor-generator set for D.C. are welding has generator of _____
 1) Series type 2) Shunt type 3) Differentially compound type
 4) Level compound type
34. Which of the following motors is preferred when quick speed reversal is the main consideration?
 1) Squirrel cage induction motor 2) Wound rotor induction motor
 3) Synchronous motor 4) D.C. motor
35. In case of ball bearings, which pan is made harder than others _____
 1) Ball 2) Outer-race 3) Inner race 4) All are made equally hard
36. Selectivity of the receiver can be increased by which of the following?
 1) By using more timed circuit 2) By decreasing number of tuned circuit
 3) By using loudspeaker 4) By increasing gain of the receiver
37. An electronics circuits in which different components such as Diode, Resistor and Capacitor etc. are connected separately is called _____
 1) Chassis 2) Printed board 3) Integrated circuit 4) Discrete circuit
38. Indicated power of a 4-stroke engine is equal to _____
 1) $pLAN$ 2) $2pLAN$ 3) $pLAN / 2$ 4) $4pLAN$
 where p = Mean effective pressure. L = Stroke. A = Area of piston and N = rpm of engine
39. What are Ferrites?
 1) Magnetic but have low resistance 2) Magnetic but have high resistance
 3) Non-magnetic with low resistance 4) Non-magnetic with high resistance
40. The translator program that converts source code in high level language into machine code line by line is called _____
 1) Assembler 2) Compiler 3) Loader 4) Interpreter
41. National Library, the largest in India is located at-
 1) Chennai 2) Mumbai 3) Delhi 4) Kolkata
42. Pak Strait joins which of the following two countries _____
 1) India-Pakistan 2) India-Myanmar 3) India-Sri lanka 4) None of these
43. Who had appointed the first Prime Minister of India?
 1) Lord Mountbatten 2) C.Rajagopalachari 3) President of India 4) None of these
44. Who had demarcated the border-line between India and Pakistan?
 1) McMohan 2) Lord Durand 3) Radcliffe 4) None of these

45. Approximate thermal efficiency of petrol engine is _____
1) 20% 2) 30% 3) 50% 4) 75%

46. Which of the following is the universal gate?
1) NAND-Gate 2) OR-Gate 3) AND-Gate 4) NOT-Gate

47. How will a red flower appear, if it is seen through a green glass?
1) Red 2) Brown 3) White 4) Green

48. What is the unit of electrical energy?
1) Ampere 2) volt 3) Watt 4) Kilowatt-hour

49. A diode _____
1) Functions only in one direction 2) Functions in both the directions
3) Does not function at all 4) It gets damaged, when voltage is applied

50. What is the frequency of the receiver?
1) 488 kHz 2) 445 kHz 3) 455 kHz 4) 456 kHz

51. When were the Indian States organised on the basis of language?
1) 1947 2) 1950 3) 1956 4) 1952

52. What would be the expenditure in 30 days at the rate of 50 paise per unit, if a bulb of 100 W is used five hours per day?
1) Rs.10.50 2) Rs.8.50 3) Rs.7.50 4) Rs.9.50

53. Lever functions on which of the following principles?
1) Crank-shaft 2) Joining rod 3) Crank pin 4) Cross head

54. Protein is not available in which of the following?
1) Meat 2) Milk 3) Rice 4) Pulse

55. In steam turbine the action of steam is _____
1) Stable 2) Dynamic 3) Stable and dynamic 4) Neither stable nor dynamic

56. Among the following statement which is the false?
1) Only minority impurities are added in a junction diode
2) Higher temperature increases the leakage current of diode
3) A simple zener diode works when connected between anode to cathode
4) Zener is mostly used in voltage regulator

57. In resistance heating, highest working temperature is obtained from heating elements made of _____

- 1) Nickel and copper 2) Nichrome 3) Silicon carbide 4) Silver

58. In higher pair, the relative motion is _____

- 1) Purely turning 2) Purely sliding 3) Purely rotary 4) Combination of sliding and turning

59. The least populated State in India is _____

- 1) Goa 2) Sikkim 3) Manipur 4) Arunachal Pradesh

60. In case of gas turbines, the gaseous fuel consumption guarantees are based on _____

- 1) High heat value 2) Low heat value 3) Net calorific value 4) Middle heat value

61. In a resistive load, power dissipation would be proportional to _____

- 1) Current 2) $1/\text{Current}$ 3) $(\text{Current})^2$ 4) $1/(\text{Current}^2)$

62. An automatic toaster is a _____ loop control system.

- 1) Open 2) Closed 3) Partially closed 4) None of the above

63. A transistor draws a base current of 100 micro ampere when the collector current is 10 milli ampere, what is value of its ' α '?

