

CBSE – DEPARTMENT OF SKILL EDUCATION

Electrical Technology (SUBJECT CODE819)

Sample Question Paper

Class XII (Session 2019–2020)

Time: 3 Hours

Max. Marks: 60

General Instructions:

1. *This Question Paper consists of two parts viz. Part A: Employability Skills and Part B: Subject Skills.*
2. **Part A: Employability Skills (10 Marks)**
 - i. *Answer any 4 questions out of the given 6 questions of 1 mark each.*
 - ii. *Answer any 3 questions out of the given 5 questions of 2 marks each.*
3. **Part B: Subject Skills (50 Marks):**
 - i. *Answer any 10 questions out of the given 12 questions of 1 mark each.*
 - ii. *Answer any 5 questions from the given 7 questions of 2 marks each.*
 - iii. *Answer any 5 questions from the given 7 questions of 3 marks each.*
 - iv. *Answer any 3 questions from the given 5 questions of 5 marks each.*
4. *This question paper contains 42 questions out of which 30 questions are to be answered.*
5. *All questions of a particular part/section must be attempted in the correct order.*
6. *The maximum time allowed is 3 hrs.*

PART A: EMPLOYABILITY SKILLS (10 MARKS)

Answer any 4 questions out of the given 6 questions of 1 mark each:

1.	Identify the following- The process of creating a non –fiction text about current or recent news, items of general interest or specific topic is called a)Writing skills b)Paragraph writing c)Article writing d)None of these	(1)
2.	It contains icons for the most commonly used commands- a)Menu bar b)Standard bar c)Formatting bar d)Title bar	(1)
3.	This personality disorder is marked by an overreliance on other people to meet one’s emotional and physical needs- a)Dependent b) Obsessive c) Avoidant d)Borderline	(1)
4.	Who oversee green activities in their organization? a) Energy auditors b) Wind energy engineers c) Solar energy engineers d) Chief sustainability officers	(1)
5.	Define ‘Entrepreneurship’.	(1)

6.	This is not the sources of motivation and inspiration- a) Books b) Gossip c) Dreaming big d) Music	(1)
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Answer any 3 questions out of the given 5 questions of 2 marks each:

7.	Give two points difference between listening and hearing.	(2)
8.	Write four steps to insert a text box in a slide.	(2)
9.	Tell two traits of each extraversion and agreeableness personality.	(2)
10.	List four green jobs in building and construction field.	(2)
11.	Give one example each of trading & services and also give its reason.	(2)

PART B: SUBJECT SKILLS (50 MARKS)

Answer any 10 questions out of the given 12 questions:

12.	Quality factor is also known as _____ a) Voltage magnification b) Current magnification c) Resistance magnification d) Impedance magnification	(1)
13.	Efficiency of a transformer is maximum at a. Leading power factor b. Lagging power factor c. Unity power factor d. None of these	(1)
14.	The starting torque of a capacitor start motor is a) zero b) low c) same as rated torque d) more than rated torque.	(1)
15.	What will happen if DC shunt motor is connected across AC supply? a) Will run at normal speed b) Will not run c) Will Run at lower speed d) Burn due to heat produced in the field winding	(1)

16.	A good heating element should have a) High resistivity and low melting point b) Low resistivity and high melting point c) High resistivity and high melting point d) Low resistivity and low melting point	(1)
17.	RMS stands for _____ a) Root Mean Square b) Root Mean Sum c) Root Maximum sum d) Root Minimum Sum	(1)
18.	The efficiency of an induction motor is about a)100% b)80-90% c)50-60% d)Less than 50%	(1)
19.	A transformer oil used in an electrical transformer must be free from _____ a) Gases b) Odour c) Sludge d) Moisture	(1)
20.	Speed of the universal motor is a) Dependent on frequency of supply b) Proportional to frequency of supply b) Independent of frequency of supply c) None of the above	(1)
21.	The household energy meter is a)An indicating instrument b)A recording instrument c)An integrating instrument d)None of the above	(1)
22.	Resistance in multimeter is measured using _____ a) constant current source b) constant voltage source c) variable current source d) variable voltage source	(1)
23.	The following class of fire occur in electrical equipment a) Class-A fires	(1)

	b) Class-B fires c) Class-C fires d) All of the above	
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Answer any 5 questions out of the given 7 questions of 2 marks each:

24.	What is Q factor of RLC circuit? What is its significance?	(2)
25.	What are the precautions while installation of dc motors?	(2)
26.	What is an auto transformer?	
27.	What are the steps to rescue a person from live wire?	(2)
28.	What is the difference between room cooler and desert cooler?	(2)
29.	What is reverse motor?	(2)
30.	What are Safety measures precautions from operational point of view of single phase transformer?	(2)

Answer any 5 questions out of the given 7 questions of 3 marks each:

31.	Compare series motor, shunt motor and compound motors.	(3)
32.	Explain the working principle of dynamometer type wattmeter.	(3)
33.	Explain the construction and operation of universal motor.	(3)
34.	Explain the operation of step-up and step-down transformer using diagram.	(3)
35.	Write the steps of starting of 3 phase induction motor	(3)
36.	Describe Schafer's Method of artificial respiration.	(3)
37.	What are Common faults of electric mixer?	(3)

Answer any 3 questions out of the given 5 questions of 5 marks each:

38.	Give construction and working details of room cooler. Explain it with a neat diagram.	(5)
39.	Explain the construction of digital multi meter and describe its operation in details.	(5)

40.	Explain construction and working principle of immersion heater. Also explain its defects and steps to repair.	(5)
41.	Classify AC motors and explain them briefly.	(5)
42.	Explain working of three phase induction motor in details using diagram.	(5)