

**Syllabi & Courses of Study
Of
Vocational Subjects
For
Class 12th (Level-4)**



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SCHEME OF EXAMINATION

Details of Assessment Plan

1. There will be two components of Assessment and the marks allocated for each component will be as under:

- a) Knowledge/Theory Test- 50 Marks
- b) Practical Test-50 Marks

S.No.	Method of Assessment	Weightage (Max. Marks)	Minimum Pass Marks	Evaluator
1	Theory/Written Test	50	18	JKBOSE
2	Practical Test, Artifacts , Demonstration , Projects (Individual and Group), Portfolio, Written Test, Viva Voce & Student Participation	50	25	Sector Skill Council(SSC)/JKBOSE
TOTAL		100 Marks		

PRACTICAL ASSESSMENT

EXTERNAL ASSESSMENT:

Distribution	Marks
Practical Experiment	50
Artifacts (Objects Created by Students)	
Demonstration	
Projects (Individual and Group)	
Portfolio	
Written Test	
Viva Voce	
Student Participation	

QUESTION DISTRIBUTION

Class: 12th (Level-4)

Max. Marks: 50

Duration: 02:30 Hrs

Pattern	Marks	Questions	Total
Very Short Questions	01	10	10 Marks
Short Type-I Questions	02	05	10 Marks
Short Type-II Questions	03	05	15 Marks
Long Type Questions	05	03	15 Marks
TOTAL		23	50 Marks

Syllabus
Employability Skills
(A Common Part for All Trades)

“Part – A”

Employability Skills----- (10 Marks)

Unit - 1: Communication & Self-Management Skills-II (05 Marks)	
Theory	Learning Outcome
Introduction to Listening & Active Listening, Overcoming barriers to Active Listening, Basic parts of speech (Noun, Pronoun, Verb, Adverb & Adjective).	Describe the steps to active listening skills & Demonstrate basic writing skills.
Introduction to Self-motivation, Intrinsic and extrinsic motivation.	Describe the various types of motivation.
Introduction to Personality, Basic personality traits & overcoming personality disorders.	Describe the basic personality traits and personality disorders.
Unit - 2: Basic ICT, Entrepreneurship & Green Skills-II (05 Marks)	
Theory	Learning Outcome
Introduction to spreadsheet, types of spreadsheet Components of spreadsheet, Presentation software, Steps to Save, Open, Close, & Print the presentation.	Perform tabulation using spreadsheet application and Prepare presentation using presentation application.
Introduction to Entrepreneurship, Qualities of a successful entrepreneur, Types of Entrepreneurs, Barriers to entrepreneurship & Start-up's.	Describe the various qualities of a successful entrepreneur.

1. IT/ITeS

Job Role: Junior Software Developer

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Relational Database Management System - MySQL	30	12
	Python Programming-II	20	04
	Software Engineering	30	12
	Emerging Trends and Social Impact	30	12
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Relational Database Management System - MySQL(12 Marks)		
S.No	Theory	Learning Outcome
1	<ul style="list-style-type: none">❖ Concepts of Database:<ul style="list-style-type: none">• Introduction to file system• Limitations of file system• Data base management system: Introduction to DBMS, Advantages of DBMS• Relational data model• Concept of: Attribute tuple, domain, degree, cardinality and schema.❖ Concept of Keys:<ul style="list-style-type: none">• Candidate key, Primary key, Alternate key and foreign key.	Describe the database management concepts.
2	<ul style="list-style-type: none">❖ Structured Query language:<ul style="list-style-type: none">• Introduction to structured query language (SQL)• Data definition language• Data manipulation language• Data types,• Constraints.❖ Create and Process Tables:<ul style="list-style-type: none">• Data definition: CREATE database/table, ALTER table,• Describe table, DROP database/table.• Data manipulation: INSERTION of records• Data query: SELECT statement• Data updation and deletion• Aggregate functions	Describe Structured Query Language.
Unit-IV Python Programming-II (04 Marks)		
S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none">❖ Iterative Statements:<ul style="list-style-type: none">• Introduction of Iteration• Types of loops-The for loop, the while loop, Loop else statement, Nested loops.• Jumps statement-break and continue	Understanding Iterative statements.
2.	<ul style="list-style-type: none">❖ String manipulation:<ul style="list-style-type: none">• Introduction to string, Traversing a string• String operators-Basic, membership and comparison operators, String functions and methods-string. Capitalize (), string. Lower (), string. Upper ().	Code & execute python programs using Strings