- 1) 101/100 2) 100/101 3) 1000/10001 4) 10/11

64. Who of the following was not the acting President of India?

1. V.V.Giri 2) B.D. Jatti 3) Hidayatullah 4) Zakir Hussain

65. The northern most limit of India is _____

- 1) $36^\circ 4'$ N latitude 2) $37^\circ 8'$ N latitude 3) $37^\circ 6'$ N latitude 4) $36^\circ 12'$ N latitude

66. When the load is above _____ a synchronous motor is found to be more economical.

- 1) 2 kW 2) 20 kW 3) 50 kW 4) 100 kW

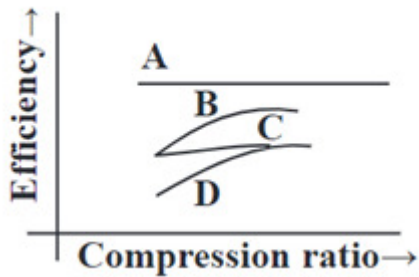
67. The first summit of NAM was held at _____

- 1) Cairo 2) Lusaka 3) Belgrade 4) New Delhi

68. To convert moving coil galvanometer into an ammeter, which of the following methods is used?

- 1) Small resistance in series 2) Small resistance in parallel
3) High resistance in series 4) High resistance in parallel

69. Following figure shows the curves of efficiency versus compression ratio for various cycles in LC engines. For constant volume cycle, the curve applicable is _____



- 1) A 2) B 3) C 4) D

70. The minimum value of the function $y = x^5 - 4x^4 + 5x^3 - 1$ will occur when the value of x is equal to _____

- 1) 0 2) 1 3) 2 4) 3

71. Which one of the natural regions is known as the 'Bread Basket' of the world?

- 1) The steppe region 2) The mediterranean region
3) The monsoon region 4) The equatorial region

72. When input signal in transistor amplifier is applied between base and emitter and out put is taken from emitter and collector, then what the configuration is called?

- 1) Common emitter 2) Common base 3) Common collector 4) None of these

73. Which of the following can be used to control the speed of a D.C. motor?

- 1) Thermistor 2) Thyristor 3) Thyatron 4) Transistor

74. The transient response of a system is mainly due to _____

- 1) Inertia forces 2) Internal forces 3) Stored energy 4) Friction

75. Minority carrier in P-type semi-conductor are _____

- 1) Free electrons 2) Free holes 3) Holes and electrons both 4) Holes minus electrons

76. Pulley in a belt drive acts as _____

- 1) Cylindrical pair 2) Turning pair 3) Rolling pair 4) Sliding pair

77. D.C. shunt relays are made of _____

- 1) Few turns of thin wire 2) Few turns of thick wire 3) Many turns of thin wire
4) Many turns of thick wire

78. The movement that came to an abrupt end due to the Chauri-chaura incident was the _____

- 1) Wahabi Movement 2) Home rule movement 3) Non-cooperation movement
4) Civil disobedience movement

79. While checked with a multimeter, an open resistor reads _____

- 1) Zero 2) Infinite 3) High but within tolerance 4) Low but not zero

80. In amplitude modulation _____

- 1) Amplitude of the carrier is kept constant
2) Change occurs in carrier frequency
3) Amplitude is varied according to the instantaneous value of modulating
4) None of these

81. Oscillator operates on sub-harmonic frequency because _____

- 1) Lower frequency gives better stability 2) It gives linear output
3) Less stages are used 4) More stages are used

82. Hopkinson's test on D.C. machines is conducted at _____

- 1) No-load 2) partial load 3) Full-load 4) Over load

83. Emitter follower is also called as _____

- 1) Common emitter 2) Common base 3) Common collector 4) SCR

84. The example of lower pair is _____

- 1) Shaft revolving in a bearing 2) Straight line motion mechanisms
3) Automobile steering gear 4) All of the above

85. Which is true statement among the following?

- 1) Main function of the detector is to suppress the image signal
2) Noise is very low in crystal detector
3) Super-regenerative is less sensitive
4) Diode detector is more sensitive

86. The first governor-General of India under East India Company was _____

- 1) Cornwallis 2) Wellesley 3) Warren Hastings 4) Sir John Shore

87. The expression $\int p \, dV$ can be used for obtaining work of _____

- 1) Non-flow reversible process 2) Steady flow reversible process
3) Adiabatic irreversible process 4) Throttling process

88. In connection with oscillator, which is FALSE statement?

- 1) Oscillator converts d.c. into a.c.

