

**Syllabi & Courses of Study of**  
**Vocational Subjects for**  
**Class-9th (Level-1)**



**Published By:**

**THE JAMMU & KASHMIR BOARD OF SCHOOL EDUCATION**  
**Kashmir/Jammu**

**Effective From**

***Session: 2024-2025 Onwards/JD***

***(Winter Zone)***

***JD (Summer Zone)***

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# SCHEME OF EXAMINATION

## SCHEME OF EXAMINATION FOR VOCATIONAL SUBJECT 2024

### Class 9<sup>th</sup> (Level 01)

#### Details of Assessment plan:

There will be three components of evaluation:

- Knowledge/ theory test
- Practical test
- Project / Field work

The marks allocated for each evaluation will be as under:

- Knowledge/theory test\* – \*\*30 marks

*\*(Theory comprise of Term-I and Term-II i.e. 30+30=\*\*60)*

*\*\* (Further divided by 2 to get marks out of 30 i.e. 15+15 at the time of adding up total marks annually)*

- Practical test – 50 marks
- CCE – 20 marks

S.NO.	Method Of Assessment	Maximum Marks	Minimum Pass Marks	Evaluator
1	Theory/Written Test	30	11	JKBOSE
2	Practical Test (Term-I) & Oral Test/Viva	50	17	School Based by Trainer in Consultation with Head of Institution
3	Continuous & Comprehensive Evaluation (CCE)	20	This will be included only if the student qualifies separately in Theory & Practical	School Based by Trainer
<b>TOTAL</b>		<b>100 Marks</b>		

## **PRACTICAL ASSESSMENT**

**(Annual)**

### **EXTERNAL ASSESSMENT:**

<b>Distribution</b>	<b>MARKS</b>
Practical Experiment	20
Artifacts (objects created by students)	05
Demonstration	05
Projects (individual and group)	10
Portfolio	10
<b>TOTAL</b>	<b>50</b>

### **INTERNAL ASSESSMENT:**

<b>Distribution</b>	<b>MARKS</b>
CBT (class based test)	10
Classroom (group work, group discussion)	05
Classroom Attendance	05
<b>TOTAL</b>	<b>20</b>

# **QUESTION DISTRIBUTION**

## **Term-I&II**

**Class: 9th**

**Max.Marks:30**

**Duration: 01:15Hrs**

<b>PATTERN</b>	<b>MARKS</b>	<b>QUESTIONS</b>	<b>TOTAL</b>
<b>LONG TYPE QUESTIONS</b>	06	1	<b>6 MARKS</b>
<b>SHORT TYPE QUESTIONS</b>	03	3	<b>9 MARKS</b>
<b>VERY SHORT QUESTIONS</b>	02	5	<b>10 MARKS</b>
<b>MCQ's</b>	01	5	<b>5 MARKS</b>
<b>TOTAL</b>		<b>14</b>	<b>30 MARKS</b>

# 1. IT/ITes

*Job Role: Domestic Data Entry Operator*

*Class (9<sup>th</sup>)*

## SCHEME OF ASSESMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> & 10<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

<b>Class 9<sup>th</sup></b>				
<b>Term</b>	<b>Module Part and Name</b>	<b>Unit Name</b>	<b>No. of Hours for Theory and Practical (110)</b>	<b>Max. Marks Theory and Practical (100)</b>
<b>Term-I</b>	<b>Part – A Employability Skills</b>	Communication Skills-I	10	5
		Self-Management & Entrepreneurship	10	5
	<b>Part – B Vocational Skills</b>	Introduction to IT-ITeS Industry	10	5
		Data Entry and Keyboarding Skills	10	5
		Digital Documentation	15	10
<b>Total</b>			<b>55</b>	<b>30*(15)</b>
<b>Term-II</b>	<b>Part – A Employability Skills</b>	Basic ICT Skills	10	6
		Green Skills	10	4
	<b>Part – B Vocational Skills</b>	Electronic Spreadsheet	20	10
		Digital Presentation	15	10
<b>Total</b>			<b>55</b>	<b>30*(15)</b>
<b>Term-I and II</b>	<b>Part – C Practical Work</b>	Practical Experiment		20
		Artifacts(objects created by students)		05
		Demonstration		05
		Projects(individual and group)		10
		Portfolio		10
<b>Total</b>				<b>50</b>
	<b>Part-D Formative Assessment</b>	Class based test, Class room participation(Group work, Group discussion, attendance)		20
<b>Total</b>				<b>20</b>
<b>Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

#### **Unit-I Communication Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

#### **Unit – II Self-Management & Entrepreneurial Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## “Part – B”

### Vocational Skills ----- (20 Marks)

#### Unit – I Introduction to IT-ITeS Industry

(6 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"><li>• Introduction to IT and ITeS,</li><li>• BPO services,</li><li>• Applications of IT in home computing, everyday life, library, workplace, education, entertainment, communication, business, science and engineering, banking, insurance, marketing, health care, IT in the government and public service,</li></ul>	Appreciate the application of IT in IT-ITeS industry

#### Unit– II Data Entry and Keyboarding Skills

(5 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"><li>• Keyboarding Skills,</li><li>• Types of keys on keyboard,</li><li>• Numeric keypad,</li><li>• Home keys, Guide keys,</li><li>• Typing and deleting text,</li><li>• Typing ergonomics,</li><li>• Positioning of fingers on the keyboard,</li><li>• Allocation of keys to fingers on four different rows,</li><li>• Pointing device – Mouse,</li><li>• Mouse operations</li></ul>	Use data entry tools keyboard and mouse
<ul style="list-style-type: none"><li>• Introduction to Rapid Typing Tutor,</li><li>• Touch typing technique,</li><li>• User interface of Typing Tutor,</li><li>• Typing text and interpret results,</li><li>• Working with lesson editor,</li><li>• Calculating typing speed,</li><li>• Typing rhythm.</li></ul>	Use Typing software

#### Unit– III Digital Documentation

(9 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"><li>• Introduction to word processing</li><li>• Word processing applications</li><li>• Introduction to Libre Office Writer</li><li>• Starting Libre Office Writer</li><li>• Creating a document</li><li>• Parts of Writer window</li><li>• Cursor and mouse pointer.</li></ul>	Start the word processing application
<ul style="list-style-type: none"><li>• Text editing – Undo and Redo</li><li>• Moving and copying text</li><li>• Copy and Paste</li><li>• Selecting text</li><li>• Selection criteria</li></ul>	Edit the document

<ul style="list-style-type: none"> <li>• Find and replace option</li> <li>• Jumping to the page number</li> <li>• Checking spelling and grammar</li> <li>• Using synonyms and the thesaurus.</li> </ul>	
<ul style="list-style-type: none"> <li>• Page style dialog,</li> <li>• Formatting text – Removing manual formatting ,Common text formatting, Changing text case, Superscript and Subscript,</li> <li>• Formatting paragraph –Indenting paragraphs, Aligning paragraphs, Font colour, highlighting, and background colour,</li> <li>• Using bullets and numbering,</li> <li>• Assigning colour, border and background to paragraph</li> <li>• Page formatting – setting up basic page layout using styles, Inserting page break, Creating header/footer and page numbers, • Defining borders and backgrounds, Inserting images shapes , special characters in a document, Dividing page into columns, Formatting the shape or image.</li> </ul>	Format the document
<ul style="list-style-type: none"> <li>• Creating table in Writer</li> <li>• Inserting row and column in a table</li> <li>• Deleting rows and columns</li> <li>• Splitting and merging tables</li> <li>• Deleting a table</li> <li>• Copying a table</li> <li>• Moving a table</li> </ul>	Create and use table
<ul style="list-style-type: none"> <li>• Printing options in Writer</li> <li>• Print preview</li> <li>• Controlling printing</li> </ul> Printing all pages, single and multiple pages.	Print the document
<ul style="list-style-type: none"> <li>• Concept of mail merge in word processing</li> <li>• Creating a main document</li> <li>• Creating the data source</li> <li>• Entering data in the fields</li> <li>• Merging the data source with main document</li> <li>• Editing individual document</li> <li>• Printing the merged letter</li> <li>• Saving the merged letter</li> </ul>	Print the letters using mail merge

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills ----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## *“Part – B”*

**Vocational Skills----- (20Marks)**

### **Unit– IV    Electronic Spreadsheet**

**10 Marks**

<b>Theory</b>	<b>Learning Outcome</b>
<ul style="list-style-type: none"> <li>• Introduction to spreadsheet application</li> <li>• Starting Libre Office Calc</li> <li>• Parts of Libre Office Calc</li> <li>• Worksheet – Rows and columns, Cell and cell address</li> <li>• Range of cell – column range, row range, row and column range.</li> </ul>	Create a Spreadsheet
<ul style="list-style-type: none"> <li>• Different types of data,</li> <li>• Entering data – Label, Values, Formula</li> <li>• Formula, how to enter formula,</li> <li>• Mathematical operators used in formulae,</li> <li>• Simple calculations using values and operators,</li> <li>• Formulae with cell addresses and operators,</li> <li>• Commonly used basic functions in Calc – SUM,AVERAGE, MAX, MIN, Count</li> <li>• Use of functions to do calculations</li> </ul>	Enter and edit the text in spreadsheet
<ul style="list-style-type: none"> <li>• Formatting tool</li> <li>• Use of dialog boxes to format values</li> <li>• Formatting a range of cells with decimal places</li> <li>• Formatting a range of cells to be seen as labels</li> <li>• Formatting of a cell range as scientific</li> <li>• Formatting a range of cells to display times</li> <li>• Formatting alignment of a cell range</li> <li>• Speeding up data entry using the fill handle</li> </ul>	Format data in the spreadsheet
<ul style="list-style-type: none"> <li>• Concept of referencing</li> <li>• Relative referencing</li> <li>• Mixed referencing</li> <li>• Absolute referencing</li> </ul>	Use Referencing
<ul style="list-style-type: none"> <li>• Importance of chart in spreadsheet</li> <li>• Types of chart</li> <li>• Example of chart.</li> </ul>	Introduce the types of charts in Calc

**Unit– V Digital Presentation-----10 Marks**

<b>Theory</b>	<b>Learning Outcome</b>
<ul style="list-style-type: none"><li>• Concept of presentation</li><li>• Elements of presentation</li><li>• Characteristics of good quality presentation</li></ul>	Describe the quality of good presentation
<ul style="list-style-type: none"><li>• Introduction to presentation software</li><li>• Starting Impress</li><li>• Parts of Impress window</li><li>• Closing Impress,</li><li>• Creating a presentation using template</li><li>• Selecting slide layout</li><li>• Saving a presentation</li><li>• Running a slide show</li><li>• Save a presentation in PDF</li><li>• Closing a presentation</li><li>• Using Help</li></ul>	Create a presentation
<ul style="list-style-type: none"><li>• Inserting a duplicate slide</li><li>• Inserting new slides</li><li>• Slide layout</li><li>• Copying and moving slides</li><li>• Deleting and renaming slides in presentation</li><li>• Copying, moving and deleting contents of slide</li><li>• View a presentation</li><li>• Workspace views – Normal, Outline, Notes, Slide sorter view.</li></ul>	Work with slides
<ul style="list-style-type: none"><li>• Formatting toolbar</li><li>• Various formatting features</li><li>• Text alignment</li><li>• Bullets and numbering.</li></ul>	Format the text in presentation
<ul style="list-style-type: none"><li>• Inserting tables in presentation,</li><li>• Entering and editing data in a table,</li><li>• Selecting a cell, row, column, table,</li><li>• Adjusting column width and row height,</li><li>• Table borders and background</li></ul>	Create and use table in presentation
<ul style="list-style-type: none"><li>• Inserting an image from a file,</li><li>• Inserting an image from the gallery,</li><li>• Formatting images,</li><li>• Moving images, Resizing images,</li><li>• Rotating images,</li><li>• Formatting using the Image toolbar,</li><li>• Drawing graphic objects –line, shapes,</li><li>• Grouping and un-grouping objects</li></ul>	Insert and format image in presentation
<ul style="list-style-type: none"><li>• Slide masters,</li><li>• Creating the slide masters,</li><li>• Applying the slide masters to all slide,</li><li>• Adding transitions.</li></ul>	Work with slide master



6. Collect the electricity bill of your home for each month from January to December (12 months). Create a worksheet with the data of Name of the Month and Bill Amount as below. Enter the data in a worksheet and develop the chart of various types. Conclude your result that which type of chart will be more appropriate for such type of data.

Month	Bill Amount
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

(5Marks)

7. Create a presentation which gives an overview of the science subject. This presentation should contain the following slides:
- (i) Title of the subject (use title slide layout only)
  - (ii) Index
  - (iii) Introduction of each chapter (Min one slide per chapter)

(5Marks)

8. Perform the following operations on a presentation:
- (i) Rename each slide with a chapter name.
  - (ii) Change the font for the slide title.
  - (iii) Add a footer that contains the current date and your school name.
  - (iv) Apply at least one master page to your presentation.
  - (v) Hide slides of even chapters and see the effect.
  - (vi) Start the slide show after setting the option as Change slides manually.

