CBSE | DEPARTMENT OF SKILL EDUCATION

ELECTRICAL TECHNOLOGY (SUBJECT- CODE -819)

Blue-print for Sample Question Paper for Class XI (Session 2023-2024)

Max. Time: 3 Hours **Max. Marks: 60**

PART A - EMPLOYABILITY SKILLS (10 MARKS):

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANSWER TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	
1	Communication Skills- III	1	1	2
2	Self-Management Skills- III	2	1	3
3	ICT Skills- III	1	1	2
4	Entrepreneurial Skills- III	1	1	2
5	Green Skills- III	1	1	2
TOTAL QUESTIONS		**6**	**5**	**11**
NO. OF QUESTIONS TO BE ANSWERED		**Any 4**	**Any 3**	**07**
TOTAL MARKS		**1 x 4 = 4**	**2 x 3 = 6**	**10 MARKS**

PART B - SUBJECT SPECIFIC SKILLS (50 MARKS):

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANS.TYPE QUES.-I	SHORT ANS. TYPE QUES.- II	DESCRIPTIVE/LONG ANS. TYPE QUESTION S	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	3 MARKS EACH	4 MARKS EACH	
1	Current Electricity	2	1	-	1	4
2	D.C Circuits	3	-	-	-	3
3	Electric Cells	3	1	-	1	5
4	Heating and Lighting Effects of Current	4	-	1	-	5
5	Capacitors	3	1	-	-	4
6	Electromagnetic Effects	3	-	-	1	4
7	A.C Circuits	4	-	1	-	5
8	Soldering and Brazing	4	1	-	-	5
9	Measuring Instruments	2	-	1	1	4
10	Electrical Engineering Drawing	2	1	-	-	3
11	Electrical Wiring	2	-	-	1	3
TOTAL QUESTIONS		**32**	**5**	**3**	**5**	**45**
NO. OF QUESTIONS TO BE ANSWERED		**26**	**Any 3**	**Any 2**	**Any 3**	34
TOTAL MARKS		**1 x 26= 26**	**2 x 3 = 6**	**3 x 2 = 6**	**4 x 3 = 12**	**50 MARKS**

CBSE | DEPARTMENT OF SKILL EDUCATION

ELECTRICAL TECHNOLOGY (SUBJECT- CODE -806)

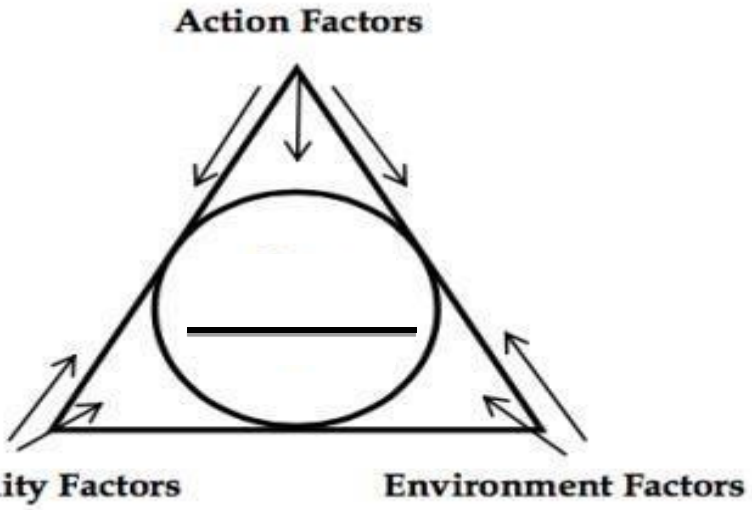
Sample Question Paper for Class XI (Session 2022-2023)

Max. Time: 3 Hours **Max. Marks: 60**

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **24 questions** in two sections – Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (6 + 18 =) 24 questions, a candidate has to answer (6 + 11 =) 17 questions in the allotted (maximum) time of 3 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):**
   - i. This section has 06 questions.
   - ii. There is no negative marking.
   - iii. Do as per the instructions given.
   - iv. Marks allotted are mentioned against each question/part.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):**
   - i. This section contains 18 questions.
   - ii. A candidate has to do 11 questions.
   - iii. Do as per the instructions given.
   - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q. 1	**Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)**	
i.	Which of the following methods is used to receive information from the sender? a) Listening b) Speaking c) Telling d) Writing	**1**
ii.	Dressing and Grooming does not affect your overall impression on other. State (T/F)	**1**
iii.	Udhav wants to reduce the window size to a small icon on the taskbar, which button should he click - Maximize, Minimize or close?	**1**
iv.	Fill in the blanks with suitable word in below fig.  	**1**
v.	Who is responsible for the success of green economy in the country? a) Government b) Social worker c) Individual Citizen d) All of the above	**1**
vi.	Shortcut key for new document in Liber office Writer is- a) Ctrl+m b) Ctrl+c c) Ctrl+n d) Ctrl+d	**1**

