



## Gandhiji's Talisman

*I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test:*



*Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it? Will it restore him to a control over his own life and destiny? In other words, will it lead to Swaraj for the hungry and spiritually starving millions?*

*Then you will find your doubts and your self melting away.*

*M.K. Gandhi*



**Learning Outcome Based Curriculum**  
**IT/ ITES – Domestic Data Entry Operator**  
**June, 2017**  
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## FOREWORD

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The Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE) a constituent of the National Council of Educational Research and Training (NCERT) is spearheading the efforts of developing learning outcome based curricula and courseware aimed at integrating both vocational and general qualifications to open pathways of career progression for students. It is a part of Centrally Sponsored Scheme of Vocationalisation of Secondary and Higher Secondary Education (CSSVSHSE) launched by the Ministry of Human Resource Development, Government of India in 2012. The PSS Central Institute of Vocational Education (PSSCIVE) is developing curricula under the project approved by the Project Approval Board (PAB) of *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA). The main purpose of the competency based curricula is to bring about the improvement in teaching-learning process and working competences through learning outcomes embedded in the vocational subject.

It is a matter of great pleasure to introduce this learning outcome based curriculum as part of the vocational training packages for the job role of **IT/ ITes – Domestic Data Entry Operator**. The curriculum has been developed for the secondary students of vocational education and is aligned to the National Occupation Standards (NOSs) of a job role identified and approved under the National Skill Qualification Framework (NSQF).

The curriculum aims to provide children with employability and vocational skills to support occupational mobility and lifelong learning. It will help them to acquire specific occupational skills that meet employers' immediate needs. The teaching process is to be performed through the interactive sessions in classrooms, practical activities in laboratories and workshops, projects, field visits, and professional experiences.

The curriculum has been developed and reviewed by a group of experts and their contributions are greatly acknowledged. The utility of the curriculum will be adjudged by the qualitative improvement that it brings about in teaching-learning. The feedback and suggestions on the content by the teachers and other stakeholders will be of immense value to us in bringing about further improvement in this document.

Hrushikesh Senapaty  
Director  
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## PREFACE

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India today stands poised at a very exciting juncture in its saga. The potential for achieving inclusive growth are immense and the possibilities are equally exciting. The world is looking at us to deliver sustainable growth and progress. To meet the growing expectations, India will largely depend upon its young workforce. The much-discussed demographic dividend will bring sustaining benefits only if this young workforce is skilled and its potential is channelized in the right direction.

In order to fulfil the growing aspirations of our youth and the demand of skilled human resource, the Ministry of Human Resource Development (MHRD), Government of India introduced the revised Centrally Sponsored Scheme of Vocationalisation of Secondary and Higher Secondary Education that aims to provide for the diversification of educational opportunities so as to enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and provide an alternative for those pursuing higher education. For spearheading the scheme, the PSS Central Institute of Vocational Education (PSSCIVE) was entrusted the responsibility to develop learning outcome based curricula, student workbooks, teacher handbooks and e-learning materials for the job roles in various sectors, with growth potential for employment.

The PSSCIVE firmly believes that the vocationalisation of education in the nation need to be established on a strong footing of philosophical, cultural and sociological traditions and it should aptly address the needs and aspirations of the students besides meeting the skill demands of the industry. The curriculum, therefore, aims at developing the desired professional, managerial and communication skills to fulfil the needs of the society and the world of work. In order to honour its commitment to the nation, the PSSCIVE has initiated the work on developing learning outcome based curricula with the involvement of faculty members and leading experts in respective fields. It is being done through the concerted efforts of leading academicians, professionals, policy makers, partner institutions, Vocational Education and Training experts, industry representatives, and teachers. The expert group through a series of consultations, working group meetings and use of reference materials develops a National Curriculum. Currently, the Institute is working on developing curricula and courseware for over 100 job roles in various sectors.

We extend our gratitude to all the contributors for selflessly sharing their precious knowledge, acclaimed expertise, and valuable time and positively responding to our request for development of curriculum. We are grateful to MHRD and NCERT for the financial support and cooperation in realising the objective of providing learning outcome based curricula and courseware to the States and other stakeholders under the PAB (Project Approval Board) approved project of *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA) of MHRD.

Finally, for transforming the proposed curriculum design into a vibrant reality of implementation, all the institutions involved in the delivery system shall have to come together with a firm commitment and they should secure optimal community support. The success of this curriculum depends upon its effective implementation and it is expected that the managers of vocational education and training system, including subject teachers will make efforts to create better facilities, develop linkages with the world of work and foster a conducive environment as per the content of the curriculum document.

The PSSCIVE, Bhopal remains committed in bringing about reforms in the vocational education and training system through the learner-centric curricula and courseware. We hope that this document will prove useful in turning out more competent Indian workforce for the 21<sup>st</sup> Century.

RAJESH P. KHAMBAYAT  
Joint Director  
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## ACKNOWLEDGEMENTS

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On behalf of the team at the PSS Central Institute of Vocational Education (PSSCIVE) we are grateful to the members of the Project Approval Board (PAB) of Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and the officials of the Ministry of Human Resource Development (MHRD), Government of India for the financial support to the project for development of curricula.

We are grateful to the Director, NCERT for his support and guidance. We also acknowledge the contributions of our colleagues at the Technical Support Group of RMSA, MHRD, RMSA Cell at the National Council of Educational Research and Training (NCERT), National Skill Development Agency (NSDA) and National Skill Development Corporation (NSDC) and IT/ ITes Sector Skill Council for their academic support and cooperation in the development of curricula.

We are grateful to the reviewers, Sanjay Agrawal, Professor, Department of Computer Engineering and Application, National Institute of Technical Teachers Training and Research (NITTTR), Shyamla Hills, Bhopal, for their earnest effort and contributions in the development of this learning outcome based curriculum. Their contributions are duly acknowledged.

The contributions made by Vinay Swarup Mehrotra, Professor and Head, Curriculum Development and Evaluation Centre (CDEC), Vipin Kumar Jain, Associate Professor and Head, Programme Planning and Monitoring Cell (PPMC) and Dipak D. Shudhalwar, Associate Professor (CSE) and Head Computer Center, PSSCIVE in development of the curriculum for the employability skills are duly acknowledged.

We are also grateful to the Course Coordinator Dipak D. Shudhalwar, Associate Professor (CSE) and Head Computer Center, PSSCIVE, for bringing out this curriculum in the final form.

**PSSCIVE Team**

## CONTENTS

S.No.	Title		Page No.
	Foreword		i
	Preface		ii
	Acknowledgement		iii
1	Course Overview		1
2	Scheme of Units and Assessment		2
3	Teaching/ Training Activities		6
4	Certification		6
5	Unit Content	<b>Class 9</b>	7
	<b>Part A</b>	<b>Employability Skills</b>	7
		Unit 1: Communication Skills	7
		Unit 2: Self-management Skills	8
		Unit 3: Basic ICT Skills	8
		Unit 4: Entrepreneurial Skills	9
		Unit 5: Green Skills	10
	<b>Part B</b>	<b>Vocational Skills</b>	11
		Unit 1: Word Processing (Elementary)	11
		Unit 2: Spreadsheet (Elementary)	12
		Unit 3: Presentation	14
		<b>Class 10</b>	
	<b>Part A</b>	<b>Employability Skills</b>	16
		Unit 1: Communication Skills	16
		Unit 2: Self-management Skills	17
		Unit 3: Basic ICT Skills	17
		Unit 4: Entrepreneurial Skills	19
		Unit 5: Green Skills	19
	<b>Part B</b>	<b>Vocational Skills</b>	
		Unit 1: Word Processing (Advanced)	20
		Unit 2: Spreadsheet (Advanced)	21
		Unit 3: Database Applications	22
6	Organisation of Filed Visits		24
7	List of Equipment and Materials		25
8	Teachers/ Trainers Qualifications		26
9	List of Contributors		26



# 1. COURSE OVERVIEW

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## **COURSE TITLE: Domestic Data Entry Operator**

Domestic Data Entry Operator in the IT-ITeS Industry is also known as Data Entry Operator. Individuals are responsible to provide daily work reports and work on daily hour bases. The individual is responsible for electronic entry of data from the client side to the office site or vice-versa. Individual tasks vary depending on the size and structure of the organization. This job requires the individual to have thorough knowledge of various technology trends and processes as well as have updated knowledge about database management systems and IT initiatives. The individual should have fast and accurate typing/data encoding. This job involves working in a personal computer, and appropriate software to enter accurate data regarding different issues like retrieving data from a computer or to a computer

**COURSE OUTCOME :** On completion of the course, students should be able to:

- ✓ Apply effective oral and written communication skills to interact with people and customers;
- ✓ Identify the principal components of a computer system;
- ✓ Demonstrate the basic skills of using computer;
- ✓ Demonstrate self-management skills;
- ✓ Demonstrate the ability to provide a self-analysis in context of entrepreneurial skills and abilities;
- ✓ Demonstrate the knowledge of the importance of green skills in meeting the challenges of sustainable development and environment protection;
- ✓ Work safely on computer.
- ✓ Start the computer.
- ✓ Open and use the related software.
- ✓ Exit from the software.
- ✓ Shut down the computer.
- ✓ Use the computer for data entry process.
- ✓ Collect all necessary information about the query.
- ✓ Log any decision about the query on the data entry tracking form.
- ✓ Follow Rules and guidelines for data entry.
- ✓ Handle queries.
- ✓ Undertake data entry with speed and accuracy.
- ✓ Identify and control hazards in the workplace that pose a danger or threat to their safety or health, or that of others.