(5Marks)

- B. Artifacts (objects created by students) (05 Marks)**
- C. Demonstration (05 Marks)**
- D. Projects (Individual and Group) (10 Marks)**
- E. Portfolio (10 Marks)**

## 2. Retail

*Job Role: Cashier*

*Class (9<sup>th</sup>)*

### SCHEME OF ASSESMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

<u>Class 9<sup>th</sup> Cashier</u>				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
Term-I	Part - A Employability Skills	Communication Skills	10	05
		Self-Management & Entrepreneurship	10	05
	Part – B Vocational Skills	Introduction of Retailing	16	10
		Service cash point (POS)	19	10
<b>Total</b>			<b>55</b>	<b>30* (15)</b>
Term-II	Part - A Employability Skills	Basic ICT Skills	10	06
		Green Skills	10	04
	Part – B Vocational Skills	Customer Order for Goods	15	10
		Process of Payments & Customer Service	20	10
<b>Total</b>			<b>55</b>	<b>30* (15)</b>
	Part - C Practical Test	Practical Experiment	00	20
		Artifacts (objects created by students)		05
		Demonstration		05
		Projects ( Individual& Groups)		10
		Portfolio		10
<b>Total</b>			<b>00</b>	<b>50</b>
	Part-D Formative Assessment	Class-based tests, classroom participation ( Group work, Group Discussion, Attendance)	<b>00</b>	<b>20</b>
<b>Total</b>			<b>10</b>	<b>20</b>
<b>Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## *“Part – B”*

### Vocational Skills----- (20Marks)

#### Unit – I Introduction of Retailing

(10 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"><li>• Concept of retail</li><li>• Functions and essential requirements of retailers</li><li>• Retailer’s services to Customers</li><li>• Meaning of organized and unorganized retailing</li><li>• Differences between organized and organized retail</li><li>• Meaning of store and non-store retailing</li><li>• Classification of store and non-store retailing</li><li>• Differences between store and non-store retailing</li><li>• Retail cashier</li><li>• Duties of a cashier</li><li>• Responsibilities of a cashier</li><li>• Skills required to become a retail Cashier</li></ul>	<p>State basics of retailing</p> <p>Distinguish between organized and unorganized retailing</p> <p>Differentiate between store and non-store retailing</p> <p>Identify the duties and responsibilities of cashier</p>

#### Unit– II Service Cash Point

(10 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"><li>• Meaning of Cash Point/ Point of Sale (POS)</li><li>• Skills required for cashier at POS</li><li>• Modes of payment</li><li>• Problems arise at service cash point /POS</li><li>• Meaning of cash handling</li><li>• Procedure for handling cash and cash equivalents,</li><li>• Precautions to be taken while handling cash</li></ul>	<p>State the modes of payment</p> <p>Demonstrate the Procedures for handling cash</p>
<ul style="list-style-type: none"><li>• Authorization of refunds</li><li>• Authorization of cheque payments</li><li>• Authorizing credit card payments</li><li>• Security procedures at POS</li><li>• Problems at service cash point Hardware issues, software issues, connectivity issues, user errors,</li><li>• Card processing problems</li></ul>	<p>Identify the authorization of refunds, cheques and credit card payments</p> <p>List out the problems at the cash points or POS</p>

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills ----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## **“Part – B”**

### **Vocational Skills----- (20Marks)**

#### **Unit– III Customer Order for Goods**

**(10 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
<ul style="list-style-type: none"><li>• Steps involving in obtaining customer orders.</li><li>• Delivery of customers’ orders</li><li>• Meaning of procuring supplies,</li><li>• Sources of procuring supplies</li><li>• Selecting the suppliers.</li></ul>	Identify process of customer order for goods  Demonstrate the procuring supplies
<ul style="list-style-type: none"><li>• Meaning of Customer information,</li><li>• Customer data management (CDM)</li><li>• Sources of information</li><li>• Customer’s confidentiality</li><li>• Confidential information</li></ul>	Collect the customers information
<ul style="list-style-type: none"><li>• Meaning of invoice</li><li>• Types of invoice</li><li>• Contents of an invoice</li></ul>	Invoice the customer orders

#### **Unit IV Process of Payment and Customer Service**

**10 Marks**

<b>Theory</b>	<b>Learning Outcome</b>
<ul style="list-style-type: none"><li>• Meaning of effective process of payments</li><li>• Effective process of payments</li><li>• Kinds of pricing</li><li>• Current discounts and special offers</li><li>• Sorting out pricing in payment process,</li><li>• Effective problem redressed,</li><li>• Steps to handle customer problems related to pricing and processing payments</li><li>• Handling problems if the solutions is beyond the control of a cashier</li></ul>	Identify the effective process of payments Sorting out the problems in payment process
<ul style="list-style-type: none"><li>• Company procedure for working out payments</li><li>• Duties of a cashier regarding to payments</li><li>• Skill requirements of a cashier</li><li>• Responsibilities of cashier.</li></ul>	List out the rights, duties and responsibilities in process of payment
<ul style="list-style-type: none"><li>• Components of payment in retail</li><li>• Devices used in payment system,</li><li>• Current trends in payment system</li><li>• E-commerce payments</li></ul>	Select suitable components of payment system in retail
<ul style="list-style-type: none"><li>• Meaning of effective process of payments</li><li>• Effective process of payments</li><li>• Kinds of pricing</li><li>• Current discounts and special offers</li></ul>	Identify customer needs and service Describe effective customer service

<ul style="list-style-type: none"> <li>• Sorting out pricing in payment process,</li> <li>• Effective problem redressed,</li> <li>• Steps to handle customer problems related to pricing and processing payments</li> <li>• Handling problems if the solutions is beyond the control of a cashier</li> <li>• Company procedure for working out payments,</li> <li>• Duties of a cashier regarding to payments</li> <li>• Skill requirements of a cashier</li> <li>• Responsibilities of cashier.</li> <li>• Components of payment in retail</li> <li>• Devices used in payment system,</li> <li>• Current trends in payment system</li> <li>• E-commerce payments</li> </ul>	<p>Organization standards</p> <p>Identify and confirm customer expectations</p>
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**Practical (External)**

**50Marks**

- A. Practical Assessment (20 Marks)**
- B. Artifacts( objects created by students) (05 Marks)**
- C. Demonstration (05Marks)**
- D. Projects (10 Marks)**
- E. Student Portfolio/Practical Notebook (10Marks)**

## 2. Retail

*Job Role: Store Operation Assistant*

*Class (9<sup>th</sup>)*

### SCHEME OF ASSESMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

<u>Class 9<sup>th</sup> Store Operation Assistant</u>				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
Term-I	Part - A Employability Skills	Communication Skills	10	05
		Self-Management & Entrepreneurship	10	05
	Part – B Vocational Skills	Introduction of Retailing	16	10
		Receiving and Storage of Goods	19	10
<b>Total</b>			<b>55</b>	<b>30* (15)</b>
Term-II	Part - A Employability Skills	Basic ICT Skills	10	06
		Green Skills	10	04
	Part – B Vocational Skills	Stock Levels in Storage	15	10
		Customer Service	20	10
<b>Total</b>			<b>55</b>	<b>30* (15)</b>
	Part - C Practical Test	Practical Experiment	00	20
		Artefacts (objects created by students)		05
		Demonstration		05
		Projects ( Individual& Groups)		10
		Portfolio		10
<b>Total</b>			<b>00</b>	<b>50</b>
	Part-D Formative Assessment	Class-based tests, classroom participation ( Group work, Group Discussion, Attendance)	<b>00</b>	<b>20</b>
<b>Total</b>			<b>10</b>	<b>20</b>
<b>Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## “Part – B”

**Vocational Skills----- (20Marks)**

### **Unit – I Introduction of Retailing**

**(10 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
<ul style="list-style-type: none"><li>• Concept of retail</li><li>• Functions and essential requirements of retailers</li><li>• Retailer’s services to Customers</li><li>• Meaning of organized and unorganized retailing</li><li>• Differences between organized and organized retail</li><li>• Meaning of store and non-store retailing</li><li>• Classification of store and non-store retailing</li><li>• Differences between store and non-store retailing</li><li>• Retail cashier</li><li>• Duties of a cashier</li><li>• Responsibilities of a cashier</li><li>• Skills required to become a retail Cashier</li></ul>	<p>State basics of retailing</p> <p>Distinguish between organized and unorganized retailing</p> <p>Differentiate between store and non-store retailing</p> <p>Identify the duties and responsibilities of cashier</p>

### **Unit– II Receiving and Storage of Goods**

**(10 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
<ul style="list-style-type: none"><li>• Meaning of goods.</li><li>• Types of goods a. Consumer goods b. Industrial goods</li><li>• Procedure required for receiving goods</li><li>• Procedure required for dispatching goods</li><li>• Refusal procedure in relation to types of goods delivered</li><li>• Reporting to supervisor about product shortage or oversupply</li></ul>	<p>Classify retail goods</p> <p>Select suitable procedure of receiving and dispatching Stock of Goods</p>
<ul style="list-style-type: none"><li>• Meaning and need of storage</li><li>• Techniques of storage of goods</li><li>• Innovative storage methods</li><li>• Material handling activities</li><li>• Moving, handling and storing of material</li></ul>	<p>Store the received goods in suitable places</p> <p>Demonstrate the process of goods handling</p>

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills ----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## “Part – B”

### Vocational Skills----- (20Marks)

#### Unit– III Stock Levels in Storage

(10 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"><li>▪ Meaning of stock level</li><li>▪ Stock level in retail store</li><li>▪ Types of stock levels</li><li>▪ How to check stock levels?</li><li>▪ Need for managing stock level in retail</li><li>▪ Documents for stock receiving<ul style="list-style-type: none"><li>a. Delivery note</li><li>b. Invoice</li><li>c. Consignment Note</li><li>d. Internal packing note</li><li>e. Electronic data system</li></ul></li><li>▪ Procedure for checking stock levels</li><li>▪ Reporting deviations</li></ul>	<p>Identify stock level and maintain proper levels in retail store</p> <p>List the documents required for stock handling</p>
<ul style="list-style-type: none"><li>• Concept of floor plan</li><li>• Allocation of space</li><li>• Types of space</li><li>• How can retailers use the available space?</li><li>• Reporting requirements for shortage</li></ul>	<p>Select appropriate storage space</p>

#### Unit IV: Customer Service

10 Marks

Theory	Learning Outcome
<ul style="list-style-type: none"><li>• Distinguish between consumer and customer</li><li>• Identifying customer’s needs and behavior<ul style="list-style-type: none"><li>Basic needs of customer</li></ul></li><li>• Role of customer service in retail</li><li>• Elements of customer services</li><li>• Advantages of customer service.</li><li>• Deal effectively with customer at retail outlet</li><li>• Effective ways to build customers rapport.</li></ul>	<p>Explain customer needs and customer service</p> <p>Describe effective customer service</p>
<ul style="list-style-type: none"><li>• Standard set for staff appearance in retail</li><li>• Precautions taken by male and female staff</li><li>• Staff behaviour in organization<ul style="list-style-type: none"><li>a. Dealing with the customer</li><li>b. Dealing with the superior</li><li>c. Dealing with the colleague</li></ul></li></ul>	<p>Demonstrate the organization standards by appearance and behavior.</p>

- Meaning of customer expectation
- Identify customer expectation
- Customer expectation from retailer
- Confirm customer expectation
- Responding to customers appropriately.

Identify and confirm customer expectations

## **Practical (External)**

**50Marks**

**A. Practical Assessment**

**(20 Marks)**

**B. Artifacts (objects created by students)**

**(05 Marks)**

**C. Demonstration**

**(05Marks)**

**D. Projects**

**(10 Marks)**

**E. Student Portfolio/Practical Notebook**

**(10Marks)**

### 3. Healthcare

*Job Role: HOME HEALTH AIDE*

*Class (9<sup>th</sup>)*

#### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9th is as follows:

Class 9 <sup>th</sup>				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
<b>Term-I</b>	<b>Part - A Employability Skills</b>	Communication Skills	10	05
		Self-Management & Entrepreneurship	10	05
	<b>Part – B Vocational Skills</b>	Human Body Structure and Function	15	10
		Healthcare Delivery Systems	20	10
<b>Total</b>			<b>55</b>	<b>30* (15)</b>
<b>Term-II</b>	<b>Part – A Employability Skills</b>	Basic ICT Skills	10	06
		Green Skills	10	04
	<b>Part – B Vocational Skills</b>	Role of Home Health Aid	15	07
		Personal Hygiene and First aid	10	07
		Primary Healthcare & Emergency Medical Response	10	06
<b>Total</b>			<b>55</b>	<b>30* (15)</b>
	<b>Part – C Practical Work</b>	Practical Examination		20
		Artifacts (objects created by students)		05
		Demonstration		05
		Projects (individual and group)		10
		Portfolio		10
<b>Total</b>				<b>50</b>
	<b>Part-D (Internal)</b>	Class-based tests classroom participation (Group work, Group discussion, Attendance)		20
<b>Total</b>				<b>20</b>
<b>Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

**“Part – B”**

**Vocational Skills----- (20Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
<b>Unit I: Human Body Structure and Function</b>	
<b>10 marks</b>	
1. Various terms of anatomy and physiology 2. Functions of various tissues and bones in human body.	1. Identify the structure, bones, organs and parts of human body.

<b>Unit II: Health Care Delivery System</b>	
<b>10 marks</b>	
1.Types of Health Care Delivery Systems 2. Role of voluntary health sector	1. Describe the Health Care Delivery Systems
1. Functions of a hospital in patient care 2. Enlist the services provided by the hospital to patients	2. Identify the components and activities of Hospital
1. Role and functions of a clinic 2. Preventative care provided at the doctor’s clinic 3. Prepare a chart for basic preventative care	3. Describe the Role and functions of Clinics
1. Role of rehabilitation facility in patient recovery 2. Differentiate between services provided at various rehabilitation and convalescent centre	4. Describe the functions of rehabilitation centre
1. Facilities available at Hospital/Home for Hospice Care	5. Demonstrate the knowledge of hospice care

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills ----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## **“Part – B”**

### **Vocational Skills----- (20Marks)**

<b>Unit III: Role of Home Health Aide</b>	<b>07 marks</b>
1. Duties and responsibilities of Home Health Aide	1. Identify the role and functions of Home Health Aide
1. Activities of patient’s daily special care including bathing, feeding, excreta disposal, transferring patients etc.	2. Prepare a daily care Plan of patient
1. Basic components required for patients comfort	3. Identify basic components required for patient comfort
1. Various elements of patients safety 2. Patients rights and environment 3. Patient safety	4. Describe patients safety
1. Good qualities of Home Health Aide	5. Identify the qualities of a Home Health Aide
1. Various techniques of collecting the specimen of urine, stool, sputum, blood etc.	6. Collect the specimen of urine, stool, sputum, blood, etc. using different methods

<b>Unit IV: Personal Hygiene and First Aid</b>	<b>07 marks</b>
1. Grooming routines to be followed for personal hygiene 2. Importance of personal hygiene	1. Demonstrate good hygiene practice
1. Factors that affect health and prevent diseases	2. Identify factors affecting good Health
1. Method of hand washing 2. Importance of washing and maintain good hand hygiene	3. Perform hand washing
1. Purpose of First Aid 2. Principles of First Aid	4. Describe the principles and rules of First Aid
1. First Aid knowledge of facilities and materials used for administering First Aid.	5. Identify facilities, equipment and materials used for First Aid
1. Knowledge of procedure required in emergency First Aid such as CPR.	6. Perform the role of first aider in cardiac arrest, unconsciousness convulsion fever, heat stroke, back pain, asthma and food borne illness

