

ELECTRONICS AND HARDWARE (420)**CLASS - X (SESSION 2026-2027)****Total Marks: 100 (Theory-50 + Practical-50)**

Week/Month	Chapters/ Topics	Subtopics	No. of Periods
6 th April-4 th May	PART B - SUBJECT SPECIFIC SKILLS Unit 1: Electrical Components And Motors	<ul style="list-style-type: none">• Relay, • Types of Relay, • Circuit Breaker, • Fuse – types, use of fuses and its ratingElectric Field and Magnetic Field, • Electromagnetic Induction, • Fleming’s left hand rule and right hand rule, • Lentz law, • Lorentz Law, • Winding, • Winding types – wave winding and lap winding, • Single phase supply system• Introduction to motor, • Parts of motor, • Types of motor, • Working principle of motor, • RPM of motor, • Functioning of motor	6 Theory
5 th May to 21 st May	Unit 2: Repair and Maintenance of Mixer/Juicer/Grinder	<p>Different models of appliances (mixer/juicer/grinder), their features and functioning,</p> <ul style="list-style-type: none">• Functioning of various electromagnetically parts of the mixer grinder• Frequently occurring faults such as abnormal noise during use, jars. <p>Components/modules of different mixer/juicer/grinder,</p> <ul style="list-style-type: none">• Other products of the company.• Demonstrate to remove and replace the faulty module (relay, thermostat, rotatory switch, indicator and motor) <p>Confirm functionality of repaired mixer/juicer/grinder</p> <ul style="list-style-type: none">• Reassembly process of the mixer/juicer/grinder, • Factors confirming the proper functioning of the repaired/ replaced part or unit of the mixer/juicer/grinder,• Cleaning and maintenance process of mixer/juicer/grinder	4 theory
23 rd to 26 th May	Unit 4: Workplace Health And Safety Measures	<p>Electrical hazards</p> <ul style="list-style-type: none">• Chemical hazards• Fire extinguisher• First aid for electrical emergency.	2 theory
	Unit 3:	<ul style="list-style-type: none">• Different models of microwave oven, their features and functionalities,• Functioning,	

1st July - 11th July	Repair And Maintenance Of Microwave Oven	<ul style="list-style-type: none"> • Components/modules of different microwave oven, • Troubleshooting of microwave oven, • Frequently occurring faults such as intermittent heating, no heating, timing problem, display problem, • Energy ratings such BEE ratings and concepts of e waste. <p>Reassembly process of the microwave oven,</p> <ul style="list-style-type: none"> • Factors confirming the proper functioning of the repaired/ replaced part or unit of the microwave oven, • Cleaning and maintenance process of microwave oven. 	6 Theory
14th – 25th July	PART A - EMPLOYABILITY SKILLS <u>Unit I:</u> Communication Skills - II	<p>Demonstrate knowledge of various methods of communication</p> <ul style="list-style-type: none"> • Methods of communication • Verbal. • Non-verbal. • Visual. <p>Provide descriptive and specific feedback</p> <ul style="list-style-type: none"> • Communication cycle and importance of feedback. • Meaning and importance of feedback. • Descriptive feedback - written comments or conversations. • Specific and non-specific feedback. <p>Apply measures to overcome barriers in communication</p> <ul style="list-style-type: none"> • Barriers to effective communication - types and factors. • Measures to overcome barriers in effective Communication. <p>Apply principles of communication</p> <ul style="list-style-type: none"> • Principles of effective communication. 	3 Theory

		<ul style="list-style-type: none"> • 7 Cs of effective communication. <p>Demonstrate basic writing skills.</p> <ul style="list-style-type: none"> • Writing skills • Sentence • Phrase • Kinds of Sentences • Parts of Sentence • Parts of Speech • Articles • Construction of a Paragraph. 	
28th July - 8th Aug	Unit II: Self Management Skills - II	<p>Apply stress Management Techniques</p> <ul style="list-style-type: none"> • Meaning and importance of stress management • Stress management techniques - physical exercise, yoga, meditation • Enjoying, going to vacations and holidays with family and friends • Taking nature walks <p>Demonstrate the ability to work independently</p> <ul style="list-style-type: none"> • Importance of the ability to work independently. • Describe the types of self-awareness. • Describe the meaning of self-motivation and self-regulation. 	3 theory
12 th – 22 nd Aug	Unit III: ICT Skills - II	<p>Distinguish between different operating systems</p> <ul style="list-style-type: none"> • Classes of operating systems • Menu, icons and task bar on the desktop • File concept, file operations, file organization, directory structures, and file- system structures • Creating and managing files and folders <p>Importance and need of care and maintenance of computer</p>	4 theory

		<ul style="list-style-type: none"> • Cleaning computer components • Preparing maintenance schedule • Protecting computer against viruses • Scanning and cleaning viruses and removing SPAM files, temporary files and folders 	
25th -29th Aug	Unit IV: Entrepreneurial Skills- II	<p>List the characteristics of successful entrepreneur</p> <ol style="list-style-type: none"> 1. Entrepreneurship and society. 2. Qualities and functions of an entrepreneur. 3. Role and importance of an entrepreneur. 4. Myth about entrepreneurship. <p>Entrepreneurship as a career option.</p>	2 theory
1 st -4 th Sept	Unit V: Green Skills - II	<p>Demonstrate the knowledge of importance, problems and solutions related to Sustainable Development</p> <ol style="list-style-type: none"> 1. Definition of sustainable development. 2. Importance of sustainable development. <p>Problems related to sustainable development.</p>	2 theory
<p>I Pre-Board Examination (1st pre board November 13,2026 to November 30,2026) (Entire syllabus will be considered)</p>			
<p>II Pre-Board Examination (December 14,2026 to January 10,2027) (Entire syllabus will be considered)</p>			