**COURSE REQUIREMENTS:** The learner should have the basic reading and writing skills in English and Hindi.

**COURSE LEVEL:** This is a beginner level course meant for class 9 and 10.

**COURSE DURATION: 400 Hours**

Class 9 : 200 hrs

Class 10 : 200 hrs

## 2. SCHEME OF UNITS AND ASSESSMENT

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			
	Units	No. of Hours for Theory and Practical 200	Max. Marks for Theory and Practical 100
<b>Part A</b>	<b>Employability Skills</b>		
	Unit 1: Communication Skills	20	<b>10</b>
	Unit 2: Self-management Skills	10	
	Unit 3: Basic ICT Skills	25	
	Unit 4: Entrepreneurial Skills	15	
	Unit 5: Green Skills	10	
	<b>Total</b>	<b>80</b>	<b>10</b>
<b>Part B</b>	<b>Vocational Skills</b>		
	Unit 1: Word Processing (Elementary)	30	<b>30</b>
	Unit 2: Spreadsheet (Elementary)	30	
	Unit 3: Presentation	30	
	<b>Total</b>	<b>90</b>	<b>30</b>
<b>Part C</b>	<b>Practical Work</b>		
	Practical Examination	6	15
	Written Test	1	10
	Viva Voce	3	10
	<b>Total</b>	<b>10</b>	<b>35</b>
<b>Part D</b>	<b>Project Work/Field Visit</b>		
	Practical File/ Student Portfolio	10	10
	Viva Voce	5	5
	<b>Total</b>	<b>15</b>	<b>15</b>
<b>Part E</b>	<b>Continuous and Comprehensive Evaluation (CCE)</b>	<b>05</b>	<b>10</b>
	<b>Total Hours</b>	<b>200</b>	<b>100</b>

The unit-wise distribution of hours and marks for **Class 10** is as follows:

<b>CLASS 10</b>			
	<b>Units</b>	<b>No. of Hours for Theory and Practical 200</b>	<b>Max. Marks for Theory and Practical 100</b>
<b>Part A</b>	<b>Employability Skills</b>		
	Communication Skills	20	<b>10</b>
	Self-management Skills	10	
	Basic ICT Skills	25	
	Entrepreneurial Skills	15	
	Green Skills	10	
	<b>Total</b>	<b>80</b>	<b>10</b>
<b>Part B</b>	<b>Vocational Skills</b>		
	Word Processing (Advanced)	30	<b>30</b>
	Spreadsheet (Advanced)	30	
	Presentation	30	
	<b>Total</b>	<b>90</b>	<b>30</b>
<b>Part C</b>	<b>Practical Work</b>		
	Practical Examination	6	15
	Written Test	1	10
	Viva Voce	3	10
	<b>Total</b>	<b>10</b>	<b>35</b>
<b>Part D</b>	<b>Project Work/Field Visit</b>		
	Practical File/ Student Portfolio	10	10
	Viva Voce	5	5
	<b>Total</b>	<b>15</b>	<b>15</b>
<b>Part E</b>	<b>Continuous and Comprehensive Evaluation (CCE)</b>	<b>05</b>	<b>10</b>
	<b>Total</b>	<b>200</b>	<b>100</b>

### 3. TEACHING/TRAINING ACTIVITIES

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The teaching and training activities have to be conducted in classroom, laboratory/ workshops and field visits. Students should be taken to field visits for interaction with experts and to expose them to the various tools, equipment, materials, procedures and operations in the workplace. Special emphasis should be laid on the occupational safety, health and hygiene during the training and field visits.

#### CLASSROOM ACTIVITIES

Classroom activities are an integral part of this course and interactive lecture sessions, followed by discussions should be conducted by trained vocational teachers. Vocational teachers should make effective use of a variety of instructional or teaching aids, such as audio-video materials, colour slides, charts, diagrams, models, exhibits, hand-outs, online teaching materials, etc. to transmit knowledge and impart training to the students.

#### PRACTICAL WORK IN LABORATORY/WORKSHOP

Practical work may include but not limited to hands-on-training, simulated training, role play, case based studies, exercises, etc. Equipment and supplies should be provided to enhance hands-on learning experience of students. Only trained personnel should teach specialized techniques. A training plan that reflects tools, equipment, materials, skills and activities to be performed by the students should be submitted by the vocational teacher to the Head of the Institution.

#### FIELD VISITS/ EDUCATIONAL TOUR

In field visits, children will go outside the classroom to obtain specific information from experts or to make observations of the activities. A checklist of observations to be made by the students during the field visits should be developed by the Vocational Teachers for systematic collection of information by the students on the various aspects. Principals and Teachers should identify the different opportunities for field visits within a short distance from the school and make necessary arrangements for the visits. At least three field visits should be conducted in a year.

### 4. ASSESSMENT AND CERTIFICATION

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**U**pon successful completion of the course by the candidate, the Central/ State Examination Board for Secondary Education and the respective Sector Skill Council will certify the competencies.

The National Skills Qualifications Framework (NSQF) is based on outcomes referenced to the National Occupation Standards (NOSs), rather than inputs. The NSQF level descriptors, which are the learning outcomes for each level, include the process, professional knowledge, professional skills, core skills and responsibility. The assessment is to be undertaken to verify that individuals have the knowledge and skills needed to perform a particular job and that the learning programme undertaken has delivered education at a given standard. It should be closely linked to certification so that the individual and the employer could come to know the competencies acquired through the vocational subject or course. The assessment should be reliable, valid, flexible, convenient, cost effective and above all it should be fair and transparent. Standardized assessment tools should be used for assessment of knowledge of students. Necessary arrangements should be made for using technology in assessment of students.

#### KNOWLEDGE ASSESSMENT (THEORY)

**Knowledge Assessment** should include two components: one comprising of internal assessment and second an external examination, including theory examination to be conducted by the Board.

The assessment tools shall contain components for testing the knowledge and application of knowledge. The knowledge test can be objective paper based test or short structured questions based on the content of the curriculum.

### WRITTEN TEST

It allows candidates to demonstrate that they have the knowledge and understanding of a given topic. Theory question paper for the vocational subject should be prepared by the subject experts comprising group of experts of academicians, experts from existing vocational subject experts/teachers, and subject experts from university/colleges or industry. The respective Sector Skill Council should be consulted by the Central/State Board for preparing the panel of experts for question paper setting and conducting the examinations.

The blue print for the question paper may be as follows:

**Duration: 3 hrs**

**Max. Mark: 30**

S.No.	Typology of Question	No. of Questions			Marks
		Very Short Answer (1 mark)	Short Answer (2 Marks)	Long Answer (3 Marks)	
1.	Remembering – (Knowledge based simple recall questions, to know specific facts, terms, concepts, principles, or theories; identify, define or recite, information)	2	1	2	10
2.	Understanding – (Comprehension – to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	1	2	2	11
3.	Application – (Use abstract information in concrete situation, to apply knowledge to new situations: Use given content to interpret a situation, provide an example, or solve a problem)	0	1	1	05
4.	High Order Thinking Skills – (Analysis & Synthesis – Classify, compare, contrast, or differentiate between different pieces of information; Organize and/ or integrate unique pieces of information from a variety of sources)	0	1	0	02
5.	Evaluation – (Appraise, judge, and/or justify the value or worth of a decision or outcome, or to predict outcomes based on values)	0	1	0	02
	<b>Total</b>	<b>3x1=3</b>	<b>6x2=12</b>	<b>5x3=15</b>	<b>30 (14 questions)</b>

### SKILL ASSESSMENT (PRACTICAL)

Assessment of skills by the students should be done by the assessors/examiners on the basis of practical demonstration of skills by the candidate, using a competency checklist. The competency

checklist should be developed as per the National Occupation Standards (NOSs) given in the Qualification Pack for the Job Role to bring about necessary consistency in the quality of assessment across different sectors and Institutions. The student has to demonstrate competency against the performance criteria defined in the National Occupation Standards and the assessment will indicate that they are 'competent', or are 'not yet competent'. The assessors assessing the skills of the students should possess a current experience in the industry and should have undergone an effective training in assessment principles and practices. The Sector Skill Councils should ensure that the assessors are provided with the training on the assessment of competencies.