1. Causes of various types of burns  
2. Reasons for using different methods for treating burns

7. Perform the role of first aider in cuts, bleeding, burns, insect bites and stings, dog bites and snake bites

**Unit V: Primary Health Care and Emergency Medical Response      06 marks**

1. Importance of primary healthcare  
2. Various indicators of the millennium development goals (MDGs) related to health

1. Identify components of primary healthcare

1. Various medical emergency situations

2. Demonstrate chain of survival

**Practical (External)**

**50Marks**

**A. Practical Assessment**

**(20 Marks)**

1. Measure body temperature using various types of thermometers
2. Measure Pulse Rate of a patient
3. Measure Respiratory rate of a patient
4. Measure B.P of patient
5. Demonstrate the steps involved in making of open bed
6. Demonstrate the steps involved in making of closed bed
7. Identify Various positions of a patient
8. Procedure(s) for changing the patient's position
9. Demonstrate use of personal protective Equipment (i.e. Gowning, Gloving, wearing a mask etc.)
10. Identify different parts of body
11. Carrying patient on a stretcher and wheel chair
12. Identify equipment in a First aid box
13. Demonstrate steps of Hand-washing
14. Demonstrate various techniques and use of equipment for collecting the Specimen of Urine, Stool, Sputum and Blood.
15. Demonstration the Steps of Chain of Survival

**B. Artifacts (objects created by students)**

**(05 Marks)**

**C. Demonstration**

**(05Marks)**

**D. Projects**

**(10 Marks)**

**E. Student Portfolio/Practical Notebook**

**(10Marks)**

## 4. Tourism & Hospitality

**Job Role: FOOD & BEVERAGE SERVICE ASSISTANT**

**Class (9<sup>th</sup>)**

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

<b>Class 9<sup>th</sup></b>				
<b>Term</b>	<b>Module Part and Name</b>	<b>Unit Name</b>	<b>No. of hours for Theory and Practical (110)</b>	<b>Max. Marks (100)</b>
Term-1	Part-A Employability Skills	Communication skills	10	05
		Self-Management & Entrepreneurship	10	05
	Part-B Vocational Skills	Introduction to Tourism & Hospitality Industry	15	08
		Preparation for Food & Beverage Service Operations	10	06
		Classification of catering Industry	10	06
<b>Total</b>			<b>55</b>	<b>30 (15)</b>
Term-2	Part-A Employability Skills	ICTS skills	10	06
		Green Skills	10	04
	Part-B Vocational Skills	Food & Beverage Service Operations	15	08
		After Dining Activities	10	06
		Communication with Colleagues & Customers	10	06
<b>Total</b>			<b>55</b>	<b>30(15)</b>
Term I & II	Part - C Practical Test	Practical Experiment		20
		Artifacts (objects created by students)		05
		Demonstration		05
		Projects (Individual and Group)		10
	<b>Total</b>	Portfolio		10
				<b>50</b>
	<b>Part-D Internal Assessment</b>	Class-Based Tests, Classroom Participation (Group Work, Group Discussion, Attendance)		20
<b>Total</b>		<b>110</b>	<b>20</b>	
<b>Grand Total</b>		<b>110</b>	<b>100</b>	

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## *“Part – B”*

### Vocational Skills----- (20 Marks)

<b>Unit I- Introduction to Tourism &amp; Hospitality Industry (8 Marks)</b>	
<b>Theory</b>	<b>Learning Outcomes</b>
Concept of Tourism, Tourist and Tourist destination. Main components of Tourism Industry, Different types and forms of Tourism, Introduction of Hotel and Hospitality sector, Importance of the Hospitality sector, Different Departments of Hotel Industry.	<ol style="list-style-type: none"><li>1. Enumerate the importance of tourism Industry.</li><li>2. Understand and depict the history and importance of hospitality sector. .</li><li>3. Identify and differentiate between basic departments in hospitality sector</li><li>4. Understand relationship between F&amp;B service and Tourism Industry</li><li>5. Appreciate and evaluate recent trends of travel and tourism.</li><li>6. Describe the need of safe and honorable tourism.</li></ol>
<b>Unit II-Classification of Catering Industry (6 Marks)</b>	
<b>Theory</b>	<b>Learning Outcomes</b>
Introduction to Catering Industry, Importance and Need of Catering Industry, Classification of Catering Industry– Commercial, Welfare, Transport, Industries, Institutional, Various Types of F&B Outlets, Scope of Catering Industry.	<ol style="list-style-type: none"><li>1. Understand and narrate the growth and history of catering industry.</li><li>2. .Describe the classification of catering industry</li><li>3. Explain the scope and career opportunities in catering industry</li></ol>
<b>Unit III- Preparation for Food &amp; Beverage Service Operations (6 Marks)</b>	
<b>Theory</b>	<b>Learning Outcomes</b>
Organizational Structure of F&B Department, Characteristics of F&B service operations, Attributes of Waiter, Personal Grooming & Hygiene, Arrangement at the Sideboard, Types of service, Types of crockery & cutlery.	<ol style="list-style-type: none"><li>1. Describe the departmental organization structure of F&amp;B</li><li>2. Enumerate and describe the attributes of a good waiter.</li><li>3. Understand and narrate basic restaurant operation standards</li><li>4. Enumerate and describe various restaurant equipment’s</li></ol>

## Term-II

### Theory (30 Marks)

#### *“Part – A”*

**Employability Skills ----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## **“Part – B”**

### **Vocational Skills----- (20Marks)**

<b>Unit IV-Food &amp; Beverage Service Operations (8 Marks)</b>	
<b>Theory</b>	<b>Learning Outcomes</b>
Receiving, Greeting & Seating the Guest, Taking Guest Reservations, Procedure of Serving Water or Welcome drink to the guests, Introduction to Menu, Presenting the Menu, Procedure of taking F&B orders from guests, Service of F&B orders	<ol style="list-style-type: none"><li>1. Receive the guest</li><li>2. Take food and beverage order from guests</li><li>3. Serve guest order</li></ol>
<b>Unit V-After Dining Activities (6 Marks)</b>	
<b>Theory</b>	<b>Learning Outcomes</b>
Preparation and Presentation of Bills, Collection of Cash/card, Bidding Farewell to guests, Collection of Solid Dishes, Crumbing, Cleaning the Table, Cleaning the work area after Dining.	<ol style="list-style-type: none"><li>1. Take order and serve food</li><li>2. Realise the importance of bill preparation and presentation to the customer</li><li>3. Clean soiled dishes and table</li><li>4. Draw the organizational chart and enlist duties of F&amp;B department</li></ol>
<b>Unit VI-Communication with Customer and Colleagues (6 Marks)</b>	
<b>Theory</b>	<b>Learning Outcomes</b>
Types of Communication-Formal communication:- Downward, Upward, Horizontal and Diagonal, Informal Communication, Instruction & Job Orders, Benefits of Effective Communication, Barriers to Effective Communication	<ol style="list-style-type: none"><li>1. Describe the importance of communication (Upward communication)</li><li>2. Describe the importance of communication (horizontal communication)</li><li>3. Explain the importance of communication with customer</li><li>4. Describe interruption and negativity in communication</li></ol>

## **Practical (External)**

**50Marks**

### **A. Practical Experiment**

**(20Marks)**

1. Prepare an organizational chart of large hotel.
2. Identification of Equipment is used in restaurants.
3. Prepare an organizational chart of Food and Beverage Department
4. Illustrate the correct way to change a table linen.
5. Demonstrate formal & informal table setup.
6. Demonstrate wiping, cleaning and handling procedures of glassware, crockery and cutlery
7. Demonstrate napkin folding (Lotus, Candle, Rose, Envelope and Fan Folding)
8. Demonstrate Greeting and seating the guest
9. Demonstrate Making of bill
10. Demonstration how to take order taking from guest.

### **B. Artifacts( objects created by students)**

**(05 Marks)**

### **C. Demonstration**

**(05Marks)**

### **D .Projects**

**(10 Marks)**

### **E. Student Portfolio/Practical Notebook**

**(10Marks)**

## 4. Tourism & Hospitality

*Job Role: House Keeping Trainee*

*Class (9<sup>th</sup>)*

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

<b>Class 9<sup>th</sup></b>				
<b>Term</b>	<b>Module Part and Name</b>	<b>Unit Name</b>	<b>No. of hours for Theory and Practical (110)</b>	<b>Max. Marks (100)</b>
Term-1	Part-A Employability Skills	Communication skills	10	05
		Self-Management & Entrepreneurship	10	05
	Part-B Vocational Skills	Introduction to Tourism and Hospitality Industry	15	08
		Classification of Various Areas in Hospitality Industry	10	06
		Prepare for manual housekeeping	10	06
<b>Total</b>			<b>55</b>	<b>30 (15)</b>
Term-2	Part-A Employability Skills	ICTS skills	10	06
		Green Skills	10	04
	Part—B Vocational Skills	Manual Cleaning of Floors , Wash and Restrooms	15	07
		Cleaning of Furniture Surfaces and Upholstery	10	05
		Maintain Area Neat and Tidy	05	04
		Collection and disposable of waste	05	04
<b>Total</b>			<b>55</b>	<b>30(15)</b>
<b>Term I &amp; II</b>	<b>Part - C Practical Test</b>	Practical Experiment		20
		Artifacts (objects created by students)		05
		Demonstration		05
		Projects (Individual and Group)		10
	<b>Total</b>	Portfolio		10
				<b>50</b>
	<b>Part-D Internal Assessment</b>	Class-Based Tests, Classroom Participation (Group Work, Group Discussion, Attendance)		20
<b>Total</b>		<b>110</b>	<b>20</b>	
<b>Grand Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

#### **Unit-I Communication Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

#### **Unit – II Self-Management &Entrepreneurial Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## **“Part – B”**

### **Vocational Skills----- (20 Marks)**

#### **Unit–I Introduction to Tourism and Hospitality Industry**

**(6 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Appreciate the importance of tourism industry- Definition of tourism industry, tourist and tourist destination. Main constituents of tourism industry. Different types and forms of tourism.	Appreciate the importance of tourism industry
Definition of Hotel and Hospitality. Identification of basic departments of hospitality sector	Understand the concept hotel and its organization

#### **Unit II Classification of Various Areas of Hospitality Industry**

**(7 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Definition of hotel industry and hospitality industry. Significance of hotel industry and role of hospitality in it. Identification of major/main departments of industry and their functions.	Appreciate the importance of hospitality industry
Definition of public and guest areas in hotel industries. Definition and role of housekeeping department. Need for regular cleaning and maintenance of public and guest area.	State the components of public and guest areas in housekeeping

#### **Unit III Prepare for Manual Housekeeping**

**(7 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Definition of the term Briefing and Debriefing. Importance of duty roster & occupancy chart.	Appreciate the importance of attending Briefing, Duty roster and Occupancy chart.
Types of surfaces. Types of equipments and other consumables. Housekeeping chemicals. Importance of personal hygiene. Importance of equipment hygiene. Handling of waste material.	Understanding the chemicals & equipments used in manual housekeeping

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills**----- (10 Marks)

**Unit-III Basic ICT & Green Skills-I** (10Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	Identify components of basic computer system and their functions
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	Demonstrate use of various components and peripherals of computer system
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	Demonstrate basic computer skills
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	Demonstrate the knowledge of the factors influencing natural resource conservation.
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	Describe the importance of green economy and green skills.

## **“Part – B”**

**Vocational Skills----- (20Marks)**

### **Unit–IV Manual Cleaning of Floors Wash and Restrooms**

**(7 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Types of floors. Equipments required for floor cleaning. Chemicals required for floor cleaning. Methods of removing the dust and debris from the floors. Methods of cleaning spoilage from the floors. Methods of removing loose dust and debris from the floor Layout of public area bathrooms. Parts of public area bathrooms. Equipments required for cleaning bathrooms.	Appreciate the importance of cleaning of floors, handling floor chemicals and Equipment.
Parts of public area bathrooms. Equipments required for cleaning bathrooms.	Appreciate the importance of layout & cleaning of bathroom.

### **Unit-V Cleaning of Furniture Surfaces and Upholstery**

**(5 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
What is cleaning? Need of cleaning in an organization. Different types of surfaces. What is dust?. Origin of dust. What is dirt and how it accumulates. Places of accumulation. What is an office?	Appreciate the knowledge of Cleaning and various Soiling that accumulate on different surfaces
What are stains? ---Their classification, causes and removal techniques.	Understanding stains and their cleaning process
What is workstation? Cleaning procedure requires at office.	

**Unit-VI Maintain Area Neat and Tidy****(4 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Importance of assigning duties. Duties & responsibilities of a housekeeping Trainee.	Appreciate the role of Housekeeping Trainee
Arrangement for furniture in public areas.	Know the public area furniture

**Unit VII- Collection and Disposal of Waste****(4 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Preparation of handling waste. S.O.P for removing waste. S.O.P for segregation of waste. Garbage heaping area of collected waste. Problems associated with handling and storage of waste.	Appreciate the importance of removing and segregating waste.

