CBSE | DEPARTMENT OF SKILL EDUCATION

<u>Electronics and Hardware</u>   (SUBJECT CODE - 847)

MARKING SCHEME FOR CLASS XI

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.

<u>SECTION A: OBJECTIVE TYPE QUESTIONS</u>

Q. No.	QUESTION	Source Material (NCERT/PSSCIVE/ CBSE Study Material)	Unit/ Chap. No.	Page no. of source material	Marks
Q. 1	**Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)**				
i.	**Answer: -** (i) Listening.	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 1	Page No. 03	1
ii.	**Answer:-** False	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 2	Page No. 77	1
iii.	**Answer:-** Timebound	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 2	Page No. 97	1
iv.	**Answer:-** False	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 4	Page No. 138	1
v.	**Answer:-** (ii) Ctrl + n	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 3	Page No. 108	1
vi.	**Answer:-** (iv) All of the above	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 5	Page No. 189	1

Q. 2	Answer any 5 out of the given 7 questions on ITCP (1 x 5 = 5 marks)				
i.	**Answer:** (iii) Both A and B.	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 1	Page No. 06	1
ii.	**Answer:** (iii) Both (i) and (ii)	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 1	Page No. 16	1
iii.	**Answer:** False	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 1	Page No. 63	1
iv.	**Answer:** (iii) Microsoft Windows	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 2	Page No. 75	1
v.	**Answer:** (i) F8	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 2	Page No. 87	1
vi.	**Answer:** GUI means Graphical User Interface.	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 2	Page No. 74	1
vii.	**Answer:-** False	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 3	Page No. 133	1

Q. 3	Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)				
i.	**Answer:** (i) It can be used for both read and write.	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 3	163	**1**
ii.	**Answer:** False	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 3	Page No. 179	**1**
iii.	**Answer:** Connector	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 4	Page No. 203	**1**
iv.	**Answer:** (ii) Uninterrupted power supply.	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 1	Page No. 19	**1**
v.	**Answer:** Two	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 1	Page No. 07	**1**
vi.	**Answer:** ALU	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 1	Page No. 29	**1**
vii.	**Answer:** (ii) 33 kΩ	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 1	Page No. 09	**1**

Q. 4	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)				
i.	**Answer:** Large Scale Integrated circuit	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 1	Page No. 26	1
ii.	**Answer:** (i) Pixel	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 1	Page No. 56	1
iii.	**Answer:** CPU	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 2	Page No. 77	1
iv.	**Answer:** True	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 2	Page No. 89	1
v.	**Answer:-** Case	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 2	Page No. 115	1
vi.	**Answer:** (iii) Both the components in the computer and many peripherals	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals.	Unit 3	Page No. 119	1
Q. 5	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)				
i.	**Answer:** Passive heat sink	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 3	Page No. 157	1
ii.	**Answer:** Register	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 3	Page No. 147	1
iii.	**Answer:** (iv) Magnetisation	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 3	Page No. 175	1

iv.	**Answer:** Blocks	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 4	Page No. 204	**1**
v.	**Answer**: Separate	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 4	Page No. 223	**1**
vi.	**Answer:** AC	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 1	Page No. 15	**1**
Q. 6	**Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**				
i.	**Answer:** (iv) Monolithic Kernel.	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 2	Page No. 109	**1**
ii.	**Answer:** True	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 1	Page no. 39	**1**
iii.	**Answer:** Magnetic Strip.	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 1	Page No. 52	**1**
iv.	**Answer:** IC (Integrated Circuit)	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 1	Page No. 15	**1**
v.	**Answer:** (iii) GHz	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 3	Page No. 150	**1**
vi.	**Answer:** CPU	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 3	Page No. 161	**1**

SECTION B: SUBJECTIVE TYPE QUESTIONS

Q. No.	QUESTION	Source Material (NCERT/PSSCIVE/ CBSE Study Material)	Unit/ Chap. No.	Page no. of source material	Marks
Answer any 3 out of the given 5 questions on Employability Skills in 20 – 30 words each (2 x 3 = 6 marks)					
Q. 7	**Answer:** Four factors affecting perspectives in communication are i. Language ii. Culture iii. Environment iv. Feelings	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 1	Page No. 03	**2**
Q. 8	**Answer:** i. The work gets done faster. ii. You feel good when the team achieves success and it builds your confidence.	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 2	Page No. 86	**2**
Q. 9	**Answer:** They contain information that is available on every page at the same place.	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 3	Page No. 130	**2**
Q. 10	**Answer:** i. Creativity ii. Innovation iii. Critical Thinking	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 4	Page No. 153	**2**
Q. 11	**Answer:** i. Agriculture ii. Energy Resources iii. Tourism iv. Transport	PSSCIVE Book Class XI(ELHA) Book Name: Employability Skills	Unit 5	Page No. 173	**2**
Answer any 3 out of the given 5 questions in 20 – 30 words each (2 x 3 = 6 marks)					
Q. 12	**Answer:** a) It amplify voltage and current. **b)** It acts as switching circuit**.**	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 1	Page No. 08	2
Q. 13	**Answer:** a) It performs arithmetic operation like addition, subtraction. b) It performs logical operation like comparisons of number, letters.	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 1	Page No. 30	2