Practical examination allows candidates to demonstrate that they have the knowledge and understanding of performing a task. This will include hands-on practical exam and viva voce. For practical, there should be a team of two evaluators – the subject teacher and the expert from the relevant industry certified by the Board or concerned Sector Skill Council. The same team of examiners will conduct the viva voce.

**Project Work** (individual or group project) is a great way to assess the practical skills on a certain time period or timeline. Project work should be given on the basis of the capability of the individual to perform the tasks or activities involved in the project. Projects should be discussed in the class and the teacher should periodically monitor the progress of the project and provide feedback for improvement and innovation. Field visits should be organised as part of the project work. Field visits can be followed by a small-group work/project work. When the class returns from the field visit, each group might be asked to use the information that they have gathered to prepare presentations or reports of their observations. Project work should be assessed on the basis of practical file or student portfolio.

**Student Portfolio** is a compilation of documents that supports the candidate's claim of competence. Documents may include reports, articles, photos of products prepared by students in relation to the unit of competency.

**Viva voce** allows candidates to demonstrate communication skills and content knowledge. Audio or video recording can be done at the time of viva voce. The number of external examiners would be decided as per the existing norms of the Board and these norms should be suitably adopted/adapted as per the specific requirements of the vocational subject. Viva voce should also be conducted to obtain feedback on the student's experiences and learning during the project work/field visits.

## CONTINUOUS AND COMPREHENSIVE EVALUATION

Continuous and Comprehensive Evaluation (CCE) refers to a system of school-based evaluation of students that covers all aspects of student's development. In this scheme, the term 'continuous' is meant to emphasize that evaluation of identified aspects of students 'growth and development' is a continuous process rather than an event, built into the total teaching-learning process and spread over the entire span of academic session. The second term 'comprehensive' means that the scheme attempts to cover both the scholastic and the co-scholastic aspects of students' growth and development. For details, the CCE manual of Central Board of Secondary Education (CBSE) or the guidelines issued by the State Boards on the procedure for CCE should be followed by the Institutions.

## 5. UNIT CONTENTS

### CLASS 9

#### Part A: Employability Skills

S.No.	Units	Duration in Hours
1.	Unit 1: Communication Skills – I	20
2.	Unit 2: Self-management Skills – I	10
3.	Unit 3: Basic ICT Skills – I	25
4.	Unit 3: Entrepreneurial Skills – I	15
5.	Unit 4: Green Skills – I	10
	<b>Total</b>	<b>80</b>

Unit 1: Communication Skills – I				
S. No.	Learning Outcome	Theory (08 Hours)	Practical (12 Hours)	20 Hrs
1.	Demonstrate knowledge of various methods of communication.	<ul style="list-style-type: none"> <li>• Methods of communication.</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	<ul style="list-style-type: none"> <li>• Writing pros and cons of written, verbal and non-verbal communication.</li> <li>• Listing do's and don'ts for avoiding common body language mistakes.</li> </ul>	05
2.	Identify elements of communication cycle.	<ul style="list-style-type: none"> <li>• Meaning of communication</li> <li>• Importance of communication skills</li> <li>• Elements of communication cycle–</li> <li>• (i) sender,</li> <li>• (ii) ideas,</li> <li>• (iii) encoding,</li> <li>• (iv) communication channel,</li> <li>• (v) receiver,</li> <li>• (vi) decoding, and</li> <li>• (vii) feedback</li> </ul>	<ul style="list-style-type: none"> <li>• Draw a diagram of communication cycle</li> <li>• Role plays on communication process related to the sector/job role.</li> </ul>	05
3.	Identify the factors affecting our perspectives in communication	<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>	<ul style="list-style-type: none"> <li>• Group discussion on factors affecting perspectives in communication.</li> <li>• Sharing of experiences on factors affecting perspectives.</li> <li>• Sharing experiences on factors affecting communication at workplace.</li> </ul>	05

4.	Demonstrate the knowledge of basic writing skills	<ul style="list-style-type: none"> <li>• Writing skills related to the following:</li> <li>• Phrases</li> <li>• Kinds of sentences</li> <li>• Parts of sentence</li> <li>• Parts of speech</li> <li>• Use of articles</li> <li>• Construction of a paragraph</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration and practice of writing sentences and paragraphs on topics related to the subject.</li> </ul>	05
<b>Total Duration in Hours</b>				<b>20</b>

**Unit 2: Self Management Skills – I**

S. No.	Learning Outcome	Theory (07 Hours)	Practical (03 Hours)	10 Hrs
1.	Describe the meaning and importance of self-management.	<ul style="list-style-type: none"> <li>• Meaning of self-management.</li> <li>• Positive results of self-management.</li> <li>• Self-management skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of self-management skills</li> <li>• Strength and weakness analysis.</li> </ul>	05
2.	Identify the factors that helps in building self-confidence .	<ul style="list-style-type: none"> <li>• Factors that help in building self-confidence – social, cultural, and physical factors</li> <li>• Self-confidence building tips - getting rid of the negative thoughts, thinking positively, staying happy with small things, staying clean, hygienic and smart, chatting with positive people, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Role play exercises on building self-confidence.</li> <li>• Use of positive metaphors/ words.</li> <li>• Positive stroking on wakeup and before going bed.</li> <li>• Helping others and working for community.</li> </ul>	05
<b>Total Duration in Hours</b>				<b>10</b>

**Unit 3: Basic ICT Skills - I**

S.No.	Learning Outcome	Theory (10 Hours)	Practical (15 Hours)	25 Hrs
1.	Describe the role of ICT in day-to-day life.	<ul style="list-style-type: none"> <li>• Introduction to ICT</li> <li>• Role and importance of ICT in personal life and at workplace</li> <li>• ICT in our daily life (examples)</li> <li>• ICT tools – Mobile, tab, radio, TV, email, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion on the role and importance of ICT in personal life and at workplace.</li> <li>• Preparing posters / collages for showing the role of ICT at workplace</li> </ul>	02
2.	Identify the various components of computer system	<ul style="list-style-type: none"> <li>• Basic components of computer system.</li> <li>• Hardware and software.</li> <li>• Primary and secondary memory.</li> <li>• Input, Output and Storage devices.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and name the various components of computer system.</li> <li>• List few hardware and software.</li> <li>• Identify and name the primary and secondary memory.</li> </ul>	05



			<ul style="list-style-type: none"> <li>Identify the various Input, Output and Storage devices.</li> </ul>	
3.	Identify various peripheral devices	<ul style="list-style-type: none"> <li>Various peripheral devices and their use.</li> <li>Examples of peripherals.</li> </ul>	<ul style="list-style-type: none"> <li>List various peripheral devices.</li> <li>Give the examples of peripheral devices.</li> <li>Practice using peripheral devices.</li> </ul>	04
4.	Perform basic computer operations	<ul style="list-style-type: none"> <li>Procedure for starting and shutting down a computer.</li> <li>Operating Systems (OS).</li> <li>Types of OS – DOS, Windows, Linux.</li> <li>Desktop of Windows and Linux.</li> <li>Files and folder.</li> <li>Keyboard and mouse operations.</li> <li>Common desktop operations.</li> </ul>	<ul style="list-style-type: none"> <li>Start the computer in proper sequence and get the initial screen.</li> <li>Identify the installed OS on computer.</li> <li>Identify the desktop and its various components.</li> <li>Work with desktop.</li> <li>Create file and folder.</li> <li>Perform keyboard and mouse operations.</li> </ul>	06
5.	Connect with the world using Internet and its applications	<ul style="list-style-type: none"> <li>Introduction to Internet.</li> <li>Applications of Internet.</li> <li>Internet Browser.</li> <li>Websites and webpages.</li> <li>Email applications.</li> <li>Email accounts.</li> <li>Sending and receiving email.</li> <li>Introduction to social media.</li> <li>Blog.</li> <li>Twitter.</li> <li>Facebook.</li> <li>Youtube.</li> <li>WhatsApp.</li> <li>Digital India.</li> </ul>	<ul style="list-style-type: none"> <li>Introduce with Internet.</li> <li>Explain the applications of Internet.</li> <li>List the various Internet Browser.</li> <li>Search the websites.</li> <li>Create Email account.</li> <li>Send and receive email.</li> <li>Use Social Media for education.</li> <li>Use Blog.</li> <li>Use Twitter.</li> <li>Use Facebook.</li> <li>Use Youtube.</li> <li>Use WhatsApp.</li> <li>Use Digital India.</li> </ul>	08
			<b>Total Duration in Hours</b>	<b>25</b>

<b>Unit 4: Entrepreneurial Skills – I</b>				
<b>S. No.</b>	<b>Learning Outcome</b>	<b>Theory (06 Hours)</b>	<b>Practical (09 Hours)</b>	<b>15 Hrs</b>
1.	Identify various types of business activities	<ul style="list-style-type: none"> <li>Types of businesses – service, manufacturing, hybrid.</li> <li>Types of businesses found in our community Business activities around us.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare posters of business activities found in cities/ villages, using pictures.</li> <li>Discuss the various types of activities, generally adopted by small businesses in a local community.</li> <li>Best out of waste.</li> <li>Costing of the product made out of waste.</li> </ul>	09