**Practical (External)****50 Marks**

- A. Practical Assessment** (20 Marks)
- B. Artifacts (objects created by students)** (05 Marks)
- C. Demonstration** (05Marks)
- D. Projects** (10 Marks)
- E. Student Portfolio/Practical Notebook** (10Marks)

## 5. Security

*Job Role: Security Guard*

*Class (9<sup>th</sup>)*

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

<b>Class 9<sup>th</sup></b>				
<b>Term</b>	<b>Module Part and Name</b>	<b>Unit Name</b>	<b>No. of Hours for Theory and Practical (110)</b>	<b>Max. Marks Theory and Practical (100)</b>
<b>Term-I</b>	<b>Part - A Employability Skills</b>	Communication Skills-I	10	5
		Self-Management & Entrepreneur Skills-I	10	5
	<b>Part – B Vocational Skills</b>	Introduction to Security Services	35	20
<b>Total</b>			<b>55</b>	<b>30</b>
<b>Term-II</b>	<b>Part - A Employability Skills</b>	Basic ICT and Green Skills-I	10	10
		<b>Part – B Vocational Skills</b>	Security Equipments for security Guard	20
	Access Control		25	09
<b>Total</b>			<b>55</b>	<b>30</b>
<b>Term I &amp; Term -II</b>	<b>Part - C Practical Work</b>	Practical Experiment		20
		Artifacts(objects created by students)		05
		Demonstration		05
		Projects(individual and group)		10
		Portfolio		10
	<b>Total</b>			
	<b>Part-D Project / Field work</b>	Class based test, Class room participation(Group work, Group discussion, attendance)		20
<b>Total</b>				<b>20</b>
<b>Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## ***“Part – B”***

**Vocational Skills----- (20Marks)**

### **Unit – I Introduction to security services**

**(20 Marks)**

<b>Theory</b>	<b>Learning Outcomes</b>
Roles and functions of public and private security personnel, General roles & responsibilities of an Security Guard, Official procedures and instructions, Assets and risks Threats, Observing and reporting, suspicious package and weapon threat, Using a fire extinguisher Risk management, Types of emergency and Risks associated with assault. Introduction to Arms And Improvised Explosive Devices (IED), Identification Of Arms.	<ol style="list-style-type: none"><li>1. Identify the roles and responsibilities of security personnel</li><li>2. Demonstrate the knowledge of risks, threats, hazards, emergencies, including responding and reporting emergencies.</li><li>3. State the various procedures for cooperating with police and people in other organizations and the regulations in PSARA Act 2005.</li><li>4. Demonstrate the knowledge of identifying arms that are used by police and public.</li><li>5 Demonstrate the knowledge of identifying suspicious objects, which may be I.E.D.</li></ol>

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

#### **Unit-III Basic ICT & Green Skills-I**

**(10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	Identify components of basic computer system and their functions
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	Demonstrate use of various components and peripherals of computer system
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	Demonstrate basic computer skills
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	Demonstrate the knowledge of the factors influencing natural resource conservation.
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	Describe the importance of green economy and green skills.

## ***“Part – B”***

### **Vocational Skills----- (20 Marks)**

#### **Unit– II: Security Equipments for Security Guard**

**(11 Marks)**

<b>Theory</b>	<b>Learning Outcomes</b>
Introduction to security equipments, Uniform and Equipments, Electronic Security Systems, Security Lightning System, Fire detection System, Safety and Emergency System,	1. Demonstrate the knowledge of security equipment used by unarmed security guard.

#### **Unit– III: Access control**

**(09 Marks)**

<b>Theory</b>	<b>Learning Outcomes</b>
Search and Seizure, Patrolling & Study the post orders & Talk to colleagues, Check the Vehicle & your equipment, Security searches: People and baggage use electronic Eqpt., Processes & Manual search of persons and baggage, Reporting risk, threat and hazard during search, Structures and Techniques , for Access Control Organizational rules & Levels of access control, Building perimeter and entrance, Access control in the absence of equipment, Electronic access control system, Alarm System & Vehicle search and access control, Queues and access control Procedure followed for body search in the absence of equipment.	1. Demonstrate the procedure of searching people and baggage at the entry/exit gates as well as patrolling and seizing prohibited articles with/without equipment.  2. Demonstrate knowledge of structures and techniques for access control.

## Practical (External)

50 Marks

### A. Hand on Skill

(20 Marks)

1. Initializations and handling with electronic security equipment, add new device (using security equipment and devices) Enter your ID address and the name of your Eqpt. Save this setting with name onSecurity equipment display board.
2. Using both your hands type:  
Shift, Ctrl, Alt and function keys for scanning and control security equipment
3. Create a table showing results of randomly selected 5 students of standard 9 as shown in theFollowing table:

S.No.	Roll No	Urdu	English	Maths	Science	SSt
1	1	25	20	21	21	22
2	4	20	23	25	25	21
3	6	21	24	20	24	20

4. Collect the One way radio communication sets of your site place for each month from January toDecember (12 months). Create a worksheet with the data of Name of the Month and quantity received mention as Table. Conclude your result that which type of chart will be more appropriate for such type of data.

Month	Received Working Sets	Received Damage Sets	Remarks
January, February			
March ,April			
May, June, July			
August			
September			
October			
November			
December			

### B. Artifacts( objects created by students)

(05 Marks)

### C. Demonstration

(05Marks)

### D. Projects

(10 Marks)

### E .Student Portfolio/Practical Notebook

(10Marks)

## 6. Agriculture

**Job Role: Paddy farmer**

**Class (9<sup>th</sup>)**

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

Class 9 <sup>th</sup>					
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)	
Term-I	Part - A Employability Skills	Communication Skills	10	5	
		Self-Management & Entrepreneurship	10	5	
	Part – B Vocational Skills	Introduction to Paddy Cultivation	10	5	
		Land Preparation and Planting	07	5	
		Nursery preparation and Transportation	10	5	
		Growth Stages of paddy plant	08	5	
<b>Total</b>			<b>55</b>	<b>30*(15)</b>	
Term-II	Part - A Employability Skills	Basic ICT Skills	10	6	
		Green Skills	10	4	
	Part – B Vocational Skills	Intercultural operations in paddy	10	5	
		Seed Production	08	5	
		Water management	10	4	
			Integrated Nutrient Management	07	6
<b>Total</b>			<b>55</b>	<b>30*(15)</b>	
	Part - C Practical Test	Practical Experiment		20	
		Artifacts (objects created by students)		05	
		Demonstration		05	
		Projects (individual and group)		10	
		Portfolio		10	
<b>Total</b>				<b>50</b>	
	Part-D Formative Assessment	Class-based tests, classroom participation (group work, group discussion, attendance),		20	
<b>Total</b>				<b>20</b>	
<b>Total</b>			<b>110</b>	<b>100</b>	

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	<p>Demonstrate knowledge of various methods of communication.</p>
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	<p>Identify elements of communication cycle.</p>
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	<p>Identify the factors affecting our perspectives in communication</p>

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	<p>Describe the meaning and importance of self management.</p>
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	<p>Demonstrate the knowledge of distinguishing characteristics of entrepreneurship</p>

## **“Part – B”**

### **Vocational Skills----- (20Marks)**

#### **Unit – I Introduction to Paddy Cultivation**

**(06 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Introduction to Paddy ( Family, botanical name), Difference between paddy and rice, Importance of paddy, discuss various sub species of paddy	Demonstrate the knowledge of importance of paddy cultivation and growing regions
Varieties of rice, Nutritive value of rice, Climate and soil for paddy cultivation Different cropping seasons for rice cultivation	Demonstrate the knowledge of climate requirements and rice growing regions

#### **Unit – II Land Preparation and Planting**

**(04 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Tillage (Ploughing, Harrowing and Levelling), Advantages of Ploughing, Types of Ploughs, Implements Used For Seed Sowing and Transplanting,	Identify the implement used for land preparation and planting
Different methods of sowing, Advantages of Line sowing, Dibbling. Transplanting and its methods.	Demonstrate the methods of sowing and planting

#### **Unit -III Nursery preparation and Transportation**

**(05 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Criteria for Site selection for Nursery, Types of nursery	Explain types of nursery and seed sowing
Different types of weeds in paddy nursery, Common insect pests of paddy, Common Diseases found in paddy,	Identify and manage weed, insect pest and disease in nursery
Age of seedlings for transplanting, Pulling of seedlings, transportation and packaging of paddy seedlings, Methods of transplanting and its precautions	Demonstrate packaging and transportation of seedlings

#### **Unit – IV Growth Stages of paddy plant**

**(05 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. Describe plant's parts i. Root system ii. Shoot system- Culm or stem, Leaves, Spikelet, Grain, and Panicle. 2. Growth stages of rice- Vegetative Phase. Seedling Stage, b. Transplanting Stage c. Tillering Stage -Reproductive Phase a. Booting Stage b. Heading Stage c. Flowering Stage - Ripening Phase a. Milk Stage b. Dough Stage c. Maturity stage d. Over-ripe Stage, Photoperiod Sensitivity	Explain growth stages of paddy

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills ----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## **“Part – B”**

### **Vocational Skills----- (20 Marks)**

#### **Unit – V Intercultural operations in paddy (05 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Define intercultural operations 2. Intercultural operation in direct seeded rice i. Cultural practices- -Stale seedbed technique ii. Physical practices. 3. Intercultural operation in Biasi rice -Gap filling in transplanted fields	Intercultural operations during sowing and planting
1. Manual weeding 2. Mechanical weeding	Intercultural operation during weeding

#### **Unit – VI Seed Production (05 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. Introduction of seed bed 2. Describe importance of seed production 3. Importance of isolation distance 4. Roguing 5. Seed standards	Explain method of seed production
1. Improved and indigenous rice varieties in India A) High Yielding Varieties i. Upland ecosystem of rice ii. Irrigated ecosystem in rice B) Hybrid Rice Varieties i. Aromatic rice ii. Aerobic	Identify improved and indigenous rice varieties of India
1. Important Traits of rice varieties 2. Define Biotic and abiotic stress 3. Varieties tolerant to Biotic and abiotic stress 4. Varieties of Rice for Malnutrition problems.	Explain Traits of rice varieties

#### **Unit – VIII Water management (04 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. Describe water requirement of paddy 2. Average water requirement 3. Critical crop growth stages for irrigation 4. Irrigation Schedule	1. Explain Water requirement of paddy
1. Describe irrigation 2. Irrigation methods a. Continuous submergence b. Continuous Flowing Irrigation c. Intermittent submergence d. Rotational Irrigation 3. Precautions taken during irrigation	Demonstrate methods of irrigation
Alternate Wetting and Drying (AWD) 2. How to apply alternate wetting and drying method of irrigation 3. Describe water use efficiency (WUE) 4. Measures to be taken for maximizing water use efficiency	Alternate Wetting & Drying and Water Use Efficiency

**Unit – VIII Integrated Nutrient Management****(06 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. Describe the soil sampling 2. Describe the components of soil analysis report 3. Recommendation of fertilizers: 4. Define integrated nutrient management	Explain Soil Sampling and Analysis
1. Essential nutrients required by plants 2. Different sources of manure and fertilizers a. Organic sources of nutrients b. Inorganic fertilizer sources	Nutrients requirement and its sources:
Methods Fertilizer Applications	Methods and time of fertilizer applications
1. Describe nutrient deficiency 2. Types of deficiency symptoms and its corrective measures	Identify nutrient deficiency symptoms in rice

**Practical (External)****50 Marks****A. Practical Experiment****(20 Marks)**

1. Prepare a pie chart on information depicting highest rice producing states and indicate these states in the maps of India.
2. Identification of various implement used in sowing and transplanting
3. Demonstration of use of implement in intercultural operation
4. Identification of Insect pest and diseases in rice nursery.
5. Demonstration of weeding by cono-weeder
6. Identify organic and inorganic sources of fertilizers.

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**B. Artifacts (Objects Created by students)****(05 Marks)****C. Demonstration****(05 Marks)****D. Projects (Individual and group)****(10 Marks)****E. Portfolio****(10 Marks)**

## 6. Agriculture

**Job Role: Dairy Worker**

**Class (9<sup>th</sup>)**

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

Class 9 <sup>th</sup>				
Term	Module Name	Part and Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
Term-I	Part – A Employability Skills	Communication Skills	10	5
		Self-Management & Entrepreneurship	10	5
		Breeds of Dairy Animals	15	10
		Livestock housing system I and II	20	10
<b>Total</b>			<b>55</b>	<b>30(15*)</b>
Term-II	Part – A Employability Skills	Basic ICT Skills	10	6
		Green Skills	10	4
	Part – B Vocational Skills	Transferring dairy animals to another locations	20	10
		Feeding and Watering for livestock	15	10
<b>Total</b>			<b>55</b>	<b>30(15*)</b>
	Part – C Practical Work	Practical Experiment		20
		Artifacts(objects created by students)		05
		Demonstration		05
		Projects (individual and group)		10
		Portfolio		10
<b>Total</b>				<b>50</b>
	Part-D Formative Assessment	Class based tests, classroom participation(group work, group discussions, attendance)		20
<b>Total</b>				<b>20</b>
<b>Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

#### **Unit-I Communication Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

#### **Unit – II Self-Management &Entrepreneurial Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## **“Part – B”**

### **Vocational Skills----- (20 Marks)**

#### **Unit – I Breeds of Dairy Animals**

**(10 Marks)**

<b>Theory</b>	<b>Learning outcome</b>
1.Common indigenous breeds of cow 2.Common exotic breeds of cow reared in India 3.Indian buffalo breeds	1. Identify different cow breeds (Indigenous and exotic breeds)
2. 1. Body parts of cows and buffalo	2. Identify different body parts of cow and buffalo

#### **Unit –II Livestock housing system I and II**

**(10 Marks)**

<b>Theory</b>	<b>Learning outcome</b>
Basics amenities needed in animal housing 2. Types of livestock housing	Explain different types of animal housing
Equipment and machinery used in a dairy farm 2. Essential provisions needed in a dairy farm	Identify the equipment and machinery in an animal housing
Describe routine activities at a dairy farm 2. Describe daily routine schedule of a medium sized dairy farm	Demonstrate the routine activities at a dairy farm
Layout of animal housing Important sections of a large dairy farm	Explain layout of animal housing

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills ----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## **“Part – B”**

### **Vocational Skills----- (20 Marks)**

#### **Unit – III Transferring Dairy Animals to another Location (10 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1.Purpose of livestock transfer 2. Modes of animal transportation 3.Difficulties faced by livestock during transfer	Explain the purpose and modes of livestock transfer

#### **Unit – IV Feeding and watering for livestock (10 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. Types of animal feed 2. Composition of feed and its quality 3. Assessing the overall quality of the feed	1. Types of animal feed 2. Composition of feed and its quality 3. Assessing the overall quality of the
1. Feed requirements of dairy animals 2. Major categories of feed ingredients used for preparation of rations	2. Explain the feed requirements of dairy animals
1. Equipment and machinery used in preparing animal feed 2. Maintenance of equipment and machinery 3. Preparation of concentrate mixture 4. Storage of animal feed 5. Structures used for storage of animal feed	3. Explain the method of preparation of animal feed
1. Plan for ensuring regular supply of feed and fodder in a dairy farm 2. Water requirement and supply for dairy animals 3. Factors affecting water needs of dairy animals	4. Maintain the feed and water supply in a dairy farm