Q. 2	**Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)**	
I.	Conventional current is the flow of electrons. State (T/F)	**1**
ii.	Combine three resistors 5Ω,4.5Ω and 3Ω in such a way that total resistance of this combination is Max. a) 12.5Ω b) 13.5Ω c) 14.5Ω d) 15.5Ω	**1**
III	Voltmeter is used to measure resistance. State (T/F)	**1**
iv.	Capacitance is measured in----------?	**1**
v.	The tip of soldering iron is made up of----------?	**1**
vi.	What is Brazing in welding?	**1**
vii.	Define Electrical Engineering Drawing.	**1**

Q. 3	**Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)**	
i.	The SI unit of power is a) Henry b) Coulomb c) Watt d) Jule	**1**
ii.	A D.C circuit usually has resistance as the load. State (T/F)	**1**
iii.	Which among the following true about Ohms Law? a) R =V/I b) I =V/R c) V =IR d) All of these	**1**
iv.	A fuel cell converts chemical energy into electrical energy. State (T/F)	**1**
v.	The capacity of battery is expressed in terms of a) Current rating b) Voltage rating c) Ampere hour rating d) None of these	**1**
vi.	Mechanical units of angle is a) rad b) Rad/sec^2 c) Nm/rad d) None of these	**1**
vii.	What do you mean by Soldering?	**1**

Q. 4	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**	
i.	Megger is used to measure electrical leakage in wire. (T/F)	**1**
ii.	Fuse, disconnect when current exceeds a certain amount.(T/F)	**1**
iii.	The earth wire or ground wire are made up of Galvanized steel.(T/F)	**1**
iv.	a) In DC circuit current is inversely proportional to resistance.(T/F)	**1**
v.	The composition of soft solder is a) Lead 37% ,Tin 63% b) Lead 50%,Tin 50% c) Lead 63%,Tin 37% d) Lead 70%,Tin 30%	**1**

vi.	Full form of CFL a) Color full lamp b) Cut fuse lamp c) Compact Fluorescent Lamp d) Common fuse lamp	**1**

Q. 5	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**	
i.	Capacitor is a passive device.(T/F)	**1**
ii.	Thermostats: help maintain an even temperature for your comfort and conserve electricity. (T/F)	**1**
iii.	Over load current in electrical wiring often cause--------in the wiring.	**1**
iv.	Pure inductive circuit: Inductor current lags inductor voltage by 90^{o}. (T/F)	**1**
v.	When the cells are arranged in parallel A) The current and capacity increases B) The current and capacity decreases C) The emf decreases D) The emf increases	**1**
vi.	The main functions performed by fluxes are : A) remove oxide films B) prevent oxidation during heating C) promote wetting of the faying D) All of these	**1**

Q. 6	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**	
i.	Dynamometer Wattmeter is used to measure power in AC circuit.(T/F)	**1**
ii.	Electrical working drawing consists of- a) Lines b) Symbol c) Dimensions, and notations d) All of these	**1**
iii.	Inside the magnet the field lines moves ----------	**1**
iv.	An electric kettle draws a current of 10 A when connected to the 230 V mains supply. the energy produced in 5 minutes will be a) 690 kJ b) 6.9 kJ c) 230 kJ d) 2.3 kJ	**1**
v.	Electrostatic induction is a redistribution of electrical charge in an object. (T/F)	**1**
vi.	Inductive reactance(X_L) of 10mH inductor at 60Hz will be:- a XL = 3.7699Ω b) XL = 37.669Ω c XL = 0.37699Ω d) XL =376.69Ω	**1**

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks) Answer each question in 20 – 30 words.

Q. 7	What do you understand by the term communication?	**2**
Q. 8	Explain the meaning of self-motivation.	**2**
Q. 9	List out the advantages of using a word processor to write a letter.	**2**
Q. 10	Discuss four basic qualities of an entrepreneur.	**2**
Q. 11	Explain the importance of the Swachh Bharat Abhiyan.	**2**

Answer any 3 out of the given 5 questions in 20 – 30 words each (2 x 3 = 6 marks)

Q. 12	State and explain the ohms law.	**2**
Q. 13	What are the advantages and disadvantages of primary cells?	**2**
Q. 14	Explain about the quality factor of a capacitor.	**2**
Q. 15	Differentiate between soldering and brazing?	**2**
Q. 16	Define engineering drawing? Why drawing is called universal language of engineers?	**2**

Answer any 2 out of the given 3 questions in 30– 50 words each (3 x 2 = 6 marks)

Q. 17	Explain the two effects of electric current along with their principles and uses.	**3**
Q. 18	Give reasons in details why there is no power consumption in an ideal inductor connected to an AC source?	**3**
Q. 19	Write down the advantages and disadvantages of PMMC measuring instrument.	**3**

Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)

Q. 20	Explain in details the factors which affect resistance of conductors. Discuss also what you understand by the term temperature coefficient of resistance.	**4**
Q. 21	Write short notes on any two (a) Fuel Cell (b) Wet Cell (c) Dry Cell	**4**
Q. 22	State and explain Faraday's laws of electromagnetic induction. Discuss also self – induced emf and mutually induced emf	**4**
Q. 23	Explain in details construction and working of dynamometer type wattmeter.	**4**
Q. 24	What is the importance of safety device like, Switch, Fuse and Earthing of wiring, their procedure and application?	**4**