Unit-V Software Engineering		(12 Marks)
S.No	Theory	Learning Outcome
1.	❖ Concepts of Software Engineering: <ul style="list-style-type: none"> • Introduction to software engineering • Need for software engineering • Phases of software development–requirement analysis, system analysis, system design, system implementation, system maintenance. 	Describe the concepts of software engineering and software development process
2.	❖ Software Testing: <ul style="list-style-type: none"> • Introduction to software testing • Types of software testing-Unit Testing, Black Box Testing & White box testing, • Concept of beta version and final version. 	Concepts of Software Testing.
Unit-VI Emerging Trends and Social Impact		(12 Marks)
S.No	Theory	Learning Outcome
1.	❖ Emerging Trends and new Technologies: <ul style="list-style-type: none"> • Introduction to Emerging trends, • Artificial intelligence (AI) • Machine learning, • Big data • Internet of things(IOT) • Cloud computing & Cloud services. 	Describe Emerging Trends and new Technologies.
2.	❖ Socio Impact on Technology: <ul style="list-style-type: none"> • Introduction to cybercrime • Types of cybercrime • Combating and preventing cybercrime • Indian Information Technology Act (IT Act) • Intellectual property right (IPR)-Copyright, Patent, Trademark • Positive and Negative effects of technology on health 	Describe the Societal Impact of Technology

“Part- C”

Practical Work----- (50 Marks)

❖ **Practical Experiment**

1. Create a student table (Roll no. Name, Fathers Name, Mothers Name, Class, Residence, Phone No.) In My SQL with Student Roll no. as primary key.
2. Add new column (Aadhar No.) to Student table.
3. Fetch (Name, Class, Residence, Phone no.)From student table using select statement.
4. Write a program in python to generate prime series.
5. Write a program in python to calculate the sum of digits of number.
6. Write a program in python to print all natural no.'s from 1 to100.
7. Write a program in python to print multiplication table of any number.

❖ **Artifacts objects created by students**

❖ **Demonstration**

❖ **Projects (Individual and Group)**

❖ **Portfolio**

❖ **Written Test**

❖ **Viva voce**

❖ **Student Participation**

2. Retail

Job Role: Retail Trainee Associate

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (300)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-I	25	05
	Basic ICT, Entrepreneurship & Green Skills-I	30	05
Total		55	10
Part - B Vocational Skills	Monitoring and Maintaining Store Security	25	12
	Loyalty Schemes to Customers	30	10
	Customer Information System and Customer Retention	30	08
	Work in a Team Organization	25	10
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit III: Monitoring and Maintaining Store Security		(12 Marks)
S.No	Theory (15 Hrs)	Learning Outcome
1	<ul style="list-style-type: none">• Meaning of risk in store,• Types of risks and securities in retail store• Factors to keep in mind when evaluating the security of store• Identify the risk in retail store• Cyber security challenges	List the types of security risks in stores.
2	<ul style="list-style-type: none">• Factors of identifying risk,• Measures undertaken in security,• Preventions for security and risk,• Policies for security issues in retail business	Demonstrate the security measures and follow the preventions for security risk
3	<ul style="list-style-type: none">• Company procedure for reporting security risk• Various issues on which reporting is necessary,• What to do if associate catches someone,• Reporting on security breaches,• Reporting through equipments• Reporting to a robbery,• Reporting on shoplifting	Describe mechanism for reporting the security risks
4	<ul style="list-style-type: none">• Various issues on loss prevention• Goals of audit and process,• Actions and involved team members,• Training on prevention of loss in store,• Elements of loss prevention,• Deactivating security devices of stores	Describe the company Procedure for preventing security risk
Unit IV: Loyalty Schemes for Customers and Process of Credit Application(14 Marks)		
S.No	Theory (15 Hrs)	Learning Outcome
1.	<ul style="list-style-type: none">• Meaning of loyalty schemes and loyal customers,• Goals, types, features and benefits of loyalty schemes,• Sources of information for loyalty schemes• Membership of loyalty schemes	Describe the loyalty schemes goals, features, benefits and sources of information