### **Practical (External)**

**50 Marks**

**A. Practical Experiment**

**(20 Marks)**

**B. Artifacts (Objects Created by students)**

**(05 Marks)**

**C. Demonstration**

**(05 Marks)**

**D. Projects (Individual and group)**

**(10 Marks)**

**E. Portfolio**

**(10 Marks)**

## 7. Telecommunication

*Job Role: Optical Fiber Splicer*

*Class (9<sup>th</sup>)*

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9 and 10 opting for vocational subject along with general education subjects. The unit-wise distribution of hours and marks for Class 9 is as follows:

CLASS 9				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (200)	Max. Marks for Theory and Practical (100)
Term-I	Part - A Employability Skills	Communication Skills	10	05
		Self-Management & Entrepreneurship Skills	10	05
	Part - B Vocational Skills	Optical Communication Technology	18	10
		Splicing Operations	17	10
<b>Total</b>			<b>55</b>	<b>30*(15)</b>
Term-II	Part - A Employability Skills	Basic ICT Skills	10	6
		Green Skills	10	4
	Part - B Vocational Skills	Splicing Tools and Equipment	14	8
		Optical Fiber Testing	11	7
		Maintain Health and Safety	10	5
<b>Total</b>			<b>55</b>	<b>30*(15)</b>
TERM I AND TERM II	Part C Practical Work	Practical Experiment		20
		Artifacts (objects created by students)		05
		Demonstration		05
		Projects (individual and group)		10
		Portfolio		10
	<b>Total</b>			
	Part D Formative Assessment	Class based tests , class room participation (group work, group discussion, attendance)		20
<b>Total</b>			<b>110</b>	<b>20</b>
<b>Grand Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

#### **Unit-I Communication Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

#### **Unit – II Self-Management &Entrepreneurial Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## **“Part-B”**

**Vocational skills----- (20 Marks)**

### **Unit-I Optical Communication Technology (10 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. The communication process, Modes of communication; Concept of data communication – Characteristics of data, Components of data communication; Transmission media and its types.	2. Explain the data communication.
2. Broadband technology – Broadband market – global and Indian Telecommunication;	2. Outline the growth and opportunities in broadband and fiber industry
3. Light Theory; Optical fiber technology – Basics of optics and its evolution, Optical fiber in broadband industry, Basics of fiber optic communication; Structure of fiber, Classification of optical fiber, Light sources of optical fiber, Losses in optical fiber.	3. Explain the fibre optic communication

### **Unit-II Splicing Operations (10 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. Concept of splicing, Need of splicing, Splicing process, Materials required for splicing.	2. Describe the splicing process
2. Optical fiber splicing – Fusion and mechanical splicing process; Classification and principle of splicing; Testing parameters of splicing.	3. Carry out fusion and mechanical splicing

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

#### Unit-III Basic ICT & Green Skills-I

**(10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## **“Part – B”**

**Vocational Skills----- (20 Marks)**

### **Unit-III Splicing Tools and Equipment**

**(08 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. Basic hand tools – screw driver, scissors, cable cutting knife, pliers, cleaning swab, electrical tape, gloves.	1. Demonstrate the use of basic hand tools.
2. Splicing Tools – Splicer, cleaver, tissue paper, isopropyl alcohol, protection sleeves, round cutter, tube cutter, fiber cutter, fiber stripper, OTDR; Mechanical Splice connector.	2. Use the splicing tools.

### **Unit –IV Optical Fiber Testing**

**(07 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. Standard process of OTDR tests, Working and Elements of OTDR, Standard process of Power meter tests.	1. Test the fiber joint with OTDR.

### **Unit-V Maintain Health and Safety**

**(05 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
1. Cut fibers, sleeves and cable pieces; Dispose of the cut fibers, sleeves and cable pieces.	1. Rules to follow while splicing.
2. Personal Protection equipment's (PPE's) – helmets, safety boots, safety glasses.	2. Use appropriate personal protection equipment

### **Practical (External)**

**50 Marks**

#### **A. Practical Experiment**

**(20 Marks)**

#### **B. Artifacts (Objects Created by students)**

**(05 Marks)**

#### **C. Demonstration**

**(05 Marks)**

#### **D. Projects (Individual and group)**

**(10 Marks)**

#### **E. Portfolio**

**(10 Marks)**

## 8. Beauty & Wellness

*Job Role: Assistant Beauty Therapist*

*Class (9<sup>th</sup>)*

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> & 10<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

<b>Class 9<sup>th</sup></b>				
<b>Term</b>	<b>Module Part and Name</b>	<b>Unit Name</b>	<b>No. of Hours for Theory and Practical (110)</b>	<b>Max. Marks Theory and Practical (100)</b>
<b>Term-I</b>	<b>Part – A Employability Skills</b>	Communication Skills-I	10	5
		Self-Management & Entrepreneurship	10	5
	<b>Part – B Vocational Skills</b>	Introduction to Beauty & Wellness Therapy Industry & Beauty Therapy	20	10
		Health & Safety In the work Area	15	10
<b>Total</b>			<b>55</b>	<b>30*(15)</b>
<b>Term-II</b>	<b>Part – A Employability Skills</b>	Basic ICT Skills	10	6
		Green Skills	10	4
	<b>Part – B Vocational Skills</b>	Manicure, Pedicure & Mehendi.	20	10
		Hair Care	15	10
<b>Total</b>			<b>55</b>	<b>30*(15)</b>
<b>Term-I and II</b>	<b>Part – C Practical Work</b>	Practical Experiment		20
		Artifacts(objects created by students)		05
		Demonstration		05
		Projects(individual and group)		10
		Portfolio		10
<b>Total</b>				<b>50</b>
	<b>Part-D Formative Assessment</b>	Class based test, Class room participation(Group work, Group discussion, attendance)		20
<b>Total</b>				<b>20</b>
	<b>Total</b>		<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## **“Part – B”**

### **Vocational Skills ----- (20 Marks)**

#### **Unit – I Introduction to beauty & wellness industry and beauty Therapy (10 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Introduction to Beauty and wellness industry in India, Major sub segments of beauty & wellness sector, career path for Assistant beauty therapist	Identify various career opportunities in the beauty sector
Services in beauty therapy- pedicure , manicure , threading, waxing, bleaching etc	Identify different services in beauty therapy
Maintenance of record cards, essentials of work area, sterilization and disinfection methods, personal presentation and behavior, safe disposal of waste, compliance of rules and norms at workplace, responsibilities of assistant	Prepare and maintain the work area.

#### **Unit–II Health and safety in the work area**

**( 10 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Hazards and risks at workplace, fire safety, types of fires, types of fire extinguishers, electrical safety, rescuing techniques, chemical safety, correct posture for lifting and carrying, parlour hygiene.	Maintain health and safety at workplace.
Human body systems, skeletal system, muscular system , Nail growth and structure	Demonstrate the knowledge of anatomy of hands, nails and feet.

## Term-II

### Theory (30 Marks)

#### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## **“Part – B”**

**Vocational Skills----- (20 Marks)**

### **Unit- III Manicure, Pedicure and Mehendi**

**(10Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Preparing the work area , Equipment and materials used for manicure , Identification of nail conditions, Contra-indications that prevent and restrict treatment, Nail conditions , Manicure procedure, Nail shapes, Applying	Perform manicure services
Purpose of pedicure, Contra- indications for pedicure, pedicure procedure, Aftercare advice.	Perform pedicure services.
Tools and materials for Mehendi application, Preparations for application of mehendi, Sparkle Mehendi, Wooden block mehendi,Aftercare advice	Carryout applications of simple mehendi designs.

### **Unit– IV Hair care**

**(10Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Types of hair-straight, wavy, curly, coilyFeatures affecting hair styling, Anatomyof hair, Structure of hair, Contra- indications , Hair and scalp conditions, Hair and scalp diseases, Aftercare advice	Perform simple hair dressingservices
Common hairstyles-plait, twist, braidsetc Hair accessories, Styling products, toolsand equipments like lotions, styling gel, heat protectants, serum Physical effects of styling on hairstructure.	Make common Hairdos

## **Practical (External)**

**50 Marks**

### **A. Practical Experiment**

**(20Marks)**

- (A) How to apply nail paint
- (B) How to remove nail paint
- (C) How to make mehendi cones
- (D) How to make different mehendi designs
- (E) Use of hair dryer
- (f) Various hairdos-plait, twist, braids, bun etc
- (G) Basic hair care-shampooing, and conditioning

### **B. Artifacts (objects created by students)**

**(05 Marks)**

### **C. Demonstration**

**(05 Marks)**

### **D. Projects (Individual and Group)**

**(10 Marks)**

### **E Portfolio**

**(10 Marks)**

## 09. Physical Education and Sports

*Job Role: Physical Education Assistant*

*Class (9<sup>th</sup>)*

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

Class 9 <sup>th</sup>					
	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)	
<b>Term-I</b>	<b>Part - A Employability Skills</b>	Communication Skills	10	5	
		Self-Management & Entrepreneurship	10	5	
	<b>Part – B Vocational Skills</b>	Role of Physical Education in development of a child	18	10	
		Age – Appropriate Physical Activities	17	10	
<b>Total</b>			<b>55</b>	<b>30*(15)</b>	
<b>Term-II</b>	<b>Part - A Employability Skills</b>	Basic ICT Skills	10	6	
		Green Skills	10	4	
	<b>Part – B Vocational Skills</b>	Organizing Age Appropriate Physical Activities	20	10	
		Children Health and Safety	15	10	
<b>Total</b>			<b>55</b>	<b>30*(15)</b>	
<b>Term I &amp; II</b>	<b>Part - C Practical Test</b>	Practical Experiment		20	
		Artefacts (objects created by students)		05	
		Demonstration		05	
		Projects (Individual and Group)		10	
		Portfolio		10	
	<b>Total</b>				<b>50</b>
	<b>Part-D Internal Assessment</b>	Class-Based Tests, Classroom Participation (Group Work, Group Discussion, Attendance)		20	
<b>Total</b>			<b>110</b>	<b>20</b>	
<b>Grand Total</b>			<b>110</b>	<b>100</b>	

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## **“Part – B”**

### **Vocational Skills ----- (20 Marks)**

<b>Unit – I Role of Physical Education in Development of a Child (10 Marks)</b>	
<b>Theory</b>	<b>Learning Outcomes</b>
Introduction of physical Education, Meaning and Concept of Physical Education, Definitions of Physical Education, Aims and objectives of physical education.	Identify the domains of early year childhood physical development
Factors affecting Physical activities, Age, Gender, Body Composition, Nutrition and Physical Activity.	Identify factors influencing physical activities.
Courses and carrier avenues in physical education, Importance of Physical Education, Need and Importance of good planning in physical education and sports.	Identifying the importance and elements of a good plan
Importance of Physical Education, Role of Physical Education in the development of the child (Physical, Mental, Social, Emotional and Intellectual)	Differentiate between props and equipment, and play spaces
<b>Unit – II Age-Appropriate Physical Activities (10 Marks)</b>	
<b>Theory</b>	<b>Learning Outcomes</b>
Meaning, Concept and types of Physical Activities, Principles for selection of physical activities for different age groups, Benefits of physical activities.	Understanding Age-Appropriate Physical activities.
Physical Activities and cognitive skill developments, Activities to be organized- Games, Singing, Dancing and effective physical education classes	Identifying the benefits of physical activities for developing cognitive skills and Taking effective Physical Education class.

# Term-II

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## “Part – B”

### Vocational Skills----- (20 Marks)

<b>Unit – III Organizing Age Appropriate Physical Activities (10 Marks)</b>	
Theory	Learning Outcomes
Meaning and Concept of organization, Types of organization, Principles of good organization, Qualities of a good organizer, Need and Importance of good organization, Fitness Activities, Sports Periods, Games, Need and Importance of organizing Games and Sports Events (Intramural/Extramural Activities, of Sports day.	Identify the Games for everyday activities and Identifying the activities to be conducted during the sports days
Tournaments, Camping, Morning Assembly, Mass drill, Programs for parents and staff, Summer camp and Winter camp	Creating a fixture for different tournament and camps for parents and school staff
<b>Unit-IV Children’s Health and Safety (10 Marks)</b>	
Meaning and concept of health, Health Hygiene, Health Education, Aims and objectives of health education, Factors Affecting personal hygiene.	Identifying the factors affecting personal hygiene
Benefits of good health hygiene, Balanced diet and its role in maintaining Childs health	Understanding the role of nutrients in maintenance of health
Play ground, Habits of good health hygiene and playground- safe Acts.	Describe the various safety measures in playground
First aid (its purposes and basic principles), Sports injuries (Safety Measures and treatment).	Understanding the importance of first Aid kits during various types of sports injuries.

### **Practical (External)**

**50 Marks**

- |   |            |
|---|------------|
| <b>A. Practical Experiment</b>                    | (30 Marks) |
| <b>B. Artifacts (objects created by students)</b> | (05 Marks) |
| <b>C. Demonstration</b>                           | (05 Marks) |
| <b>D. Projects (individual and group)</b>         | (10 Marks) |
| <b>E. Portfolio</b>                               | (10 Marks) |

# 10. Automotive

*Job Role: Four Wheeler Assistant*

*Class (9<sup>th</sup>)*

## SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9th opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9th is as follows:

Class 9 <sup>th</sup>				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
Term-I	Part – A Employability Skills	Communication Skills	10	5
		Self-Management and Entrepreneurship Skills	10	5
	Part – B Vocational Skills	History And Evolution Of Automobiles	07	04
		Various Types Of Automobiles	10	06
		Road Safety	07	04
		Health Hygiene And Environment	07	04
		Innovation And Development	04	02
<b>Total</b>			<b>55</b>	<b>30[15]</b>
Term-II	Part – A Employability Skills	Basic ICT Skills	10	6
		Green Skills	10	4
		Major Systems And Components Of An Automobile	20	16
		Vehicle Maintenance And Servicing	15	04
		<b>Total</b>		
Term I & II	Part – C Practical Work	Practical Experiment		20
		Artifacts , objects created by students		05
		Demonstration		05
		Project individual and group		10
		Portfolio		10
		<b>Total</b>		
	Part-D Formative Assessment	Class based tests, classroom participation group work, group discussion ,Attendance		20
<b>Total</b>			<b>110</b>	<b>20</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

#### Employability Skills----- (10 Marks)

#### Unit-I Communication Skills-I (05 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

#### Unit – II Self-Management & Entrepreneurial Skills-I (05 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## **“Part – B”**

### **Vocational Skills----- (20 Marks)**

#### **Unit: I History and Evolution of Automobiles**

**(04 Marks)**

<b>Theory</b>	<b>Learning outcome</b>
Introduction to Wheel, Wheel Structure, Conception of wheel Cart and modifications, Invention of automobiles.	Describe the Invention of wheel, Invention of wheel cart and animal powered horse cart, Invention of Automobiles and Evaluation till date, Invention of automobile (Post world war II).

