

Question paper
Technical Assistant –A (Electrical)

Name:-

Full Marks:- 100

Date:-

Time:- 3 Hours.

Roll Number:-

1) Tick the right answer.

1 x30=30 marks

Sl no	Questions	Answers			
1	What is the ideal value of voltage regulation?	01 volt	Zero Volt	5 volts	0.1 volt
2	What is the ratio of charcoal and salt in plate earthing	3:2	3:1	4:1	5:2
3	The speed of the non-inverter compressor is	Fixed	variable	340 RPM	None of this
4	Bulbs in street lighting are all connected in	Series Parallel	Series	Parallel	End-to-end
5	Electric pressure is also called	Resistance	Power	energy	Voltage
6	The resistance of a conductor varies inversely as	Temperature	Area of cross-section	Length	Resistivity
7	The method of cooling in pole-mounted transformers is	OFAN	ONAF	ONAN	ON
8	A capacitor start single phase induction motor will usually have a power factor of	Unity	0.8 leading	0.6 leading	0.6 lagging
9	If the efficiency of a machine is to be high, what should be low?	Input power	Ration of output to input	Losses	True component of power
10	The electrical potential of the earth is considered to be	One Volt	Five Volts	Zero Volt	2.5 Volts
11	Which of the following quantities remain the same in all parts of series circuit?	Voltage	Current	Power	Resistance

12	Ohm's law is not applicable to	High currents	D.C circuit	Small resistors	Semi-conductors
13	KVA is the unit of	Apparent power	Active power	Reactive power	True power
14	According to Indian standards a distribution Transformer is?	400 V/11KV	11KV/0.433 V	11/0.433KV	220 V/133KV
15	The speed of 8 poles synchronous generator is?	1000 RPM	Zero	960 RPM	750 RPM
16	Medium Voltage means?	Not exceed 11 kv	Not exceed 650 V	Above 250V	Bellow 6.6 KV
17	The normal voltage of lead acid cells is?	24 Volts	1.4 Volts	12 Volts	2.0 Volts
18	Each disc in a string of insulators is designed	6.6KV	20 KV	11 KV	33KV
19	KVA is the unit of	Apparent power	Active power	Reactive power	True power
20	The method of cooling in pole-mounted transformers is	OFAN	ONAN	ONAF	ON
21	If there is no back e.m.f in a d.c motor	Motor will run faster than its rated speed	Armature drop will be reduced substantially	Motor will burn	None of the above is true
22	D-type MCB are used for	High starting current (motor)	Domestic application	Buttery charger	Industrial use
23	Creeping is associated with	Voltmeter	Power factor meter	Energy meter	Watt meter
24	Electric pressure is also called	Resistance	Power	Voltage	energy
25	The substance which have a large number of free electrons and offer a low resistance are called	Insulators	Inductors	Semi-conductors	Conductors
26	Out of the flowing which is not a poor conductor?	Cast iron	Copper	Carbon	tungsten
27	Out of the flowing which is an insulating material?	Copper	Gold	Silver	Paper
28	What is the Peak value of 230 Volt AC?	162.66 Volts	325.22 Volts	230 Volts	415 Volts
29	The resistance of a conductor varies inversely as	Length	Area of cross-section	Temperature	Resistivity
30	Which of the following quantities remain the same in all parts of series circuit?	Voltage	Current	Power	Resistance

2) Write full form of the following, (1x20=20 marks)

1. HVAC -
2. ELCB-
3. ACSR-
4. CBCU-
5. DCDB-
6. BLDC -
7. OCTC-
8. SMPS -
9. VRF -
10. XLPE -
11. AVR-
12. RCBO -
13. MDO –
14. ACB-
15. PDB-
16. ATS-
17. PCB-
18. DPIC-
19. SFU-
20. PILC-

3. Write short notes of the following: (7x3 marks each= 21marks)

- a) What is Green energy/renewable Energy?
- b) ON grid connected solar power roof top system and OFF grid solar power roof top system
- c) Why Transformers are rated In KVA?
- d) Why Earthing of an electrical equipment is essential?

- e) What are the benefits of LED lights?
- f) What is Neutral?
- g) What is surge protection Devices (SPD)

4. How much electricity was consumed if 01 number television with 130 w, 06 numbers LED light with 09 w, 03 numbers ceiling fan with 70w, 01 number inverter AC with 1000w, 01 number refrigerator with 750 w ,

What will be the Electricity charges if consumption ran from 7.00 AM to 5.00PM?

(02 marks)

5. Calculate the full load current of a 3 phase, 10 kW induction motor, voltage-415 Voltage, and Power factor-0.8.

(02 marks)

6. Prepared proper Bill of Quantities , Specifications, estimated the approximate cost of the Innovation Hub(27meter X 23meter) having 24 watts panel LED lights, 50 watts LED outdoor flood lights,35 watts BLDC wall mounted fans, 7.5 ton Air conditioners, with sufficient power points for different type of exhibits. (25 marks)

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