			<ul style="list-style-type: none"> <li>Selling of items made from waste materials.</li> <li>Prepare list of businesses that provides goods and services in exchange for money.</li> </ul>	
2.	Demonstrate the knowledge of distinguishing characteristics of entrepreneurship	<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>	<ul style="list-style-type: none"> <li>Prepare charts showing advantages of entrepreneurship over wages.</li> <li>Group discussions on role and features of entrepreneurship.</li> <li>Lectures/presentations by entrepreneurs on their experiences and success stories.</li> <li>Identify core skills of successful entrepreneur.</li> </ul>	06
<b>Total Duration in Hours</b>				<b>15</b>

<b>Unit 5: Green Skills – I</b>				
<b>S. No.</b>	<b>Learning Outcome</b>	<b>Theory (03 Hours)</b>	<b>Practical (07 Hours)</b>	<b>10 Hrs</b>
1.	Demonstrate the knowledge of the factors influencing natural resource conservation.	<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> <li>Environment protection and conservation.</li> </ul>	<ul style="list-style-type: none"> <li>Group discussion on hazards of deteriorating environment.</li> <li>Prepare posters showing environment conservation.</li> <li>Discussion on various factors that influence our environment.</li> </ul>	05
2.	Describe the importance of green economy and green skills.	<ul style="list-style-type: none"> <li>Definition of green economy</li> <li>Importance of green economy</li> </ul>	<ul style="list-style-type: none"> <li>Discussion on the benefits of green skills and importance of green economy.</li> <li>Prepare a Poster showing the importance of green economy with the help of newspaper/ magazine cuttings.</li> </ul>	05
<b>Total Duration in Hours</b>				<b>10</b>

## Part B: Vocational Skills

<b>S. No.</b>	<b>Units</b>	<b>Duration in Hours</b>
1.	Unit 1: Word Processing (Elementary)	30
2.	Unit 2: Spreadsheet Applications (Elementary)	30
3.	Unit 3: Presentation	30

<b>Total Duration</b>	<b>90</b>
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### Unit 1: Word Processing (Elementary)

S. No.	Learning Outcome	Theory (10 Hours)	Practical (20 Hours)	30 Hrs
1.	Start the word processing application	<ul style="list-style-type: none"> <li>• Introduction to word processing.</li> <li>• Word processing applications.</li> <li>• Parts of the main window.</li> <li>• Document views.</li> <li>• Creating a new document.</li> <li>• Opening an existing document.</li> <li>• Saving a document.</li> <li>• Closing a document.</li> <li>• Navigator options.</li> </ul>	<ul style="list-style-type: none"> <li>• List the available word processing applications. Introduce with the parts of the main window.</li> <li>• Change document views.</li> <li>• Start a new document.</li> <li>• Open an existing document.</li> <li>• Save a document.</li> <li>• Close a document.</li> <li>• Use the Navigator.</li> </ul>	04
2.	Set up options in Writer	<ul style="list-style-type: none"> <li>• Various options for setting up the Writer.</li> <li>• General, View, Formatting Aids, Grid options etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Change or set various options as per the requirement.</li> </ul>	04
3.	Enter and edit the text	<ul style="list-style-type: none"> <li>• Text editing – cut, copy, paste, and move text.</li> <li>• Find and replace option.</li> <li>• Inserting special characters.</li> </ul>	<ul style="list-style-type: none"> <li>• Type some text in the document and edit it.</li> <li>• Use the keyboard and mouse options to select, cut, copy, paste, and move text.</li> <li>• Search the word from the text and replace it with another word.</li> <li>• Insert some special characters in the document using the appropriate option.</li> </ul>	06
4.	Format the paragraph and text	<ul style="list-style-type: none"> <li>• Formatting characters.</li> <li>• Formatting paragraphs.</li> <li>• Numbered or bulleted lists.</li> <li>• Spelling and grammar, thesaurus, hyphenation options.</li> <li>• AutoCorrect, AutoText and word completion.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply various character formatting options for the text.</li> <li>• Format paragraphs of the document.</li> <li>• Assign number or bullets to the lists items.</li> <li>• Check spelling and grammar and apply the changes to the document.</li> <li>• Use the thesaurus, and choose hyphenation options.</li> <li>• Use AutoCorrect, autotext, and word completion feature to the document for text automation.</li> </ul>	05
5.	Format pages	<ul style="list-style-type: none"> <li>• Inserting page break.</li> <li>• Changing page margins.</li> <li>• Page layout – columns and</li> </ul>	<ul style="list-style-type: none"> <li>• Create a document and change the page margins as per requirement.</li> </ul>	04

		<ul style="list-style-type: none"> <li>frames for page layout.</li> <li>• Headers and footers.</li> <li>• Page numbering in various formats.</li> <li>• Borders and background.</li> </ul>	<ul style="list-style-type: none"> <li>• Insert page break in the document.</li> <li>• Define the page layout using columns and frames.</li> <li>• Insert and format headers and footers.</li> <li>• Insert and format page numbering.</li> <li>• Assign borders and background to the page.</li> </ul>	
6.	Create and use table	<ul style="list-style-type: none"> <li>• Table menu options.</li> <li>• Creating table in Writer.</li> <li>• Inserting row and column in a table.</li> <li>• Merging and splitting the rows and column.</li> <li>• Changing the appearance of table using AutoFormat styles.</li> <li>• Changing the properties of table.</li> <li>• Formatting a table layout and table text.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore Table menu options.</li> <li>• Create table.</li> <li>• Insert row and column in a table.</li> <li>• Merge and split the rows and column.</li> <li>• Change the appearance of table using AutoFormat styles.</li> <li>• Change the properties of table.</li> <li>• Format a table layout and table text.</li> </ul>	05
7.	Print the document	<ul style="list-style-type: none"> <li>• Printing options in Writer.</li> <li>• Previewing pages before printing.</li> <li>• Printing brochure.</li> <li>• Printing envelops and labels.</li> <li>• Export the document to PDF.</li> </ul>	<ul style="list-style-type: none"> <li>• Print the document.</li> <li>• Print the document with various options.</li> <li>• Preview pages before printing.</li> <li>• Print Brochure.</li> <li>• Print Envelops and Labels.</li> <li>• Export the document to PDF.</li> </ul>	02
			<b>Total Duration in Hours</b>	<b>30</b>

<b>Unit 3: Spreadsheet Applications (Elementary)</b>				
<b>S.No.</b>	<b>Learning Outcome</b>	<b>Theory (10 Hours)</b>	<b>Practical (20 Hours)</b>	<b>30 Hrs</b>
1.	Create a Spreadsheet	<ul style="list-style-type: none"> <li>• Introduction to spreadsheet application.</li> <li>• Creating, opening and saving spreadsheets.</li> <li>• Spreadsheet navigation.</li> <li>• Spreadsheet items.</li> <li>• Columns and rows operation.</li> <li>• Operations performed on sheet.</li> <li>• Freezing, unfreezing rows and columns.</li> <li>• Splitting the screen horizontally or vertically.</li> <li>• Using navigator.</li> </ul>	<ul style="list-style-type: none"> <li>• Introduce with spreadsheet application.</li> <li>• Create, open and save spreadsheets.</li> <li>• Navigate within spreadsheets.</li> <li>• Select items in a spreadsheet.</li> <li>• Insert, delete single and multiple rows or columns in a sheet.</li> <li>• Insert, move, copy, delete and rename a sheet.</li> <li>• Freez, unfreez rows and columns.</li> </ul>	06