#### **Unit II Various types of Automobile**

**(06 Marks)**

<b>Theory</b>	<b>Learning outcome</b>
Two and three wheeler, introduction to passenger and commercial vehicle, construction equipment vehicle (bulldozer, road roller, dumper, excavator).	Able to identify Two Wheelers Three Wheelers, Passenger vehicle, Commercial vehicle, Agricultural vehicle, Construction Equipment Vehicle.

#### **Unit III Road safety**

**(04 Marks)**

<b>Theory</b>	<b>Learning outcome</b>
Importance of road safety ,safe and responsible driving, important road signs, driving rules and general introduction to revised motor vehicle Act, procedure for vehicle registration and driving license through Parivahan portal.	Importance of road safety rules Safe and responsible driving Road Signs Driving rules and Registration of a vehicle Driving License.

#### **Unit IV Health, Hygiene and Environment**

**(04 Marks)**

<b>Theory</b>	<b>Learning outcome</b>
Air pollution and its control, Emission norms Standards viz Euro/BS- I, II, III, IV, V, PUC certification and its importance.	Air pollution Auto Emissions and EU/ BS Standards PUC.

#### **Unit V Innovation and development**

**(02 Marks)**

<b>Theory</b>	<b>Learning outcome</b>
Electric cars and hybrid cars, new development- (G-Force control Technology, Pedestrian Safety).	Explain Innovation and Development.

## Term-II

### Theory (30 Marks)

#### *“Part – A”*

**Employability Skills----- (10 Marks)**

#### **Unit-III Basic ICT & Green Skills-I**

**(10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## “Part – B”

### Vocational Skills----- (20 Marks)

#### Unit VI Major System and components of Automobile (16 Marks)

Theory	Learning outcome
Definition of chassis, Auto body or Superstructure, Engine and its types, Components of engine viz cylinder, cylinder head, piston crankshaft, connecting rod, camshaft, define lubrication and its objectives, cooling system and its importance, Introduction to fuel supply system, Introduction to transmission system, define clutch and gearbox, Introduction to Front and rear axle, Basics of steering and suspension system, define brakes and types of brakes.	Identify and discuss major systems and components of an automobile.

#### Unit VII Vehicle Maintenance and servicing (04 Marks)

Theory	Learning outcome
General introduction to workshop, precautions during maintenance and servicing, common activities in the workshop, tips to extend the life of vehicle.	Importance of Vehicle Maintenance and Servicing Tips to Extend the Life of Vehicles Introduction to Vehicle Servicing procedure.

#### Practical (External) 50 Marks

##### A) Practical experiment (20 Marks)

- Able to describe the Invention of wheel, wheel cart,
- Able to identify three Wheelers used, make drawing of three Wheelers,
- Able to identify passenger vehicles used, make a drawing of passenger vehicle,
- Able to identify commercial vehicle used, make drawing of commercial vehicle,
- Able to identify and describe the importance of the Engine and its components
- Able to make a drawing of the Engine and its components.
- Able to make a drawing of the Lubrication system and its components
- Able to make a drawing of the Fuel Supply System

##### B) Artefacts (objects created by students) (05 Marks)

##### C) Demonstration (05 Marks)

##### D) Projects( Individual and group) (10Marks)

##### E) Portfolio (10Marks)

# 10. Automotive

*Job Role: Electric Vehicle Service Assistant*

*Class (9<sup>th</sup>)*

## SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9th opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9th is as follows:

Class 9 <sup>th</sup>				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
<b>Term-I</b>	<b>Part – A Employability Skills</b>	Communication Skills	10	5
		Self-Management and Entrepreneurship Skills	10	5
	<b>Part – B Vocational Skills</b>	Introduction of electric vehicles in India	18	10
		Major Components and systems of electric vehicles	12	07
			Health and safety equipments	05
<b>Total</b>			<b>55</b>	<b>30[15]</b>
<b>Term-II</b>	<b>Part – A Employability Skills</b>	Basic ICT Skills	10	6
		Green Skills	10	4
	<b>Part – B Vocational Skills</b>	Workshop and tool equipments	10	08
		Routine service and repair of electric vehicles	25	12
<b>Total</b>			<b>55</b>	<b>30[15]</b>
<b>Term I &amp; II</b>	<b>Part – C Practical Work</b>	Practical Experiment		20
		Artifacts , objects created by students		05
		Demonstration		05
		Project individual and group		10
		Portfolio		10
<b>Total</b>				<b>50</b>
	<b>Part-D Formative Assessment</b>	Class based tests, classroom participation group work, group discussion ,Attendance		20
<b>Total</b>			<b>110</b>	<b>20</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

## “Part – B”

### Vocational Skills ----- (20 Marks)

#### Unit-I: Introduction to electric vehicles in India

(10 Marks)

Theory	Learning Outcomes
Introduction and history of electric vehicles	Identify the importance and role of electric vehicle.
The environmental impact and electric vehicles, role and duties of EV service assistant	Demonstrate the social and environment impact of electric vehicle
Various types of EV's (Battery EV, Plug-in hybrid EV, Hybrid EV) and different products/ models manufactured by Original Equipment Manufacturers (OEMs).	List the various types of EV's and different products/ models manufactured by Original Equipment Manufacturers (OEMs)

#### Unit II: Major components and system of EV

(07 Marks)

Theory	Learning Outcomes
Fundamental terms, laws and principles used in EV (Ohms, current, voltage, resistance, series and parallel circuit, power Calculation).	Demonstrate the basic Electric terminology used in EV.
Various electrical and electronic signals such as electrical inputs, outputs, voltage, pulse width modulation, digital signal (including infra-red and fiber optics) etc.	Describe various symbols, units and terms used in wiring diagrams associated with electrical/ Electric systems/ components of an EV.
Components of EV. 1. Major components of EV: - 1. Traction battery pack 2. DC-DC Converter, DCAC converter and ACDC converter 3. Charge Port 4. Onboard charger 5. Electric motors 6. Power inverter 7. Charging ports 8. Controller 9. Auxiliary batteries 10. Thermal system (cooling) 11. Transmission system 12. Regenerative Braking System	Demonstrate the major components and its working, interconnections of various systems of an EV.

**Unit III: Health and safety equipments.****(03Marks)**

<b>Theory</b>	<b>Learning Outcomes</b>
Safety considerations for EVs	Demonstrate the safety consideration for Electric Vehicles
Personal protective equipments.	Demonstrate the Personal Protective Equipment (PPE)

**Term-II**  
**Theory (30 Marks)**

*“Part – A”*

**Employability Skills**----- **(10 Marks)**

**Unit-III Basic ICT & Green Skills-I****(10Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<b>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</b>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<b>Identify components of basic computer system and their functions</b>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<b>Demonstrate use of various components and peripherals of computer system</b>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<b>Demonstrate basic computer skills</b>

<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p><b>Demonstrate the knowledge of the factors influencing natural resource conservation.</b></p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p><b>Describe the importance of green economy and green skills.</b></p>

### **“Part – B”**

**Vocational Skills----- (20 Marks)**

**Unit IV: Workshop and tool equipments. (08Marks)**

<b>Theory</b>	<b>Learning Outcomes</b>
Insulated hand tools Importance and use of insulated hand tools (open end spanners, double end ring spanners, socket spanners with accessories, T spanners, Screw Drivers, Hammers, Files, Mallet, Pliers, Bench Vice etc.)	Demonstrate the hand and cutting tools for Workshop.
measuring tools Introduction and uses of measuring tools - Scale, Calipers (Internal and outer), Micrometer, Vernier Caliper, Feeler Gauge, Tachometer, Air pressure gauge, Compression Tester, Multimeter,	Identify the various types of the measuring tools used in EV workshop
Introduction and uses of Service Equipment’s With safety measures.	Demonstrate the Diagnostic tool service equipment’s
Introduction and uses of Power tools (Electric Gun, Grinder (Bench), Hand Drill machine	Describe the working of Power/Electric tools

**Unit V: Routine service and repair of an EVs (12Marks)**

<b>Theory</b>	<b>Learning Outcomes</b>
Maintenance schedule, Introduction to Maintenance in EV. Types of maintenance (Periodic maintenance, schedule maintenance)	Identify about the importance of maintenance Schedule.
Job card and warranty card :Basic principle of SOP for Automobile Industry, Describe the organization/ professional code of ethics and standards of practice	Describe Standard Operating Procedure (SOP) for receiving vehicles, opening job card, allocation of work. invoicing vehicle delivery handling complaints
Inspection and testing of EV components.	Identify various faults and its repairing procedure.

## **Practical (External)**

**50 Marks**

### **A. Practical experiment**

**(20 Marks)**

1. Make a list of the types of EVs available in the market.
2. List the components of electric components in EVs to find the current , ampere and voltage mentioned in components'
3. Find out the symbols in EVs and identify them.
4. Identify various hand and measuring tools.
5. Perform a drilling operation.
6. Draw the flow chart of service layout for EV maintenance.

### **B) Artefacts (objects created by students)**

**(05 Marks)**

### **C) Demonstration**

**(05 Marks)**

### **D) Projects (Individual and group)**

**(10Marks)**

### **E) Portfolio**

**(10Marks)**

# 11. Apparel made ups and home furnishing

*Job Role: Sewing Machine Operator*

*Class (9<sup>th</sup>)*

## SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects. The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

Class 9 <sup>th</sup>				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
<b>Term-I</b>	<b>Part – A Employability Skills</b>	Communication Skills	10	5
		Self-Management and Entrepreneurship Skills	10	5
	<b>Part – B Vocational Skills</b>	Introduction to Sewing Machine	17	10
		Sewing tools and sewing machine operations	18	10
<b>Total</b>			<b>55</b>	<b>30[15]</b>
<b>Term-II</b>	<b>Part – A Employability Skills</b>	Basic ICT Skills	10	6
		Green Skills	10	4
	<b>Part – B Vocational Skills</b>	Basics of Garment construction	12	8
		Care and maintenance of sewing machine	11	6
		Health and Safety measures for sewing machine operations	12	6
<b>Total</b>			<b>55</b>	<b>30[15]</b>
<b>Term I &amp; II</b>	<b>Part – C Practical Work</b>	Practical Experiment		20
		Artifacts , objects created by students		05
		Demonstration		05
		Project individual and group		10
		Portfolio		10
	<b>Total</b>			
	<b>Part-D Formative Assessment</b>	Class based tests, classroom participation group work, group discussion ,Attendance		20
<b>Total</b>			<b>110</b>	<b>20</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	<p><b>Demonstrate knowledge of various methods of communication.</b></p>
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	<p><b>Identify elements of communication cycle.</b></p>
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	<p><b>Identify the factors affecting our perspectives in communication</b></p>

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	<p><b>Describe the meaning and importance of self management.</b></p>
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	<p><b>Demonstrate the knowledge of distinguishing characteristics of entrepreneurship</b></p>

## **“Part – B”**

**Vocational Skills ----- (20 Marks)**

### **UNIT I Introduction to sewing machines (10Marks)**

<b>Theory</b>	<b>Learning outcome</b>
Classification of industrial, Commercial and Domestic Sewing Machine	Identify different types of sewing Machine
Sewing terminology , Basting , Seams , Selvedge, Fabric Grain (Grain line), Bias, Hem, Notches etc	Express Sewing Terminology
Describe functions of various parts of sewing machine, Describe attachments for sewing machine.	Explain functions of various parts and attachments of sewing machine

### **UNIT II Sewing tools and sewing machine operations (10 Marks)**

<b>Theory</b>	<b>Learning outcome</b>
Various measuring and marking tools and their usage I curve hip curve French curve pattern master chalk carbon paper and tracing wheel etc.	identify different types of measuring and marking tools
Various cutting tools and explain their usage scissors electric cutters and notcher etc	Identify the different types of cutting tools
Different types of sewing needles and threads 2 suitability of threads and needles according to fabric	Use of different types of needles and threads for sewing machine or hand
Different operations of single needle sewing machine	Practice operations of sewing machine

## Term-II

### Theory (30 Marks)

#### “Part – A”

**Employability Skills----- (10 Marks)**

#### Unit-III Basic ICT & Green Skills-I (10Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p><b>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</b></p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p><b>Identify components of basic computer system and their functions</b></p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p><b>Demonstrate use of various components and peripherals of computer system</b></p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p><b>Demonstrate basic computer skills</b></p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p><b>Demonstrate the knowledge of the factors influencing natural resource conservation.</b></p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p><b>Describe the importance of green economy and green skills.</b></p>

## **“Part – B”**

**Vocational Skills----- (20 Marks)**

**Unit III Basics of garment construction (8 marks)**

<b>THEORY</b>	<b>LEARNING OUTCOMES</b>
Different Types of Constructive And Decorative Stitches	DEMONSTRATE VARIOUS TYPES OF STITCHES
Different types of seams like plain seam flat and fell seam bound seam lapped seam counter seam etc	Demonstrate various types of seams
Various types of edge finishes functions of different edge finishes	Carry out different types of edge finishes

**UNIT IV Care and maintenance of sewing machine (6 marks)**

<b>THEORY</b>	<b>LEARNING OUTCOMES</b>
Cleaning of sewing machine Oiling of sewing machine Safe handling procedure of sewing machine Handle materials machinery equipment and tools safely and correctly	Demonstrate proper cleaning oiling and handling of sewing machine
Machine and sewing problems Remedies of the machine and sewing defects	Identify machine and sewing problems and their remedies

**UNIT V Hazards in industry and their safety measures (6 marks)**

<b>THEORY</b>	<b>LEARNING OUTCOME</b>
Risks and hazards in the industry Risk assessment factors	Analyze various risks and hazards in the industry
Importance of safety measures Safety and navigation symbols	Demonstrate health and safety measures for sewing machine operator

