



SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY
THIRUVANANTHAPURAM—695 011, INDIA.
(An Institute of National Importance under Govt. of India)
Phone—(91)0471—2443152 Fax—(91)0471—2446433, 2550728
Email-sct@sctimst.ac.in Web site—www.sctimst.ac.in

ROLL NUMBER

WRITTEN TEST FOR THE POST OF TECHNICIAN (ELECTRICAL) – A

DATE : 05/07/2017

TIME : 09.30 AM

DURATION : 60 MINUTES

TOTAL MARKS : 60

INSTRUCTIONS TO THE CANDIDATE

1. Write your Roll Number on the top of the Question Booklet and in the OMR sheet.
2. Each question carries 1 mark.
3. There will not be any Negative Marking.
4. Darken only the bubble corresponding to the most appropriate answer.
5. Marking more than one answer will invalidate the answer.
6. Candidate should sign on the question paper and OMR sheet.
7. Candidate should hand over the question paper and OMR sheet to the invigilator before leaving the examination hall.

Signature of the Candidate

WRITTEN TEST FOR THE POST OF TECHNICIAN (ELECTRICAL) – A

1. Resistor with colored bands in the body
 - A. Wire wound resistor
 - B. Carbon composition resistor
 - C. Metal film resistor
 - D. Rheostat
2. What type of flux is suitable for electrician's solder
 - A. Zinc chloride
 - B. Resin
 - C. Hydrochloride acid
 - D. Tallow
3. Which is the electrical conductor used in the battery.
 - A. Gas
 - B. Silver
 - C. Water
 - D. Aluminium
4. The commercial unit of electrical energy is -----
 - A. Joule
 - B. Watt – hour
 - C. Kilowatt-hour
 - D. Watt – second
5. An industry has 100 nos. of 200W LED light load. How many numbers of sub circuit is used?
 - A. 10
 - B. 25
 - C. 24
 - D. 5
6. In a lead acid battery there are 6 positive plates. How many numbers of negative plates are in the battery?
 - A. 6
 - B. 7
 - C. 12
 - D. 5
7. Two capacitors of capacitance 9 F and 18 F in series will have a total capacitance of ---
 - A. 27
 - B. 9
 - C. 6
 - D. 18
8. A tank circuit is a -----
 - A. Parallel LC circuit
 - B. series LC circuit
 - C. A resonant circuit
 - D. Series parallel circuit
9. If a D.C. series motor is started on very light load or no-load then -----
 - A. It will run at dangerously high speed
 - B. It will run at low speed
 - C. It will run at constant speed
 - D. It will not run
10. Which circuit breaker is preferred to be installed in extra high voltage A.C. system?
 - A. Bulk oil type circuit breaker
 - B. SF 6 circuit breaker
 - C. Vacuum circuit breaker
 - D. Air blast circuit breaker
11. What is the value of form factor for a sinusoidal A.C.?
 - A. 1.11
 - B. 11.1
 - C. 0.111
 - D. 0.707
12. A coil has an inductance of 0.1H and is connected to 230V, 50 Hz AC supply. What is the value of inductive reactance ?
 - A. 23.0 ohm
 - B. 2300 ohm
 - C. 3.1 ohm
 - D. 31.04 ohm
13. In moving coil meters, damping is provided by
 - A. Damping vane in the air tight chamber
 - B. The aluminium frame of the coil
 - C. Eddy current disk
 - D. The coil spring attached to the moving mechanism