		<ul style="list-style-type: none"> <li>• Document properties</li> </ul>	<ul style="list-style-type: none"> <li>• Split the screen horizontally or vertically</li> <li>• Use the navigator and document properties.</li> </ul>	
2.	Enter and edit the text in spreadsheet	<ul style="list-style-type: none"> <li>• Different ways to enter data in spreadsheet.</li> <li>• AutoInput, Fill tool, and selection lists to speed up data entry.</li> <li>• Merging and spiting cells.</li> <li>• Editing data in cell – delete, replace, paste and insert.</li> </ul>	<ul style="list-style-type: none"> <li>• Try different ways to enter data in spreadsheet and note the efficient way.</li> <li>• Use AutoInput, the Fill tool, and selection lists to speed up data entry</li> <li>• Merge and split cells.</li> <li>• Edit data – delete, replace, paste and insert.</li> </ul>	04
3.	Format data in the spreadsheet	<ul style="list-style-type: none"> <li>• Formatting data in the spreadsheet.</li> <li>• Conditional formatting</li> <li>• Hide and show data in the sheet.</li> <li>• Sorting records.</li> <li>• Using Find and replace option.</li> </ul>	<ul style="list-style-type: none"> <li>• Format data in the spreadsheet.</li> <li>• Use conditional formatting.</li> <li>• Hide and show data in the sheet.</li> <li>• Sort records.</li> <li>• Use Find and replace.</li> </ul>	04
4.	Create charts and graphs	<ul style="list-style-type: none"> <li>• Creating charts and graphs using wizard.</li> <li>• Editing charts and graphs.</li> <li>• Formating charts and graphs.</li> <li>• Resizing and moving charts.</li> <li>• Exporting charts.</li> <li>• Different types of charts.</li> </ul>	<ul style="list-style-type: none"> <li>• Create charts and graphs using wizard for sample data.</li> <li>• Edit charts and graphs.</li> <li>• Format charts and graphs.</li> <li>• Resize and move charts.</li> <li>• Export charts.</li> <li>• Demonstrate different types of charts from sample data.</li> </ul>	04
5.	Add graphs	<ul style="list-style-type: none"> <li>• Different ways to add graphics in a spreadsheet.</li> <li>• Options to modify, position, resize and arrange images</li> </ul>	<ul style="list-style-type: none"> <li>• Insert graphics image in a spreadsheet by various ways.</li> <li>• Practice to modify, position, resize and arrange image in the spreadsheet.</li> </ul>	04
6.	Use formulas and functions	<ul style="list-style-type: none"> <li>• Formulas and functions in spreadsheet.</li> <li>• Formula bar.</li> <li>• Entering formula.</li> <li>• Using functions.</li> <li>• Using operators in functions.</li> <li>• Concept of absolute and relative reference.</li> <li>• Order of calculations</li> <li>• Regular expression in functions.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify formula bar.</li> <li>• Enter formula to get the sum of values across row and column.</li> <li>• Use basic functions on sample data.</li> <li>• Use the operators in functions.</li> <li>• Demonstrate the absolute and relative reference.</li> <li>• Demonstrate the order of calculations.</li> <li>• Use regular expression in functions.</li> </ul>	05
7.	Print the spreadsheet	<ul style="list-style-type: none"> <li>• Printing the entire spreadsheet.</li> <li>• Print options for selected</li> </ul>	<ul style="list-style-type: none"> <li>• Print the entire spreadsheet.</li> <li>• Use the options to print the selected pages, ranges of</li> </ul>	03

		pages, ranges of spreadsheet.	spreadsheet.	
			<b>Total Duration in Hours</b>	<b>30</b>

<b>Unit 4: Presentation</b>				
<b>S. No.</b>	<b>Learning Outcome</b>	<b>Theory (10 Hours)</b>	<b>Practical (20 Hours)</b>	<b>30 Hrs</b>
1.	Create a presentation	<ul style="list-style-type: none"> <li>• Introduction to presentation software.</li> <li>• Starting Impress.</li> <li>• Components of main Impress window.</li> <li>• Different workspace views.</li> <li>• Creating a new presentation using wizard.</li> <li>• Formatting the presentation.</li> <li>• Running the presentation.</li> </ul>	<ul style="list-style-type: none"> <li>• Start Impress</li> <li>• Identify and name the various components of main Impress window</li> <li>• Observe the different workspace views.</li> <li>• Create a new presentation using wizard.</li> <li>• Format the presentation</li> <li>• Run the presentation.</li> </ul>	04
2.	Slide Master	<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>• Modifying the slide masters.</li> <li>• Creating own templates.</li> <li>• Default template.</li> <li>• Editing and organizing templates.</li> </ul>	<ul style="list-style-type: none"> <li>• Create the slide masters.</li> <li>• Apply the slide masters to the presentation.</li> <li>• Modify the slide masters</li> <li>• Create your own templates.</li> <li>• Set default template</li> <li>• Edit and organize templates.</li> </ul>	04
3.	Add and Format Text	<ul style="list-style-type: none"> <li>• Text boxes.</li> <li>• Entering text into text boxes.</li> <li>• Moving and resizing the text boxes.</li> <li>• Formatting the text in text boxes.</li> <li>• Bulleted and numbered lists in presentation.</li> <li>• Creating and using tables in presentation.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the text boxes.</li> <li>• Enter text into text boxes.</li> <li>• Move and resize the text boxes.</li> <li>• Format the text in text boxes.</li> <li>• Create and use bulleted and numbered lists in presentation.</li> <li>• Create and use tables in presentation.</li> </ul>	04
4.	Add and Format Images	<ul style="list-style-type: none"> <li>• Inserting images into presentation from various sources</li> <li>• Options to move, resize and rotate the image.</li> <li>• Image toolbar.</li> <li>• Formatting image.</li> <li>• Deleting an image</li> </ul>	<ul style="list-style-type: none"> <li>• Insert images into presentation from various sources</li> <li>• Move, Resize and Rotate the image</li> <li>• Format the image using Image toolbar</li> <li>• Delete an image</li> </ul>	03
5.	Manage Graphics Objects	<ul style="list-style-type: none"> <li>• Tools on the Drawing tool bar.</li> <li>• Creating lines and basic shapes using tool.</li> <li>• Grouping and ungrouping the graphics objects.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and use the various tools on the Drawing tool bar</li> <li>• Create lines and various shapes using the appropriate tool on the Drawing tool bar</li> <li>• Group and ungroup the</li> </ul>	04

		<ul style="list-style-type: none"> <li>• Editing and formatting the groups.</li> <li>• Positioning and resizing the graphics objects.</li> <li>• Special effects to graphics objects.</li> </ul>	<p>graphics objects</p> <ul style="list-style-type: none"> <li>• Edit and format the groups</li> <li>• Position and resize the graphics objects</li> <li>• Apply special effects to graphics objects</li> </ul>	
6.	Format Graphics Object	<ul style="list-style-type: none"> <li>• Graphics objects.</li> <li>• Formatting lines.</li> <li>• Formatting area fills.</li> <li>• Creating new area fills.</li> <li>• Formatting text in objects.</li> <li>• Formatting connectors.</li> <li>• Image styles.</li> </ul>	<ul style="list-style-type: none"> <li>• List graphics objects.</li> <li>• Format lines.</li> <li>• Format area fills.</li> <li>• Create new area fills.</li> <li>• Format text in objects.</li> <li>• Format connectors.</li> <li>• Work with image styles.</li> </ul>	04
7.	Create Slide Shows Transitions, and animations	<ul style="list-style-type: none"> <li>• Creating a slide show using basic settings.</li> <li>• Creating a customized slides show.</li> <li>• Editing, deleting, or copying a custom slide show.</li> <li>• Adding, removing transitions.</li> <li>• Setting timing to change slide automatic.</li> <li>• Applying, changing and removing animation effects.</li> <li>• Running slide show.</li> </ul>	<ul style="list-style-type: none"> <li>• Create a slide show using basic settings</li> <li>• Create a customized slides show</li> <li>• Edit, delete, or copy a custom slide show</li> <li>• Add, remove transitions</li> <li>• Set timing to change slide automatic</li> <li>• Apply, change and remove animation effects.</li> <li>• Run a slide show using keyboard and mouse.</li> </ul>	04
8.	Print, Export and Save the presentation	<ul style="list-style-type: none"> <li>• Printing the presentation using various options.</li> <li>• Creating PDF of presentation.</li> <li>• Creating web page and flash file of presentation.</li> <li>• Saving the presentation into Microsoft Power Point.</li> </ul>	<ul style="list-style-type: none"> <li>• Print the presentation using various options.</li> <li>• Export the presentation to PDF.</li> <li>• Export the presentation to web page and flash file.</li> <li>• Save the presentation into Microsoft Power Point.</li> </ul>	03
			<b>Total Duration in Hours</b>	<b>30</b>

## CLASS 10

## Part A: Employability Skills

S. No.	Units	Duration in Hours
1.	Unit 1: Communication Skills	20
2.	Unit 2: Self-management Skills	10
3.	Unit 3: Basic ICT Skills	25
4.	Unit 4: Entrepreneurial Skills	15
5.	Unit 5: Green Skills	10
	<b>Total</b>	<b>80</b>

