

# CBSE | DEPARTMENT OF SKILL EDUCATION

## Electronics and Hardware (SUBJECT CODE 420)

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

Max. Time: 2 Hours

Max. Marks: 50

### 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 – I	1	1	2
2	Self-Management Skills – I	2	1	3
3	ICT Skills – I	1	1	2
4	Entrepreneurial Skills – I	1	1	2
5	Green Skills - I	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 (40 MARKS):

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANSWER TYPE QUESTIONS	DESCRIPTIVE / LONG ANS. TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	4 MARKS EACH	
1	Basics of Electrical and Electronics	4	1	-	5
2	Electrical and Electronics Components	5	1	1	7
3	Tools and Equipment	5	1	-	6
4	Installing an RO Water Purifier	3	1	1	5
5	Repair and Maintenance of Water Purifier	3	1	2	6
6	Maintain Health and Safety	4	1	1	6
TOTAL QUESTIONS		24	6	5	35
NO. OF QUESTIONS TO BE ANSWERED		20	Any 4	Any 3	27
TOTAL MARKS		1 x 20 = 20	2 x 4 = 8	4 x 3 = 12	40 MARKS

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## Electronics and Hardware (420)

### Sample Question Paper for Class IX (Session 2023-2024)

Max. Time: 2 Hours

Max. Marks: 50

#### General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **21 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 (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 2 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):**
  - i. This section has 05 questions.
  - ii. Marks allotted are mentioned against each question/part.
  - iii. There is no negative marking.
  - iv. Do as per the instructions given.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
  - i. This section has 16 questions.
  - ii. A candidate has to do 10 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.	What does the word " <i>Communicare</i> " means? a) Listening b) Share c) Understanding d) Giving	1
ii.	Which of the following is a quality of a self-confident person? a) Patient b) Compassionate c) Committed d) Passionate	1
iii.	Which of the following is not a self-management skill? a) Problem solving b) Bargaining c) Understanding self d) Confidence building	1
iv.	What does ICT stands for?	1
v.	Business is an (an) _____ activity? a) Social. b) Economic c) Hazardous d) Selling	1
vi.	Which of the following is an example of renewable resources? a) Coal b) Solar Energy c) CNG d) Petroleum	1

Q. 2	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	Unit of Voltage is ..... a) Ampere b) Volt c) Watt d) Joule	1
ii.	Device which store energy in the form of electric field ----- a) Capacitor b) Inductor c) Resistors d) Diode	1
iii.	The maximum contamination level advised for TDS is _____ a) 400 mg/L b) 500 mg/L c) 600 mg/L d) 700 mg/L	1
iv.	Which of the following equipment is used to measure the Current? a) Multimeter b) Megger meter c) Ammeter	1

	d) Tachometer	
v.	The average pressure for the purifier is _____ a) 70 – 80 psi b) 60 – 50 psi c) 50 – 70 psi d) 40 – 50 psi	1
vi.	Cardio-Pulmonary Resuscitation is a ..... a) Natural respiration b) Artificial respiration c) Study of respiratory system d) Study of heart	1

<b>Q. 3</b>	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	
i.	If $P = 50$ watt and $R = 2 \Omega$ , then $I =$ _____ a) 50 A b) 5 A c) 10 A d) 2 A	1
ii.	Which of the following is a semiconductor material? a) Silicon b) Germanium c) Both a & b d) None of these	1
iii.	The device which is used to measure insulation resistance _____	1
iv.	Raw water TDS should not be less than .....? a) 50 PPM b) 100 PPM c) 110 PPM d) 120 PPM	1
v.	PPM stands for .....? a) Parts per meter b) Particle per million c) Particle per milli d) Parts per million	1
vi.	Which of the following tools is used for making threads? a) Tap and dies b) Screwdriver c) Hammer d) Drill machine	1

<b>Q. 4</b>	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	
i.	While working with electricity, the technician must wear..... gloves & shoes.	1
ii.	Which of the following is type of impurity? a) Minerals	1

	<ul style="list-style-type: none"> <li>b) Salts</li> <li>c) Metals or ions</li> <li>d) All of the above</li> </ul>	
iii.	<p>What is the pH value of water?</p> <ul style="list-style-type: none"> <li>a) More than 7</li> <li>b) Less than 7</li> <li>c) Equal to 7</li> <li>d) 14</li> </ul>	<b>1</b>
iv.	Tong meter is also known as _____	<b>1</b>
v.	<p>A colour code of Brown, Brown, Red, Gold is for what ohmic value?</p> <ul style="list-style-type: none"> <li>a) 1.2kΩ 5%</li> <li>b) 1.1kΩ 5%</li> <li>c) 1.3kΩ 5%</li> <li>d) 1.5kΩ 5%</li> </ul>	<b>1</b>
vi.	<p>Resistance of material is affected----</p> <ul style="list-style-type: none"> <li>a) Length</li> <li>b) Temperature</li> <li>c) Thickness</li> <li>d) All of the above</li> </ul>	<b>1</b>

<b>Q. 5</b>	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	
i.	<p>Transformer works on _____</p> <ul style="list-style-type: none"> <li>a) AC</li> <li>b) DC</li> <li>c) Both a &amp; b</li> <li>d) None of these</li> </ul>	<b>1</b>
ii.	In line tester _____ Bulb is used for indication of live wire.	<b>1</b>
iii.	1 KWh = _____ watt x _____ second	<b>1</b>
iv.	Earthing is necessary in electrical equipment. (True/False)	<b>1</b>
v.	<p>Which of the following is used as a wire connector.</p> <ul style="list-style-type: none"> <li>a) Lugs</li> <li>b) Screwdriver</li> <li>c) Stripper</li> <li>d) Hammer</li> </ul>	<b>1</b>
vi.	<p>In NPN Transistor P-type material is equivalent to _____ of the Diode.</p> <ul style="list-style-type: none"> <li>a) Cathode</li> <li>b) Anode</li> <li>c) Ground</li> <li>d) Neutral</li> </ul>	<b>1</b>

## **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.**

<b>Q. 6</b>	Write down different types of non-verbal communication.	<b>2</b>
<b>Q. 7</b>	What are the factors that affect self-confidence?	<b>2</b>
<b>Q. 8</b>	List the different input and output devices of a computer.	<b>2</b>
<b>Q. 9</b>	What are the 3 types of business activities?	<b>2</b>
<b>Q. 10</b>	What are green skills?	<b>2</b>

**Answer any 4 out of the given 6 questions in 20 – 30 words each (2 x 4 = 8 marks)**

<b>Q. 11</b>	What is electric current?	<b>2</b>
<b>Q. 12</b>	What are the applications of transistor?	<b>2</b>
<b>Q. 13</b>	Write down two uses of a Multimeter?	<b>2</b>
<b>Q. 14</b>	Write a short note on Carbon filter?	<b>2</b>
<b>Q. 15</b>	Write down a short note on TDS?	<b>2</b>
<b>Q. 16</b>	Write down the different types of Hazards?	<b>2</b>

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

<b>Q. 17</b>	What is LED & Why LEDs are good choice?	<b>4</b>
<b>Q. 18</b>	List the different types of water purifier?	<b>4</b>
<b>Q. 19</b>	What are the steps for checking the TDS level of the water?	<b>4</b>
<b>Q. 20</b>	Write down the steps for the replacement of filter?	<b>4</b>
<b>Q. 21</b>	What are the precautions to be taken for preventing electric shock on the job?	<b>4</b>