WRITTEN TEST FOR THE POST OF TECHNICIAN (ELECTRICAL) - A

14. The unit of magnetic flux density is -----
A. Weber B. Weber per metre C. Ampere per metre D. Tesla
15. In an induction motor, no-load slip is generally-----
A. less than 1% B. 1.6% C. 2% D. 5%
16. In squirrel cage induction motor, the rotor slots are usually given slight skew in order to-----
A. reduce magnetic hum B. reduce eddy current losses
C. reduce windage losses D. reduce hysteresis losses
17. For transformers ratings are always given in KVA not in KW because
A. It is conventional B. Power factor of load is not known
C. For higher efficiency D. To make calculation simple
18. The hysteresis loss in a transformer is minimized by using
A. Laminating the core B. Brazing of transformer assembly
C. Silicon steel D. Proper design of winding
19. If the power factor of the transformer increases, then its efficiency will
A. increase B. decrease C. remain constant D. not related to each other
20. Scott- connection of the transformer is used for the conversion of
A. Single phase to 2 phase B. 2 phase to 3 phase
C. 3 phase to single phase D. 3 phase to 2 phase
21. Generating voltage and frequency in India is about?
A. 220V 60 Hz B. 220V 50 Hz C. 11 KV 50 Hz D. 33 KV 50 Hz
22. What is the highest possible transmission voltage in India?
A. 765 KV B. 132 KV C. 440 KV D. 220 KV
23. What is the maximum range of current and voltage of the wattmeter to measure power without CT and PT?
A. more than 25A, 250V B. more than 50A, 415V
C. more than 30A, 500V D. more than 15A, 600V
24. What is the unit of rated output of the potential transformer?
A. volt amperes B. Ampere hour C. Watt hour D. Volts
25. What is the initial operating voltage of the fluorescent lamp?
A. 240V B. 250 V C. 230V D. 1100 V
26. Which of the following is not a passive component?
A. Transistor B. Inductor C. Capacitor D. Resistor
27. Large value resistances are expressed in kilo ohm and mega ohm. How can 1500000 ohm resistor be expressed?
A. 1500000 Ω B. 150 K Ω C. 1500 K Ω D. 1.5 M Ω

WRITTEN TEST FOR THE POST OF TECHNICIAN (ELECTRICAL) - A

28. What is the PTC resistor called?
A. Thermistors B. Sensistors C. Varistors D. LDR
29. Which type of resistors is used for over voltage protection?
A. Sensistors B. Thermistors C. Varistors D. Light depended resistor
30. What is the barrier potential of silicon diode?
A. 0.3V B. 0.7V C. 0.6V D. 0.5V
31. What will be the D.C. output voltage of the half wave rectifier, if the input A.C. voltage is 36 V?
A. 16.2 V B. 26.2 V C. 31.6 V D. 24.8 V
32. What is the ripple frequency in full wave bridge rectifier?
A. f input B. $1/2$ f input C. 2 f input D. 4 f input
33. Which of the following value is appeared in the screen of the CRO, when measuring A.C voltage?
A. R.M.S value B. Average value
C. Instantaneous value D. Peak to peak value
34. What energy is converted into sound energy in loud speakers?
A. mechanical vibration energy B. electrical energy
C. light energy D. heat energy
35. In voltage regulated power supply, which type of diode is used?
A. Zener diode B. Tunnel diode C. light emitting diode D. PN junction diode
36. In a 3 phase delta connection
A. Line voltage = 3 phase voltage B. Phase voltage = 3 Line voltage
C. Line voltage = Phase voltage D. Line current = Phase current
37. How many PN junctions are used in SCR?
A. 4 B. 3 C. 1 D. 2
38. Which type of fire extinguisher is to be used on electrical equipment or installation under fire?
A. Foam type B. Halon type
C. Gas cartridge water filled type D. Stored pressure, water filled type
39. The decimal number "8" is equal to the binary number
A. 1000 B. 1001 C. 0111 D. 0110
40. The logic gate produces a '0' or low level output when one or both of the inputs are '1' is called gate.
A. AND B. OR C. NOR D. NAND