Unit 1: Communication Skills – II				
S. No.	Learning Outcome	Theory (12 Hours)	Practical (08 Hours)	20 Hrs
1.	Demonstrate knowledge of various methods of communication.	<ul style="list-style-type: none"> <li>• Methods of communication</li> <li>• Verbal.</li> <li>• Non-verbal.</li> <li>• Visual.</li> </ul>	<ul style="list-style-type: none"> <li>• Writing pros and cons of written, verbal and non-verbal communication</li> <li>• Listing do's and don'ts for avoiding common body language mistakes</li> </ul>	04
2.	Provide descriptive and specific feedback.	<ul style="list-style-type: none"> <li>• Communication cycle and importance of feedback.</li> <li>• Meaning and importance of feedback.</li> <li>• Descriptive feedback - written comments or conversations.</li> <li>• Specific and non-specific feedback.</li> </ul>	<ul style="list-style-type: none"> <li>• Constructing sentences for providing descriptive and specific feedback.</li> </ul>	04
3.	Apply measures to overcome barriers in communication.	<ul style="list-style-type: none"> <li>• Barriers to effective communication – types and factors.</li> <li>• Measures to overcome barriers in effective. Communication.</li> </ul>	<ul style="list-style-type: none"> <li>• Enlisting barriers to effective communication.</li> <li>• Applying measures to overcome barriers in communication.</li> </ul>	04
4.	Apply principles of communication.	<ul style="list-style-type: none"> <li>• Principles of effective communication.</li> <li>• 7 Cs of effective communication.</li> </ul>	<ul style="list-style-type: none"> <li>• Constructing sentences that convey all facts required by the receiver.</li> <li>• Expressing in a manner that shows respect to the receiver of the message</li> <li>• Exercises and games on applying 7Cs of effective communication.</li> </ul>	04



5.	Demonstrate basic writing skills.	<ul style="list-style-type: none"> <li>• Writing skills to the following:</li> <li>• Sentence</li> <li>• Phrase</li> <li>• Kinds of Sentences</li> <li>• Parts of Sentence</li> <li>• Parts of Speech</li> <li>• Articles</li> <li>• Construction of a Paragraph.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration and practice of writing sentences and paragraphs on topics related to the subject.</li> </ul>	04
<b>Total Duration in Hours</b>				<b>20</b>

<b>Unit 2: Self-management Skills – II</b>				
<b>S. No.</b>	<b>Learning Outcome</b>	<b>Theory (05 Hours)</b>	<b>Practical (05 Hours)</b>	<b>10 Hrs</b>
1.	Apply stress management techniques	<ul style="list-style-type: none"> <li>• Meaning and importance of stress management</li> <li>• Stress management techniques – physical exercise, yoga, meditation</li> <li>• Enjoying, going to vacations and holidays with family and friends</li> <li>• Taking nature walks</li> </ul>	<ul style="list-style-type: none"> <li>• Exercises on stress management techniques – yoga, meditation, physical exercises.</li> <li>• Preparing a write-up on an essay on experiences during a holiday trip.</li> </ul>	04
2.	Demonstrate the ability to work independently	<ul style="list-style-type: none"> <li>• Importance of the ability to work independently.</li> <li>• Describe the types of self-awareness.</li> <li>• Describe the meaning of self-motivation and self-regulation.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration on working independently goals.</li> <li>• Planning of an activity</li> <li>• Executing tasks in a specific period, with no help or directives.</li> <li>• Demonstration on the qualities required for working independently.</li> </ul>	06
<b>Total Duration in Hours</b>				<b>10</b>

<b>Unit 3: Basic ICT Skills – II</b>				
<b>S. No.</b>	<b>Learning Outcome</b>	<b>Theory (10 Hours)</b>	<b>Practical (15 Hours)</b>	<b>25 Hrs</b>
1.	Prepare documentation using Word Processing Application	<ul style="list-style-type: none"> <li>• Introduction to word processing.</li> <li>• Software packages for word processing.</li> <li>• Opening and exiting the word processor.</li> <li>• Creating a document.</li> <li>• Saving document.</li> <li>• Text editing.</li> <li>• Word wrap and alignment.</li> <li>• Font size, type and face.</li> <li>• Header and Footer.</li> <li>• Auto Correct.</li> </ul>	<ul style="list-style-type: none"> <li>• List the features of word processing.</li> <li>• List the software packages for word processing.</li> <li>• Open and exit the word processor.</li> <li>• Create a document.</li> <li>• Edit the text.</li> <li>• Wrap and align the text.</li> <li>• Change the font type, size, and face.</li> <li>• Insert Header and Footer.</li> <li>• Use Autocorrect option.</li> </ul>	10

		<ul style="list-style-type: none"> <li>• Numbering and Bullet.</li> <li>• Creating Table.</li> <li>• Password protection.</li> <li>• Printing document.</li> <li>• Find and Replace.</li> <li>• Page numbering.</li> <li>• Saving a document in various formats.</li> </ul>	<ul style="list-style-type: none"> <li>• Assign numbering and bullets to list items.</li> <li>• Create Table.</li> <li>• Save the document.</li> <li>• Protect the document with password.</li> <li>• Print the document.</li> <li>• Use Find and Replace.</li> <li>• Give page numbering.</li> <li>• Save the document in various formats.</li> </ul>	
2.	Perform Tabulation using Spreadsheet Application	<ul style="list-style-type: none"> <li>• Introduction to spreadsheet application.</li> <li>• Various spreadsheet applications.</li> <li>• Creating a new worksheet.</li> <li>• Opening workbook and entering data.</li> <li>• Resizing fonts and styles.</li> <li>• Copying and moving.</li> <li>• Filter and sorting.</li> <li>• Formulas and functions.</li> <li>• Password protection.</li> <li>• Printing a spreadsheet.</li> <li>• Saving a spreadsheet in various formats.</li> </ul>	<ul style="list-style-type: none"> <li>• Introduce with the spreadsheet application.</li> <li>• List the spreadsheet applications.</li> <li>• Create a new worksheet.</li> <li>• Open the workbook and enter text.</li> <li>• Resize fonts and styles.</li> <li>• Copy and move the cell data.</li> <li>• Sort and Filter the data.</li> <li>• Apply elementary formulas and functions.</li> <li>• Protect the spreadsheet with password.</li> <li>• Print a spreadsheet.</li> <li>• Save the spreadsheet in various formats.</li> </ul>	10
3.	Prepare Presentation using Presentation Application	<ul style="list-style-type: none"> <li>• Introduction to presentation software .</li> <li>• Software packages for presentation.</li> <li>• Creating a new presentation.</li> <li>• Entering and editing text.</li> <li>• Adding a slide.</li> <li>• Deleting a slide.</li> <li>• Formatting text.</li> <li>• Inserting clipart &amp; images.</li> <li>• Slide layout.</li> <li>• Slide transition and custom animation.</li> <li>• Saving a presentation.</li> <li>• Printing a presentation. document.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the features of presentation.</li> <li>• List the software packages for presentation.</li> <li>• Create a new presentation.</li> <li>• Add a slide to presentation.</li> <li>• Delete a slide.</li> <li>• Enter and edit text.</li> <li>• Format text.</li> <li>• Insert clipart &amp; images.</li> <li>• Slide layout.</li> <li>• Save a presentation.</li> <li>• Print a presentation. document.</li> </ul>	05
			<b>Total Duration in Hours</b>	<b>25</b>

Unit 4: Entrepreneurial Skills – II				
S.	Learning Outcome	Theory	Practical	15

No.		(06 Hours)	(09 Hours)	Hrs
1.	List the characteristics of successful entrepreneur	<ul style="list-style-type: none"> <li>• Entrepreneurship and society.</li> <li>• Qualities and functions of an entrepreneur.</li> <li>• Role and importance of an entrepreneur.</li> <li>• Myth about entrepreneurship.</li> <li>• Entrepreneurship as a career option.</li> </ul>	<ul style="list-style-type: none"> <li>• Writing a note on entrepreneurship as career option.</li> <li>• Collecting success stories of first generation and local entrepreneurs.</li> <li>• Listing the entrepreneurial qualities – analysis of strength and weaknesses.</li> <li>• Group discussion of self-qualities that students feel are needed to become successful entrepreneur.</li> <li>• Collect information and related data for a business.</li> <li>• Make a plan in team for setting up a business.</li> </ul>	15
			<b>Total Duration in Hours</b>	<b>15</b>

Unit 5: Green Skills – II				
S. No.	Learning Outcome	Theory (07 Hours)	Practical (03 Hours)	10 Hrs
1.	Demonstrate the knowledge of importance, problems and solutions related to sustainable development	<ul style="list-style-type: none"> <li>• Definition of sustainable development.</li> <li>• Importance of sustainable development.</li> <li>• Problems related to sustainable development.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the problem related to sustainable development in the community.</li> <li>• Group discussion on the importance of respecting and conserving indigenous knowledge and cultural heritage.</li> <li>• Discussion on the responsibilities and benefits of environmental. citizenship, including the conservation and protection of environmental values.</li> <li>• Preparing models on rain water harvesting, drip / sprinkler irrigation, vermin-compost, solar energy, solar cooker, etc.</li> </ul>	10
			<b>Total Duration in Hours</b>	<b>10</b>

## Part B: Vocational Skills

S. No.	Units	Duration in Hours
1.	Unit 1: Word Processing (Advanced)	30
2.	Unit 2: Spreadsheet Applications (Advanced)	30
3.	Unit 3: Database Applications	30
	<b>Total Duration</b>	<b>90</b>