**A. Practical Experiment****(20 Marks)**

1. Make a chart of sewing terminology
2. Draw diagrams of various measuring and marking tools
3. Identify various cutting tools
4. Draw diagrams of various cutting tools
5. Prepare sample of different type of seams and paste in practical file
6. Practice oiling of sewing machine
7. Observation of sewing problems and their remedies
8. Draw various machine attachments
9. Make a table for different types of machine and hand needles suitable for different types of fabrics
10. Visit an industry and enlist the safety tools and equipment used while working with various machines

**B. Artifacts (objects created by students)****(05 Marks)****C. Demonstration****(05 Marks)****D. Projects (Individual and Group)****(10 Marks)****E Portfolio****(10 Marks)**

## 12. Electronics & Hardware

*Job Role: Junior field technician home appliances*

*Class (9<sup>th</sup>)*

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> & 10<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

Class 9 <sup>th</sup>				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
Term-I	Part - A Employability Skills	Communication Skills	10	5
		Self-Management & Entrepreneurship	10	5
	Part – B Vocational Skills	Fundamentals of Electrical and Electronics Engineering	30	20
<b>Total</b>			<b>50</b>	<b>30(15)</b>
Term-II	Part - A Employability Skills	Basic ICT Skills	10	6
		Green Skills	10	4
	Part – B Vocational Skills	Installation and Repair and Maintenance of LED and other Lights	30	10
		Work Ethics, Quality, Substantiality and Safety	10	10
<b>Total</b>			<b>60</b>	<b>30(15)</b>
	Part - C Practical Work	Practical Exam		20
		Artifacts ( objects created by students)		05
		Demonstration		05
		Projects ( individual and group)		10
		portfolio		10
<b>Total</b>				<b>50</b>
	Part-D Formative assessment	Class based tests, classroom participation ( group work, group discussion , attendance )		20
<b>Total</b>			<b>110</b>	<b>20</b>
<b>Grand Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

#### **Unit-I Communication Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	<p><b>Demonstrate knowledge of various methods of communication.</b></p>
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	<p><b>Identify elements of communication cycle.</b></p>
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	<p><b>Identify the factors affecting our perspectives in communication</b></p>

#### **Unit – II Self-Management &Entrepreneurial Skills-I**

**(05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	<p><b>Describe the meaning and importance of self management.</b></p>
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	<p><b>Demonstrate the knowledge of distinguishing characteristics of entrepreneurship</b></p>

## “Part – B”

### Vocational Skills ----- (20 Marks)

#### Unit I: Fundamentals of Electrical and Electronics Engineering

**20 Marks**

THEORY	LEARNING OUTCOME
<ul style="list-style-type: none"><li>•Size and scope of electronic industry and its sub-sectors</li></ul> Role and responsibilities of Junior Field Technician Home Appliances.	Describe the duties and responsibilities of Junior Field Technician Home Appliances
<ul style="list-style-type: none"><li>•Electricity, Types of electricity – AC, DC Current, Voltage, Power, Resistance Measuring units of current, voltage and resistance, Potential and Potential difference, Electric Circuit.</li><li>• Open and Closed Circuit, Series and Parallel connections</li><li>• Electrostatics, Laws of Electrostatics, Ohm’s law, Kirchhoff’s law, Faraday’s law of electromagnetic induction</li><li>• Switches, relay and fuse</li><li>•Concept of magnetic field, Comparison between magnetic circuit and electric circuit, Domestic wiring</li><li>•Transformer, AC motors, , DC motors</li></ul>	Describe the basic electrical engineering concepts
<ul style="list-style-type: none"><li>• Electronic components – active and passive components, Color codes of resistors, Types of capacitors, Semiconductor, PN Junction diode, Forward and reverse bias characteristics of PN junction diode Transistor, Thermistor, Integrated Circuits, Electrical and Electronic Symbols.</li></ul>	Describe the basic electronics engineering concepts
<ul style="list-style-type: none"><li>• Common hands tools – Cutter, Scissors, Screwdriver, Combination Pliers, Measuring instruments – Phase Tester, Earth Tester, Watt Meter, Energy Meter, Multi-meter, Clamp Meter</li><li>Measurement of AC, DC voltage and current using multi-meter</li><li>• Safety practices to use Tools, Equipment and Measuring instruments</li></ul>	Use tools, equipment and measuring instruments

# Term-II

## Theory (30 Marks)

### “Part – A”

**Employability Skills----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p><b>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</b></p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p><b>Identify components of basic computer system and their functions</b></p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p><b>Demonstrate use of various components and peripherals of computer system</b></p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p><b>Demonstrate basic computer skills</b></p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p><b>Demonstrate the knowledge of the factors influencing natural resource conservation.</b></p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p><b>Describe the importance of green economy and green skills.</b></p>

## “Part – B”

### Vocational Skills----- (20 Marks)

#### Unit II: Installation and Repairing dysfunctional LED and Other Lights (10 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Different types of light – LED Lights, CFL, Incandescent bulb, Fluorescent light, Halogen light, Features and functioning of lights,</li> <li>• Types of LED lights – LET strip, LED tube, LED dimmer switches, Color LED, Specifications of various types of lights.</li> <li>• Energy ratings (BEE) and consumption of various light. Functioning of dimmer, filament, Pre-installation preparation,</li> <li>• Hazards and prevention/ safety precautions while handling the appliances,</li> <li>• Installation and testing of light, Post installation activity – billing and documentation, Operational guidelines.</li> </ul>	Install LED and other lights
<ul style="list-style-type: none"> <li>• Faults based on customer interaction, usage pattern and initial inspection,</li> <li>• Basic tests – power supply, earth test power supply, internal check</li> <li>• Common issues and faults that may occur in an LED light,</li> <li>• Faults due to electrical connections, Reasons for damage and disfunctioning of light, Reasons for flickering, simming, sparking,</li> <li>• Process of comparing actual voltage with the desired voltage to find out the damaged section of supply using multimeter.</li> </ul>	Diagnose faults in lights
<ul style="list-style-type: none"> <li>• Importance of checking and replacing the damaged LED strips,</li> <li>• Parameters to check and ensure functioning of the LED lights,</li> <li>• Preventive Maintenance of LED lights, Maintenance tips of LED lights.</li> </ul>	Repair faulty LED lights

#### Unit III: Work Ethics, Quality, Substantiality and Safety (10 Marks)

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Importance of cleanliness, air and water quality in the workplace, time management to meet daily target, Quality in delivery of work, Organization's policies and procedures and work ethics</li> </ul>	Describe the process of achieving optimum productivity and quality
<ul style="list-style-type: none"> <li>• Organization safety and health policy,</li> <li>• Appropriate Personal Protective Equipment (PPE) , ESD precautions, Types of accident injury or hazard</li> </ul>	Explain the importance of implementing health and safety procedures
<ul style="list-style-type: none"> <li>• Recyclable/non-recyclable and hazardous wastes,</li> <li>• Different waste categories of dry, wet, recyclable, non recyclable and single use plastic items, Different colors of dustbins to dispose waste, Waste management and waste disposal procedures,</li> <li>• Methods of recycling as well as repairing and reusing electronic components, Effects of greening of jobs</li> </ul>	Demonstrate the process of organizing waste management and recycling
<ul style="list-style-type: none"> <li>• Efficient utilization of material and water, Prevalent energy Efficient devices,</li> <li>• Common electrical problems, Cleaning of tools, machines and equipment ,Common practices of conserving electricity</li> </ul>	Explain the importance of conserving resources

**A. Practical Experiment****(20 Marks)**

1. Role play on the communication process.
2. Delivering a speech and practicing public speaking by using 3P's.
3. Storytelling.
4. Preparations of posters on applications of ICT.
5. Chart preparation on components of a computer.
6. Group activity on connecting devices to a computer.
7. Group activity on becoming a successful entrepreneur.
8. Connect the electrical components in series and parallel combination.
9. Connect the electrical components in series and parallel combination.
10. Verify the Kirchhoff's law by using experiment.
11. Verify Faraday's law of electromagnetic induction.
12. List the active and passive components and draw their symbols.
13. Prepare a display board of Electric and Electronic Components.
14. Determine the value of resistance by using color code.
15. Test the continuity of given diode using multimeter.
16. Construct the circuit for forward and reverse bias of the diode and draw its characteristic curve.
17. Determine the input and output voltage of a given transformer.
18. Measure the given AC, DC voltage and current by using Multi-meter
19. Group activity to solder wires and make connections of loose wires to make them functional.
20. Group activity to use various hand tools like drills, TDS Meter, etc.
21. Group activity to detect faults in lights.
22. Demonstrate to repair and replace the damaged component of LED light and ensure its functioning.
23. Demonstrate the use of proper personal protective equipment (PPE) for safety
24. Identify and segregate recyclable/non-recyclable and hazardous wastes.
25. Perform routine cleaning of tools, machines and equipment.

**B. Artifacts (objects created by students)****(05 Marks)****C. Demonstration****(05 Marks)****D. Projects (Individual and Group)****(10 Marks)****E Portfolio****(10 Marks)**

# 13.Plumbing

*Job Role: Assistant Plumber General*

*Class (9<sup>th</sup>)*

## SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects. The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

Class 9 <sup>th</sup>				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
Term-I	Part - A Employability Skills	Communication Skills	10	05
		Self-Management & Entrepreneurship skills	10	05
	Part – B Vocational Skills	Introduction to Plumbing	10	06
		Tools for Plumbing	10	06
		Plumbing Materials & Pipes.	15	08
<b>Total</b>			<b>55</b>	<b>30 *(15)</b>
Term-II	Part - A Employability Skills	Basic ICT Skills	10	06
		Green Skills	10	04
	Part – B Vocational Skills	Measurements & Symbols Used in Plumbing	15	08
		Pipe fittings, joints & valves	20	12
<b>Total</b>			<b>55</b>	<b>30 *(15)</b>
	Part - C Practical Test	Practical Eexperiment		20
		Artefacts (objects created by students)		05
		Demonstration		05
		Projects (individual and group)		10
		Port folio		10
<b>Total</b>				<b>50</b>
	Part-D Formative Assessment	Class based tests, Classroom participation (group work, group discussion, attendance)		<b>20</b>
		<b>Total</b>		<b>110</b>
<b>Grand Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I: Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	<b>Describe the meaning and importance of self management.</b>
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	<b>Demonstrate the knowledge of distinguishing characteristics of entrepreneurship</b>

## **“Part – B”**

**Vocational Skills----- (20 Marks)**

### **Unit I: Introduction to Plumbing**

**(06 Marks)**

<b>Theory</b>	<b>Learning outcomes</b>
Importance of plumbing Job opportunities in Plumbing.	Overview of plumbing industry Scope of employment in this sector
Responsibilities of assistant plumber general	Responsibilities of assistant plumber general
Identifying the plumbing components	Meaning of plumbing Sketches Application and Uses

### **Unit II: Tools for Plumbing**

**(06 Marks)**

<b>Theory</b>	<b>Learning outcomes</b>
Importance of tools Different types of tools used in plumbing, Knowledge of tools such as Bench vice, Pipe, vice, Wrenches, Adjustable wrench, Water-pump, plies, Spanners, Ring spanner, Open-ended spanner, Combination Spanners, Bi-hexagonal, ring spanner, Chisel, Hammer, Chain wrench Rover jumper, Trowel, Screw driver, Hacksaw, Pipe cutter, Pipe bending, machine, Threading dies, File, Pliers, Caulking tools, Drill machine, Drill bit, Hangers, Measuring tape, Plumb rule and bob Spirit level, Pipe threader.	Identify the tools to be used
Methods of holding the tools Safety precautions to be taken while using the tools Maintaining the plumbing tools and equipment's	Handling of tools
Impact of factors such as temperature, pH (acidity levels), chemical composition, oxidation and ageing on plumbing tools, equipment, products and materials 11. Processes of prevention and their application used in the plumbing industry	Maintenance of tools

**Unit III: Plumbing Materials & Pipes****(8 MARKS)**

Theory	Learning outcome
Importance of obtaining clarity about the task to be performed and following instruction and standard procedure. Unpacking and checking of material as per manufacturer guideline	Basic task to facilitate plumbing work
Plumbing material and its importance Method/technique of application of plumbing material, Precautions to be used during application. Various tools used for application of material	Identify the plumbing materials used.
Importance and use of plumbing pipes Types and quality of pipes. Grades and characteristics of pipes Cost of the pipes Precaution while handling the pipes	Identify the plumbing pipes.

## Term-II

### Theory (30 Marks)

#### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-III Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	Identify components of basic computer system and their functions
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	Demonstrate use of various components and peripherals of computer system
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	Demonstrate basic computer skills
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	Demonstrate the knowledge of the factors influencing natural resource conservation.
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	Describe the importance of green economy and green skills.