WRITTEN TEST FOR THE POST OF TECHNICIAN (ELECTRICAL) - A

41. Underground cable is protected by :
A. M.S and G.I pipe
B. Granite stone
C. A layer of sand and bricks
D. A layer of stone slabs
42. The slot angle between starting winding and main winding in a split phase motor should be
A. 90°
B. 120°
C. 180°
D. 270°
43. A pump motor has an incorrect direction of rotation because of wrong connection. How do you notice this fault?
A. The pump supplies too much water
B. The pump does not supply water
C. The pump motor runs too hot
D. The fuse in the motor circuit blows out
44. What is the type of supply on which a universal motor work?
A. AC supply only
B. DC supply only
C. Both AC and DC supply
D. Only on rectified DC supply
45. Two watt meters can be used to measure 3 phase power in a 3 phase, 3 wire system with
A. Balanced load
B. Unbalanced load
C. Balanced as well as unbalanced load
D. Out of balanced load
46. What is the name of the instrument used to measure the specific gravity of battery electrolyte?
A. Pyrometer
B. Hydrometer
C. Lactometer
D. Fuel gauge
47. Cells are connected in parallel in order to increase the
A. Efficiency
B. Current capacity
C. Voltage rating
D. Life of the cell
48. MCCB Stands for
A. Moulded Case Circuit Breaker
B. Maximum Current Circuit Breaker
C. Minimum Current Circuit Breaker
D. Metal Case Circuit Breaker
49. What is the color coding of 2.2 kilo ohm resistor with 5% tolerance?
A. red, red, orange, gold
B. red, red, red, gold
C. red, red, red, silver
D. orange, orange, orange, gold
50. In a purely resistive circuit
A. Power consumed is zero
B. Power factor is unity
C. Current lead the voltage by 90°
D. Heat produced is zero
51. The number of cycles completed in one second is called
A. hertz
B. Period
C. frequency
D. Amplitude
52. The unit of inductive reactance is
A. Henry
B. Ohm
C. Farad
D. Hertz

WRITTEN TEST FOR THE POST OF TECHNICIAN (ELECTRICAL) - A

53. Soldering is done on joints to improve the
- A. Tensile strength B. Resistivity C. Ductility D. Conductivity
54. Which of the following statement is true?
- A. At higher voltage, cost of transmission is reduced
B. At higher voltage, cost of transmission is increased
C. Efficiency increased
D. Efficiency decreased
55. The capacitor used in the fan motor is connected in
- A. Series to the starting winding B. Series to the running winding
C. Parallel to the running winding D. Series to the starting and running winding
56. The starter used to start the slip ring induction motor is
- A. Auto transformer starter B. Star delta starter
C. DOL starter D. Rotor resistance starter
57. A 6 pole induction motor is connected to a 50 c/s supply. If it is running at 970 rev/min. What is the percentage of slip?
- A. 3% B. 4% C. 5% D. 6%
58. The moisture presence in transformer oil reduces
- A. Density of oil B. Lubricating property of oil
C. Dielectric strength of oil D. All of the above
59. Which type of single phase motor is used for portable electric drilling machine?
- A. repulsion motor B. universal motor
C. Shaded pole motor D. Capacitor start induction motor
60. What is the precaution to be taken before removing the capacitor from the motor for testing?
- A. The rating of the capacitor is to be noted
B. The polarity is to be checked
C. Check the continuity of the capacitor
D. It should be discharged to avoid total shock

TECHNICIAN (ELECTRICAL)-A-ANSWER KEY (05/07/2017)

1	B	21	C	41	C
2	B	22	A	42	A
3	C	23	C	43	B
4	C	24	A	44	C
5	B	25	D	45	C
6	B	26	A	46	B
7	C	27	D	47	B
8	A	28	B	48	A
9	A	29	C	49	B
10	B	30	B	50	B
11	A	31	A	51	C
12	D	32	C	52	B
13	C	33	D	53	D
14	D	34	B	54	A
15	A	35	A	55	A
16	A	36	C	56	D
17	B	37	B	57	A
18	C	38	B	58	C
19	A	39	A	59	B
20	D	40	C	60	D