Unit 1: Word Processing (Advanced)				
S. No.	Learning Outcome	Theory (10 Hours)	Practical (20 Hours)	30 Hrs
1.	Apply Styles in the document	<ul style="list-style-type: none"> <li>Style categories in Writer.</li> <li>Styles and Formatting window.</li> <li>Fill Format.</li> <li>Creating and updating new style from selection</li> <li>Load style from template or another document.</li> <li>Creating a new style using drag-and-drop.</li> <li>Applying styles.</li> </ul>	<ul style="list-style-type: none"> <li>List style categories in Writer.</li> <li>Select the style from the Styles and Formatting window.</li> <li>Use Fill Format to apply a style to many different areas quickly.</li> <li>Create and update new style from a selection.</li> <li>Load a style from a template or another document.</li> <li>Create a new style using drag-and-drop.</li> </ul>	08
2.	Insert and use images in document	<ul style="list-style-type: none"> <li>Options to insert image to document from various sources.</li> <li>Options to modify, resize, crop and delete an image.</li> <li>Drawing objects and its properties.</li> <li>Creating drawing objects and changing its properties.</li> <li>Resizing and grouping drawing objects.</li> <li>Positioning the image in the text.</li> </ul>	<ul style="list-style-type: none"> <li>Insert an image to document from various sources.</li> <li>Modify, resize, crop and delete an image.</li> <li>Create drawing objects</li> <li>Set or change the properties of a drawing object</li> <li>Resize and group drawing objects</li> <li>Position the image in the text</li> </ul>	08
3.	Create and use template	<ul style="list-style-type: none"> <li>Template in Writer.</li> <li>Using predefined templates.</li> <li>Creating a template.</li> <li>Set up a custom default template.</li> <li>Updating a document.</li> <li>Changing to a different template.</li> <li>Using the Template.</li> </ul>	<ul style="list-style-type: none"> <li>Create a template.</li> <li>Use predefined templates.</li> <li>Set up a custom default template.</li> <li>Update a document.</li> <li>Change to a different template.</li> <li>Use the Template.</li> </ul>	08
4.	Create table of contents	<ul style="list-style-type: none"> <li>Table of contents.</li> <li>Hierarchy of headings.</li> <li>Customization of table of contents.</li> </ul>	<ul style="list-style-type: none"> <li>Create table of contents.</li> <li>Define a hierarchy of headings.</li> <li>Customize a table of</li> </ul>	06

		<ul style="list-style-type: none"> <li>Character styles.</li> <li>Maintaining a table of contents.</li> </ul>	<ul style="list-style-type: none"> <li>contents.</li> <li>Apply character styles.</li> <li>Maintain a table of contents.</li> </ul>	
			<b>Total Duration in Hours</b>	<b>30</b>

<b>Unit 2: Spreadsheet Applications (Advanced)</b>				
<b>S. No.</b>	<b>Learning Outcome</b>	<b>Theory (10 Hours)</b>	<b>Practical (20 Hours)</b>	<b>30 Hrs</b>
1.	Analyse data using scenarios and goal seek.	<ul style="list-style-type: none"> <li>Using consolidating data.</li> <li>Creating subtotals.</li> <li>Using "what if" scenarios.</li> <li>Using "what if" tools</li> <li>Using goal seek and solver.</li> </ul>	<ul style="list-style-type: none"> <li>Use consolidating data</li> <li>Create subtotals</li> <li>Use "what if" scenarios</li> <li>Use "what if" tools</li> <li>Use goal seek and solver</li> </ul>	07
2.	Link spreadsheet data	<ul style="list-style-type: none"> <li>Setting up multiple sheets.</li> <li>Creating reference to other sheets by using keyboard and mouse.</li> <li>Creating reference to other document by using keyboard and mouse.</li> <li>Relative and absolute hyperlinks</li> <li>Hyperlinks to the sheet.</li> <li>Linking to external data.</li> <li>Linking to registered data sources.</li> </ul>	<ul style="list-style-type: none"> <li>Setup multiple sheets by inserting new sheets.</li> <li>Create reference to other sheets by using keyboard and mouse.</li> <li>Create reference to other document by using keyboard and mouse.</li> <li>Create, Edit and Remove hyperlinks to the sheet.</li> <li>Link to external data.</li> <li>Link to registered data sources.</li> </ul>	07
3.	Share and review a spreadsheet	<ul style="list-style-type: none"> <li>Setting up a spreadsheet for sharing.</li> <li>Opening and saving a shared spreadsheet.</li> <li>Recording changes.</li> <li>Add, Edit and Format the comments.</li> <li>Reviewing changes – view, accept or reject changes.</li> <li>Merging and comparing.</li> </ul>	<ul style="list-style-type: none"> <li>Set up a spreadsheet for sharing.</li> <li>Open and save a shared spreadsheet.</li> <li>Record changes.</li> <li>Add, Edit and Format the comments.</li> <li>Review changes – view, accept or reject changes.</li> <li>Merge and compare documents.</li> </ul>	08
4.	Use Macros in spreadsheet	<ul style="list-style-type: none"> <li>Using the macro recorder.</li> <li>Creating a simple macro.</li> <li>Using a macro as a function.</li> <li>Passing arguments to a macro.</li> <li>Passing the arguments are as values.</li> <li>Macros to work like built-in functions.</li> <li>Accessing cells directly.</li> <li>Sorting the columns using macro.</li> </ul>	<ul style="list-style-type: none"> <li>Use the macro recorder.</li> <li>Create a simple macro.</li> <li>Use a macro as a function.</li> <li>Pass arguments to a macro.</li> <li>Pass the arguments are as values.</li> <li>Write macros that act like built-in functions</li> <li>Access cells directly.</li> <li>Sort the columns using macro.</li> </ul>	08
			<b>Total Duration in Hours</b>	<b>30</b>

<b>Unit 4: Database Applications</b>				
<b>S. No.</b>	<b>Learning Outcome</b>	<b>Theory (10 Hours)</b>	<b>Practical (20 Hours)</b>	<b>30 Hrs</b>
1.	Introduce with LibreOffice Base	<ul style="list-style-type: none"> <li>• What is Base, LibreOffice Base for database management</li> <li>• Types of database – flat and relational database</li> <li>• Planning for database creation</li> <li>• Sections of main database window: Database, Tasks, and List</li> <li>• Options to create a new database using the Database Wizard</li> <li>• Options to open an existing database using the Database Wizard</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare a table of list of students in your class with S.No., Name, Class</li> <li>• Prepare a plan for creating database</li> <li>• Start Base and observe the main database window and its 3 sections</li> <li>• Create a new database using the Database Wizard</li> <li>• Open an existing database using the Database Wizard</li> </ul>	05
2.	Create a table using table wizard	<ul style="list-style-type: none"> <li>• Database objects – tables, queries, forms, and reports of the database</li> <li>• Terms in database – table, field, record</li> <li>• Steps to create a table using table wizard</li> <li>• Major steps – Select fields, Set types and formats, Set primary key, Create table</li> <li>• Field information – type, entry required (Y/N), Length</li> <li>• Various data types in database</li> <li>• Primary key and option to set primary key</li> <li>• Table Data View dialog box</li> </ul>	<ul style="list-style-type: none"> <li>• List and explain various database objects</li> <li>• Explain terms in database – table, field, record</li> <li>• Select the category of table</li> <li>• Select fields from the available fields</li> <li>• Practice to create different tables from the available list and choosing fields from the available fields</li> <li>• Set the information for each field</li> <li>• Set primary key using available options</li> <li>• Click on Finish to create table</li> <li>• Enter or remove data using the Table Data View dialog box</li> </ul>	05
3.	Enter or remove data using the Table Data View dialog	<ul style="list-style-type: none"> <li>• Process to open Table Data View dialog box</li> <li>• Process to enter data into an empty table and empty cell</li> <li>• Steps to Modify data in a cell of a table</li> <li>• Steps to Delete data from a table.</li> </ul>	<ul style="list-style-type: none"> <li>• Open Table Data View dialog box</li> <li>• Enter data into an empty table</li> <li>• Add additional row</li> <li>• Enter data into an empty cell</li> <li>• Close the table data view dialog</li> <li>• Modify data in a cell of a table</li> <li>• Delete data from a table</li> </ul>	05
4.	Create a simple form using the Form Wizard	<ul style="list-style-type: none"> <li>• Two ways to open the wizard for creating a form</li> </ul>	<ul style="list-style-type: none"> <li>• Choose any one of the two ways to open the wizard for</li> </ul>	05