## **“Part – B”**

**Vocational Skills----- (20 Marks)**

### **Unit IV: Measurements & Symbols Used In Plumbing**

**(8 MARKS)**

<b>Theory</b>	<b>Learning Outcome</b>
Importance of measurement Types of measurement Measurement tools Conversion method	Identify the measurement system used for plumbing
Technique of measurement with tools Important units of measurement	Measure the various quantity to be used in plumbing
Importance of symbols Symbols used in plumbing List the types of symbols	Identify the various symbols used for plumbing work

### **Unit V: Pipe Fittings, Joints & Valves**

**(12 MARKS)**

<b>Theory</b>	<b>Learning Outcome</b>
Importance and use of plumbing fittings Types and properties of plumbing fittings. Tools required for fixing the plumbing fittings Procedure of fixing the fittings like Elbow, Gasket, Couplings, Union, Reducer, Tee, Nipple, Valve and Trap etc.	Able to identify plumbing fittings
Importance and use of plumbing joints Types and properties of plumbing joints. Tools required for fixing the plumbing joints Procedure of fixing the joints	Able to identify plumbing joints

## **Practical (External)**

**50 Marks**

### **A. Practical Experiment**

**20 Marks**

1. Visit to the school building & list the different plumbing items
2. Identify & draw the different plumbing tools
3. Identify the different types of plumbing pipes
4. Measurement of length, width & height of a room
5. Measurement of pipe dimensions
6. List & draw the plumbing symbols
7. Identify & draw the different types of plumbing fittings
8. Build a simple plumbing system using pipes & fittings

### **B. Artifacts (objects created by students)**

**(05 Marks)**

### **C. Demonstration**

**(05 Marks)**

### **D. Projects (Individual and Group)**

**(10 Marks)**

### **E Portfolio**

**(10 Marks)**

## 14. Media & Entertainment

*Job Role: Storyboard Artist –I*

*Class (9<sup>th</sup>)*

### SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

<b>Class 9<sup>th</sup></b>					
<b>Term</b>	<b>Module Part and Name</b>	<b>Unit Name</b>	<b>No. of Hours for Theory and Practical (110)</b>	<b>Max. Marks Theory and Practical (100)</b>	
<b>Term-I</b>	<b>Part – A Employability Skills</b>	Communication Skills-I	10	05	
		Self-Management& Entrepreneur Skills-I	10	05	
	<b>Part – B Vocational Skills</b>	Planning and Visulising Storyboard	20	12	
		Story boarding Production Process	15	08	
<b>Total</b>			<b>55</b>	<b>30*(15)</b>	
<b>Term-II</b>	<b>Part – A Employability Skills</b>	Basic ICT	10	06	
		Green Skills-I	10	04	
	<b>Part – B Vocational Skills</b>	Storyboarding Tools and Techniques	15	8	
		Drawing and Sketching Storyboard	20	12	
<b>Total</b>			<b>55</b>	<b>30*(15)</b>	
<b>Term I &amp; II</b>	<b>Part – C Practical Test</b>	Practical Experiment		20	
		Artifacts ( Object created by Students )		05	
		Demonstration		05	
		Project ( Individual and group)		10	
		Portfolio		10	
	<b>Total</b>				<b>50</b>
	<b>Part-D Formative Assessment</b>	Class based test Classroom participation ( Group Work, Group Discussion , Attendance)		20	
<b>Total</b>				<b>20</b>	
<b>Grand Total</b>			<b>110</b>	<b>100</b>	

# Term-I

## Theory (30 Marks)

### “Part – A”

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skill ----- (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	<p><b>Demonstrate knowledge of various methods of communication.</b></p>
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	<p><b>Identify elements of communication cycle.</b></p>
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	<p><b>Identify the factors affecting our perspectives in communication</b></p>

**Unit – II Self-Management &Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	<p><b>Describe the meaning and importance of self management.</b></p>
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	<p><b>Demonstrate the knowledge of distinguishing characteristics of entrepreneurship</b></p>

## **“Part – B”**

### **Vocational Skills----- (20 Marks)**

<b>Unit – I: Planning and Visualizing Story</b>		<b>(12 Marks)</b>
<b>Theory</b>	<b>Learning Outcome</b>	
History and evolution of storyboarding, Use of storyboard as preproduction for animation and films, Software and hardware requirement of storyboarding	Describe the Basics of Storyboarding	
Types of animation (Hand drawn, Computer generated, Stop motion)	Identify different Animation Types to understand storyboard requirement	
Types of storyboards, Application area of different types of storyboard	Describe different types of Storyboards and their application area	
Elements of script - locations, characters, dialogue, actions. Techniques to breakdown the script into scenes and shots	Break Down the script into scenes and shots	
Short description in storyboard - camera angle, shot number, depth, duration, action, dialogue, audio.	Describe the short description in story board	

<b>Unit–II Story boarding Production Process</b>		<b>(08 Marks)</b>
<b>Theory</b>	<b>Learning Outcome</b>	
Members of production team Director, Director of Photography (DOP), Producer, and Production Designer. Roles and responsibilities of members of production team. Information required to create a storyboard- Location, Prop and wardrobe illustrations and photographs, aspect ratio. Storyboarding steps – rough storyboards, working storyboards, presentation storyboards, animatic/ Leica reel.	Describe the Storyboarding Production process	

# Term-II

## Theory (30 Marks)

### “Part – A”

**Employability Skills----- (10 Marks)**

**Unit-III: Basic ICT & Green Skills-I (10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<p>Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace</p>
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	<p>Identify components of basic computer system and their functions</p>
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	<p>Demonstrate use of various components and peripherals of computer system</p>
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	<p>Demonstrate basic computer skills</p>
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	<p>Demonstrate the knowledge of the factors influencing natural resource conservation.</p>
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	<p>Describe the importance of green economy and green skills.</p>

## **“Part – B”**

### **Vocational Skills----- (20 Marks)**

<b>Unit-III: Story boarding Tools and Techniques (8 Marks)</b>	
<b>Theory</b>	<b>Learning Outcome</b>
Types of shots, Camera angles, Camera Movements, Types of scene (Active, passive, Dialogue, Montage and silhouette). Types of transitions (Cross Dissolve, Dissolve ripple, Wipe, Fade to black)	Describe the cinematic techniques used to create story board
Sketching tools – Pencil and paper. Different types of pencil. Sketching Techniques	Describe the different Sketching tools

<b>Unit– IV Drawing and Sketching Storyboard (12 Marks)</b>	
<b>Theory</b>	<b>Learning Outcome</b>
Simple drawing technique – straight line and circle. Sketching through observation and recordings, Landscape, Landforms, Water bodies, Different types of gestures and actions of human	Sketch the object through observation and recording
Drawing characters using basic shapes. Key points to draw a character, Minimum Viable Character (MVC).	Draw the Human Character
Perspective- one point, two point, three point perspective, Multi- view drawing	Draw Perspective Drawing
Different Pencil grades from 9H to 9B. Shading techniques. Tips and Tricks for Pencil Shading. Lighting effect on sketching. Lighting for different planes.	Perform Shading & Lighting on Object
Creating a template for storyboard, Creating a storyboard using script	Create a Storyboard

## **Practical (External)**

**50 Marks**

### **A. Practical Experiment**

**(20 Marks)**

1. List the various examples of storyboard for animated movies, Visualize the storyboard as preproduction for animated movies, List the software and hardware requirement for preparation of storyboard. Draw a flowchart for development of animation, Visualize a scene from text, Draw a rough sketch from the scene visualized.
2. List the comparative features of different types of storyboard, – Identify the given storyboard into appropriate type, – and Identify the application area of a given storyboard in different media. – Read the script and identify the elements of script, – Breakdown the given script into scenes and shots, – Sketch the thumbnail for the Identify the various shot description in a given storyboard
3. Observe the various activities coordinated by the production team members with storyboard artist, List the information required to create a storyboard, – Identify and name the steps of given storyboard: – Identify the type of shot from the given scene, – Draw the given shot size by visualizing the scene or as per the given situation, – Identify the camera angle from the given scene, Draw the given camera angle by visualizing the scene, – Identify the camera movement from the given scene, – Identify the scene from the given story or situation
4. Use different pencil shades and analyze its quality. Sketch an eye using a pencil. Use of shade chart for sketching
5. Observe different paper material used in sketching. Draw a realistic human face. Create different types of Texture through shading.
6. Draw and practice straight lines and circles, – Perform sketching through observing an object or scene, – Observe trees around you and list down the fine detailing of its characteristics, – Draw a tree without foliage and with foliage, Observe and draw tree leaves shades and pattern, – Draw simple expressions of landform, Draw expressions of water, – Use shading technique of land and water in waterbody sketching, – Draw different gesture and action of human characters simple.
7. Draw Mickey Mouse using circles and ovals, – Draw side view face using circles, Draw front view face using circles, – Draw perspective view face using circles, Draw evil character using triangle, – Draw Minimum Viable Character for tall, thin, wider, women character, – Draw a realistic human body proportionally
8. Draw an object in one point, two point and three point perspective, Create Multi-view drawing of a box and chair Draw proportionate detail of a box. Practice pencil shading using pressure control technique, Practice different shading techniques, Draw a series of squares with decreasing width and shade them with vertical strokes, Use different tips and tricks for pencil shading, Create lighting effects on sketch by using Highlights, Mid tone and Shadows, Identify the different planes of the given figure and sketch it for different lighting arrangements. Create a template for storyboard, Create a storyboard for given story including two characters and one environment.

### **B. Artifacts (objects created by students)**

**(05 Marks)**

### **C. Demonstration**

**(05 Marks)**

### **D. Projects (Individual and Group)**

**(10 Marks)**

### **E Portfolio**

**(10 Marks)**

# 15. Power

**Job Role: Consumer Energy Meter Technician**

**Class (9<sup>th</sup>)**

## SCHEME OF ASSEMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 9<sup>th</sup> opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 9<sup>th</sup> is as follows:

Class 9 <sup>th</sup>				
Term	Module Part and Name	Unit Name	No. of Hours for Theory and Practical (110)	Max. Marks Theory and Practical (100)
<b>Term-I</b>	<b>Part – A Employability Skills</b>	Communication Skills	10	5
		Self-Management & Entrepreneurship	10	5
	<b>Part – B Vocational Skills</b>	Electricity	20	12
		Handling of tools and equipment	15	08
<b>Total</b>			<b>55</b>	<b>30*(15)</b>
<b>Term-II</b>	<b>Part – A Employability Skills</b>	Basic ICT Skills	10	6
		Green Skills	10	4
	<b>Part – B Vocational Skills</b>	Electrical wiring components and accessories	22	13
		Introduction to energy meter	13	07
<b>Total</b>			<b>55</b>	<b>30*(15)</b>
	<b>Part – C Practical Test</b>	Practical Experiment		20
		Artifacts ( Objects created by students)		05
		Demonstration		05
		Projects(Individual and group)		10
		Portfolio		10
<b>Total</b>				<b>50</b>
	<b>Part-D Formative Assessment</b>	Class based test ,classroom participations(Group work, group discussion ,attendance )		20
<b>Total</b>			<b>110</b>	<b>20</b>
<b>Grand Total</b>			<b>110</b>	<b>100</b>

# Term-I

## Theory (30 Marks)

### *“Part – A”*

**Employability Skills----- (10 Marks)**

**Unit-I Communication Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	Demonstrate knowledge of various methods of communication.
<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle– (i) sender, (ii) ideas,(iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding, and(vii) feedback</li> </ul>	Identify elements of communication cycle.
<ul style="list-style-type: none"> <li>• Perspectives in communication.</li> <li>• Factors affecting perspectives in communication.</li> <li>• Visual perception.</li> <li>• Language.</li> <li>• Past experience.</li> <li>• Prejudices.</li> <li>• Feelings.</li> <li>• Environment</li> </ul>	Identify the factors affecting our perspectives in communication

**Unit – II Self-Management & Entrepreneurial Skills-I (05 Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Meaning and components of self management.</li> <li>• Positive results of self management.</li> <li>• Self-management skills.</li> </ul>	Describe the meaning and importance of self management.
<ul style="list-style-type: none"> <li>• Meaning of entrepreneurship development.</li> <li>• Distinguishing characteristics of entrepreneurship.</li> <li>• Role and rewards of entrepreneurship</li> </ul>	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship

**“Part – B”**

**Vocational Skills----- (20 Marks)**

**Unit-I Electricity**

**( 12 marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Origin of electricity and electricity concept and definition, importance of electricity, generation of electricity	Illustrate basic electricity generation concept
Understanding series and parallel connection ,Definition of voltage ,current ,resistance, capacitance and inductance, Difference between power and energy, Ohms law and its description	Describe basic units and definition of electricity
Earthing, importance and its types.	Explain the importance of Earthing system

**Unit – II Handling of Tools and Equipment’s**

**(08 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Various Electrical Hand tool- Pliers, screw drivers, connectors, hammers, testers, electrician knife, wire strippers and uses, Safety precautions while using tools.	Demonstrate electrical Hand Tools safely
Details of Ammeter and voltmeter and its uses. Practice safety and precautions for electrical meters while using in circuits.	Measure electrical and electronic parameters accurately with precautions

## Term-II

### Theory (30 Marks)

#### *“Part – A”*

**Employability Skills----- (10 Marks)**

#### **Unit-III Basic ICT & Green Skills-I**

**(10Marks)**

Theory	Learning Outcome
<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• ICT in our daily life(examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	Demonstrate the knowledge of the role of Information and Communication Technology (ICT) in day-to-day life and workplace
<ul style="list-style-type: none"> <li>• Computer system – Central Processing Unit (CPU),memory, motherboard storage devices</li> <li>• Hardware and software of a computer system</li> <li>• Procedure for starting and shutting down a computer</li> </ul>	Identify components of basic computer system and their functions
<ul style="list-style-type: none"> <li>• Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system</li> </ul>	Demonstrate use of various components and peripherals of computer system
<ul style="list-style-type: none"> <li>• Primary operations on a computer system – input, process, storage, output, communication etc.</li> </ul>	Demonstrate basic computer skills
<ul style="list-style-type: none"> <li>• Introduction to environment.</li> <li>• Relationship between society and environment, ecosystem and factors causing imbalance.</li> <li>• Natural resource conservation</li> </ul>	Demonstrate the knowledge of the factors influencing natural resource conservation.
<ul style="list-style-type: none"> <li>• Definition of green economy</li> <li>• Importance of green economy</li> </ul>	Describe the importance of green economy and green skills.

## **“Part – B”**

**Vocational Skills----- (20 Marks)**

**Unit – III Electrical Wiring Components and Accessories----- (13 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Wiring material and its application, Electrical wiring, types and its accessories, Definition of Switch Distribution board.	Identify and select the wiring materials and components
Series and parallel connections of lamp.	Draw Wiring Circuits & fix wiring accessories on board
, Underground cables and its importance, Types of wires and cables, specification and precautions while usage.	Describe the various types of cables and wires

**Unit – IV Introduction to Energy Meters**

**(07 Marks)**

<b>Theory</b>	<b>Learning Outcome</b>
Definition of Energy meter, Single phase meter, different components of a consumer energy meter and their functions	Examine the types of meters
Specifications set by (BIS ),Criteria to select suitable for location for installation of energy meter and testing	Perform meter testing, commissioning, reading, recording and maintenance

## **Practical (External)**

**50 Marks**

### **A. Practical Experiment**

**(20 Marks)**

1. List the sources of electricity
2. Identification of various electrical symbols
3. Draw a wiring joint
4. Observe the sketch of meter at your home or school
5. Fix wiring accessories on board by screws
6. Verify distance between poles or cables is correct
7. Check the energy meter and take readings.

### **B. Artifacts (objects created by students)**

**(05 Marks)**

### **C. Demonstration**

**(05 Marks)**

### **D. Projects (Individual and Group)**

**(10 Marks)**

### **E Portfolio**

**(10 Marks)**