Q. 14	**Answer:** a) BIOS: Basic Input Output System CMOS: Complementary Metal Oxide Semiconductor b) BIOS is non-volatile CMOS is volatile.	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 3	Page No. 137	2
Q. 15	**Answer:** a) Accumulator(ACC) b) Instruction Register(IR) c) Program Counter(PC) d) MAR(Memory Address Register) e) MBR(Memory Buffer Register) f) Data Register(DR)	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 2	Page No. 30	2
Q. 16	**Answer:** a) ESD Tools b) Hand tools c) Cleaning tools d) Diagnostic tools	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 4	Page No. 201	2

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

Q. 17	**Answer:** There are three most common types of operating systems: a. Microsoft Windows b. Mac OX c. Linux Depending on processing method there are some other operating system also exist which are enlisted below: a) Multi Programming OS b) Multi tasking OS c) Multi processing OS d) Time sharing OS e) Multi threading OS f) Batch processing OS g) Real-time OS	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 2	Page No. 76	3

	Answer:				
Q. 18	Memory is very much important for computer because, computer loads data from memory, it (computer) stores data into memory, it(computer) loads BIOS from ROM, overall it is needed for proper functioning of the computer. ii) RAM—RAM stands for Random Access Memory. It means the CPU can directly access any address location of RAM memory. It is quickly accessible memory of the computer and its speed is measured in nanoseconds. It is a read/write memory of the computer. It is fast and volatile which means it stores the data temporarily till the power is SWITCHED ON.	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 3	Page No. 160,163	(1+2)
Q. 19	**Answer:** i). Most tools used in the computer assembly process are small hand tools. They are available individually or as part of a computer repair tool kit. Tool kits range widely in size, quality and price. ii) The following steps need to be perform for installing a new processor: a. Take extreme care not to touch the pins in the socket during the process. b. Pop in the video card c. Set up the drive d. Add memory e. Final assembly	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 4	Page No. 202 and Page No. 229	(1+2)

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

	Answer:				
Q. 20	i) Volatile memory means the memory which do not retains its information after switching off the computer. Example of volatile memory is RAM RAM- It stands for Random Access Memory ROM- It stands for Read Only Memory RAM- It is volatile type ROM- It is non-volatile type. RAM- Both read and write is possible. ROM- Only read operation is possible**.**	PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 3	Page No. 161,162	4

Q. 21	**Answer:**
	There are three most common types of operating systems:
	    a. Microsoft Windows
	    b. Mac OX
	    c. Linux
	Depending on processing method there are some other operating system also exist which are enlisted below:
	    h) Multi Programming OS
	    i) Multi tasking OS
	    j) Multi processing OS
	    k) Time sharing OS
	    l) Multi threading OS
	    m) Batch processing OS
	    n) Real-time OS
	
	Linux: Linux is a family of open source operating system. It means that it can be modified and distributed by anyone around the world.
	
	Advantage of open source:
	    ii. i. It is free of cost.
	    iii. It can be modified by anyone.
	    iv. It can be distributed by anyone.
		PSSCIVE Book Class XI(ELHA)
		Book Name:
		Installation Technician Computing and Peripherals
			Unit 2	Page No. 76-79	4

Q. 22	**Answer:**
	The major components of CPU are as follows:
	    a. ALU (Arithmetic and Logical Unit)
	    b. Control Unit
	    c. Register
	    d. Program Counter
	    e. Instruction Counter
	    f. Memory Address Register(MAR)
	    g. Memory Buffer Register(MBR)
	Basic task performer by CPU:
	    a) All the arithmetic and logical operation are done in CPU
	    b) CPU accept input and produces output based on given input.
	    c) It controls all the operation performed in computer.
	
	Register are used in computer to store and hold data temporarily while processing.
		PSSCIVE Book Class XI(ELHA)
		Book Name:
		Installation Technician Computing and Peripherals
			Unit 3	Page no. 147-148	4

Q. 23	**Answer:**
	i). Physical components of HDD are
	a. Platters
	b. Spindle
	c. Read/Write head
	d. actuator arm assembly
	e. controller.
	The logical components of HDD are:
	  a. Tracks
	  b. Cylinders
	  c. Sectors
	  d. Clusters
	  e. Files
		PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 3	Page No.175-178	(2+2)

Q. 24	**Answer:**
	i) There are four categories of hardware tools and they are as follows:
	    a. ESD tools
	    b. Hand tools
	    c. Cleaning tools
	    d. Diagnostics tools
	
	ii) The required tools and accessories required for assembly or disassembly are follows:
	  a) Electronic cutter
	  b) Precise screwdriver
	  c) Hex Driver
	  d) A Philip head screwdriver
	  e) A torx screwdriver
	  f) Combination pliers
	  g) Wire stripper
	  h) Crimper
	  i) Punch down tool
	  j) Soft lint-free
	  k) Compressed air
	  l) Cable ties
	  m) Parts organizer
	  n) Digital multimeter
	  o) Loopback adapter
	  p) Toner probe
		PSSCIVE Book Class XI(ELHA) Book Name: Installation Technician Computing and Peripherals	Unit 4	Page No. 201-204	(2+2)