- 2) Oscillator is that amplifier which provides its own input
- 3) All types of oscillator produce sine wave
- 4) In phase, feedback used in oscillator is also called positive feedback.

89. The index of compression n tends to reach ratio of specific heats γ when _____

- 1) flow is uniform and steady
- 2) process is isentropic
- 3) process is isothermal
- 4) process is isentropic and specific heat does not change with temperature

90. Who of the following attended all the three Round Table Conferences?

- 1) B.R. Ambedkar 2) M.M.Malaviya 3) Yallabhbai Patel
- 4) None of the above

91. For which of the following substances, the internal energy and enthalpy are the functions of temperature only _____

- 1) Any gas 2) Saturated steam 3) Water 4) Perfect gas

92. Frequency multiplier stage of the transmitter operates under _____

- 1) Class C 2) Class A 3) Class AB 4) Class B

93. Which of the following is used in the blast furnace as flux?

- 1) Fluorspar 2) Quartzite 3) Limestone 4) Ferro-manganese

94. An air vessel is usually provided at the summit of a syphon in order to _____

- 1) Regulate the flow 2) Increase discharge 3) Avoid interruption in flow
- 4) Increase velocity

95. An exciter for a turbo generator is a _____

- 1) Separately excited generator 2) Shunt generator 3) Series generator
- 4) Compound generator

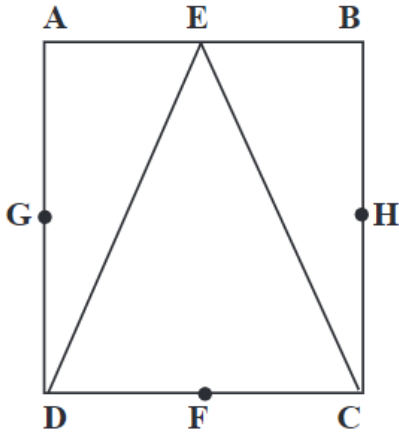
96. Which of the following instruments is most accurate?

- 1) Vertical caliper 2) Manometric screw gauge 3) Optical projector
- 4) Mechanical comparator

97. The value of $Lt \frac{\sin x}{x}$ is equal to _____

- 1) 1 2) -1 3) Zero 4) Infinity

98. In the given figure we see a square ABCD and a triangle EDC within it. E, F, G and H are the midpoints of the four sides of the square AB, DC, AD and BC respectively. If these midpoints are joined together with straight lines e.g.. E with F and G with H, then how many triangles will the figure have?



99. Two generators A and B have 6-poles each. Generator A has wave wound armature while generator B has lap wound armature. The ratio of the induced e.m.f. in generator A and B will be _____

- 1) 2 : 3 2) 3 : 1 3) 3 : 2 4) 1 : 3

100. A frame-structure is nice if the number of its constituents is equal to _____

- 1) $2n-3$ 2) $n-1$ 3) $2n-1$ 4) $n-2$

Answer:

1 . 3	2 . 2	3 . 3	4 . 2	5 . 1	6 . 4	7 . 4	8 . 4	9 . 2	10 . 1
11 . 2	12 . 4	13 . 1	14 . 3	15 . 1	16 . 1	17 . 1	18 . 2	19 . 3	20 . 1
21 . 1	22 . 3	23 . 2	24 . 3	25 . 2	26 . 2	27 . 2	28 . 3	29 . 2	30 . 4
31 . 2	32 . 2	33 . 3	34 . 4	35 . 4	36 . 4	37 . 3	38 . 3	39 . 2	40 . 2
41 . 4	42 . 3	43 . 1	44 . 3	45 . 2	46 . 1	47 . 2	48 . 4	49 . 1	50 . 4
51 . 3	52 . 3	53 . 1	54 . 3	55 . 2	56 . 1	57 . 2	58 . 4	59 . 2	60 . 3
61 . 3	62 . 1	63 . 2	64 . 4	65 . 3	66 . 3	67 . 3	68 . 2	69 . 2	70 . 1
71 . 1	72 . 1	73 . 2	74 . 2	75 . 2	76 . 1	77 . 2	78 . 3	79 . 2	80 . 3
81 . 2	82 . 3	83 . 3	84 . 2	85 . 4	86 . 3	87 . 1	88 . 3	89 . 2	90 . 1
91 . 4	92 . 1	93 . 1	94 . 1	95 . 1	96 . 3	97 . 3	98 . 2	99 . 2	100 . 1

Our Online Courses :

Bank/ Insurance

Railways

TN Police

TNPSC – Maths/Tamil

www.shakthiiaacademy.com