		<ul style="list-style-type: none"> <li>Steps to create form using Form Wizard – Select the fields from table to form, Set up subform, add subform fields and get joined fields, Arrange the controls of the form, Select the data entry mode, Apply the style of form, Set the name of the form</li> <li>Options to enter or remove data from forms</li> <li>Options to enter or remove data from individual controls</li> <li>Form Navigation toolbar</li> <li>Options to delete records in a form</li> </ul>	<p>creating a form</p> <ul style="list-style-type: none"> <li>Follow the steps to create a form using wizard – Select the fields from table to form, Set up subform, add subform, fields and get joined fields, Arrange the controls of the form, Select the data entry mode, Apply the style of form, Set the name of the form</li> <li>Enter or remove data from forms</li> <li>Enter or remove data from individual controls</li> <li>Identify Form Navigation toolbar and options available on it</li> <li>Delete records in a form</li> </ul>	
5.	Query the database using the Query Wizard	<ul style="list-style-type: none"> <li>What is Query in database</li> <li>Planning a Query based on the desired output</li> <li>Steps to create a Query using Form wizard</li> <li>Concept of sorting and sort order, searching and search conditions, grouped by and grouping conditions, aliases</li> <li>Examples of Queries</li> </ul>	<ul style="list-style-type: none"> <li>Define Query</li> <li>Plan a Query for the expected output</li> <li>Demonstrate the steps to create a Query by Query wizard</li> <li>Create a Query by following the steps in Query wizard</li> <li>Examine the output as per the the created Query</li> <li>Demonstrate the various examples of Queries</li> </ul>	05
6.	Create Reports using the wizard	<ul style="list-style-type: none"> <li>Concept and purpose of Report in database</li> <li>Steps to create a Report using Report Wizard</li> <li>Examples of Reports</li> </ul>	<ul style="list-style-type: none"> <li>Explain the Report in database</li> <li>Demonstrate the steps to create a Report by Report Wizard</li> <li>Create a Report by following the steps in Report Wizard</li> <li>Verify the output of Report as desired</li> <li>Demonstrate the various examples of Report</li> </ul>	05
			<b>Total Duration in Hours</b>	<b>30</b>

## 6. ORGANISATION OF FIELD VISITS

In a year, at least 3 field visits/educational tours should be organised for the students to expose them to the activities in the workplace.

Visit a data entry centre and observe the following: Location, Site, Office building, Computer Systems, Tools and Equipment, Printer, Scanner. During the visit, students should obtain the following information from the owner or the supervisor of the Data Centre:

1. Data Entry Centre.
2. Computer Infrastructure.
3. Sitting Posture of data entry operators.
4. Assistive technology.
5. Manpower engaged
6. Total expenditure of Data Entry Centre.
7. Total annual income.
8. Profit/Loss (Annual)
9. Any other information

## 7. LIST OF EQUIPMENT AND MATERIALS

The list given below is suggestive and an exhaustive list should be prepared by the vocational teacher. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

S.No.	Item Name, Description & Specification	Quantity
	<b>HARDWARE</b>	
1.	Computer with latest configuration or minimum Pentium Processor with 2 GB RAM, 512 GB HDD, 17" LED Monitor, NIC Card, 3 button Mouse, 105 keys key board and built-in speakers and mic.	15
2.	Laser Printer Black	01
3.	Inkjet Printers (Colour & Black)	01
4.	Scanner	01
5.	Online UPS 5 KVA	01
6.	16 Port Switches	01
7.	Air Conditioner 1.5 tonne	02
8.	Telephone line (For Internet)	01
9.	Fire extinguisher	01
	<b>SOFTWARE</b>	
1.	Operating System Linux and Windows	
2.	Anti Virus Latest version	
3.	LibreOffice or MS Office latest version	
	<b>FURNITURE</b>	



1.	Class room chairs and desks	25
2.	Computer Tables	15
3.	Straight back revolving & adjustable chairs (Computer Chairs)	15
4.	Printer Tables	02
5.	Trainers Table	01
6.	Trainers Chair	01
7.	Steel cupboards drawer type	02
8.	Cabinet with drawer	01
9.	Steel almirah big size	01
10.	Steel almirah small size	01

## 8. VOCATIONAL TEACHER'S/TRAINER'S QUALIFICATION

Qualification and other requirements for appointment of vocational teachers/trainers on contractual basis should be decided by the State/UT. The suggestive qualifications and minimum competencies for the vocational teacher should be as follows:

S.No.	Qualification	Minimum Competencies	Age Limit
1	<p>Bachelor of Engineering / Technology in Computer Science / Information Technology <b>OR</b> Master of Computer Science <b>OR</b> Master of Computer Application <b>OR</b> Master of Information Technology <b>OR</b> DOEACC B Level Certificate.</p> <p>The suggested qualification is the minimum criteria. However higher qualifications such as Master of Engineering / Technology in Computer Science / Information Technology will also be acceptable.</p>	<p>The candidate should have a minimum of 1 year of work experience in the same job role. S/He should be able to communicate in English and local language. S/He should have knowledge of equipment, tools, material, Safety, Health &amp; Hygiene.</p>	<p>18-37 years (as on Jan. 01 (year))</p> <p>Age relaxation to be provided as per Govt. rules</p>

Vocational Teachers/Trainers form the backbone of Vocational Education being imparted as an integral part of Rashtriya Madhyamik Shiksha Abhiyan (RMSA). They are directly involved in teaching of vocational subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement.

These guidelines have been prepared with an aim to help and guide the States in engaging quality Vocational Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging the Vocational Teachers/Trainers are mode and procedure of selection of Vocational Teachers/Trainers, Educational Qualifications, Industry Experience, and Certification/Accreditation.

The State may engage Vocational Teachers/Trainers in schools approved under the component of Vocationalisation of Secondary and Higher Secondary Education under RMSA in following ways:

- (i) Directly as per the prescribed qualifications and industry experience suggested by the PSS Central Institute of Vocational Education (PSSCIVE), NCERT or the respective Sector Skill Council (SSC). **OR**
- (ii) Through accredited Vocational Training Providers accredited under the National Quality Assurance Framework (NQAF\*) approved by the National Skill Qualification Committee on 21.07.2016. If the State is engaging Vocational Teachers/Trainers through the Vocational Training Provider (VTP), it should ensure that VTP should have been accredited at NQAF Level 2 or higher.

\* *The National Quality Assurance Framework (NQAF) provides the benchmarks or quality criteria which the different organisations involved in education and training must meet in order to be accredited by competent bodies to provide government-funded education and training/skills activities. This is applicable to all organizations offering NSQF-compliant qualifications.*

The educational qualifications required for being a Vocational Teacher/Trainer for a particular job role are clearly mentioned in the curriculum for the particular NSQF compliant job role. The State should ensure that teachers / trainers deployed in the schools have relevant technical competencies for the NSQF qualification being delivered. The Vocational Teachers/Trainers preferably should be certified by the concerned Sector Skill Council for the particular Qualification Pack/Job role which he will be teaching. Copies of relevant certificates and/or record of experience of the teacher/trainer in the industry should be kept as record.

To ensure the quality of the Vocational Teachers/Trainers, the State should ensure that a standardized procedure for selection of Vocational Teachers/Trainers is followed. The selection procedure should consist of the following:

- (i) Written test for the technical/domain specific knowledge related to the sector;
- (ii) Interview for assessing the knowledge, interests and aptitude of trainer through a panel of experts from the field and state representatives; and
- (iii) Practical test/mock test in classroom/workshop/laboratory.

In case of appointment through VTPs, the selection may be done based on the above procedure by a committee having representatives of both the State Government and the VTP.

The State should ensure that the Vocational Teachers/ Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools.

The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understand the latest trends and policy reforms in vocational education.

The Head Master/Principal of the school where the scheme is being implemented should facilitate and ensure that the Vocational Teachers/Trainers:

- Prepare session plans and deliver sessions which have a clear and relevant purpose and which engage the students;
- Deliver education and training activities to students, based on the curriculum to achieve the learning outcomes;
- Make effective use of learning aids and ICT tools during the classroom sessions;
- Engage students in learning activities, which include a mix of different methodologies, such as project based work, team work, practical and simulation based learning experiences;
- Work with the institution's management to organise skill demonstrations, site visits, on-job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;
- Identify the weaknesses of students and assist them in up-gradation of competency;

- Cater to different learning styles and level of ability of students;
- Assess the learning needs and abilities, when working with students with different abilities
- Identify any additional support the student may need and help to make special arrangements for that support;
- Provide placement assistance

Assessment and evaluation of Vocational Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the Vocational Teachers/Trainers is appraised annually. Performance based appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the Vocational Teachers/Trainers. Following parameters may be considered during the appraisal process:

- Participation in guidance and counselling activities conducted at Institutional, District and State level;
- Adoption of innovative teaching and training methods;
- Improvement in result of vocational students of Class X or Class XII;
- Continuous up-gradation of knowledge and skills related to the vocational pedagogy, communication skills and vocational subject;
- Membership of professional society at District, State, Regional, National and International level;
- Development of teaching-learning materials in the subject area;
- Efforts made in developing linkages with the Industry/Establishments;
- Efforts made towards involving the local community in Vocational Education
- Publication of papers in National and International Journals;
- Organisation of activities for promotion of vocational subjects;
- Involvement in placement of students/student support services.

## 9. LIST OF CONTRIBUTORS

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