	<ul style="list-style-type: none"> • Ask customer about the membership of loyalty schemes • Respond positively to customer • Help customer in decision making • Provide relevant information • Build and promote goodwill 	
2.	<ul style="list-style-type: none"> • Concept of propagation of loyalty programme, • Mechanism to propagate loyalty programmes, • Methods used in propagation of loyalty programmes • Gain customer commitment to the loyalty schemes, • Recognize customer interest • Get signs of interest to sign loyalty schemes • Fill membership form • Give customer proof of membership • Check customer • detail for documentation 	Describe the mechanism for propagation of loyalty schemes
3.	<ul style="list-style-type: none"> • Meaning of membership drive for loyalty schemes, • Steps followed during a membership drive , • Pre-membership stage, • Membership stage, • Post membership stage 	Explain the procedure of membership drive for loyalty schemes
4.	<ul style="list-style-type: none"> • Meaning of customer relationship management (CRM) • Objectives of CRM and customer loyalty schemes • Benefits of CRM, • Concept of e-CRM • Difference between CRM and E-CRM. 	List the components of customer relationship management (CRM) and its impact on sales

Unit V: Customer Information System and Customer Retention(08 Marks)

S.No	Theory (15 Hrs)	Learning Outcome
1.	<ul style="list-style-type: none"> • Need of customer information • Need of communicate information to customer • Retailers policy for providing information and advice to customer • Acknowledge customer's • Identify customer need for information • Communicate information and advice to customer • Features of information, Information meet with customer's needs • Ways to help customer • Refer to right person 	Identify the customer information and advices to customers
2.	<ul style="list-style-type: none"> • Meaning of customer complaints, • Machinery for complaints handling, • Rights of customer and retailers regarding complaints, • Duties of retailers regarding complaints • Help customer sort out complaints <ul style="list-style-type: none"> ○ Identify the nature of complaints • Acknowledge the complaint • Follow legal requirements • Company policies and procedures for dealing with complaints 	Explain the mechanism for managing customers complaints

	<ul style="list-style-type: none"> • Refers to right person in case it is not the responsibility of retailer • Procedure of referral 	
3.	<ul style="list-style-type: none"> • Concept of recognize customer needs • Significance of recognizing customer's needs, • Guidelines for recognizing customer needs • Timely responding to customers • Advantage of responding the customer on time effectively 	Follow the guidelines to recognize the customer needs
Unit IV: Work in Team & Organization (10 Marks)		
	Theory (10Hrs)	Learning Outcome
1.	<ul style="list-style-type: none"> • Organization standard of appearance • Precautions taken by male staff and female staff • Dealing with the customer • Greet customer • Communicate customer that they are valued customer • Identify customer expectations • Treat customer courteously • Informed customer and reassured 	<ul style="list-style-type: none"> • Demonstrate the organization standards by appearance and behavior
2.	<ul style="list-style-type: none"> ➤ Support in effective working <ul style="list-style-type: none"> • Share work with colleagues • Make realistic commitment • Find out the suitable alternatives • Encourage colleagues when conditions are difficult • Solve colleagues problems related to work in group • Career prospects in retailing • Job prospects in retail cashier and retail sector remuneration • Rights of employees • Responsibilities of employees 	Work effective in organization
3.	<ul style="list-style-type: none"> • Define the goal and its features • Skills to complete goal • Actions taking for completing • Check goals on regularly • Ask for feedback to improve performance ➤ Help other <ol style="list-style-type: none"> a. Encourage colleagues b. Solve colleagues problems c. Give clear, accurate and relevant information d. Advice on task procedure e. Demonstrate the procedure f. Encourage colleagues to ask questions g. Give opportunities to practice new skills and constructive feedback • Concept of work in a team • Importance of teams to achieve targets in retailing • Tools and techniques available to set team performance targets and how to work as a team • Mobilizing finances • Personnel recruitment • Marketing activities 	Help in planning of own and others

“Part- C”

Practical Work----- (50 Marks)

- ❖ **Practical Experiment**
 - 1
 - 2
- ❖ **Artifacts objects created by students**
- ❖ **Demonstration**
- ❖ **Projects (Individual and Group)**
- ❖ **Portfolio**
- ❖ **Written Test**
- ❖ **Viva voce**
- ❖ **Student Participation**

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3. Healthcare

Job Role: General Duty Assistant-Trainee

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Hospital management system	20	6
	Sterilization and Disinfection	20	8
	Introduction to Medication	15	5
	Immunization	15	6
	Physiotherapy	15	5
	Bio Medical Waste Management	15	5
	Medical Records	10	5
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Hospital Management System(06 Marks)		
S.No	Theory	Learning Outcome
1	<ul style="list-style-type: none">Responsibilities of GDA in admitting the patient in hospitalVarious ways of transporting a patient form OPD to IPD	Describe the role of GDA in admission of patient in hospital
2	<ul style="list-style-type: none">Purpose and procedure of the health assessmentState effective ways of obtaining health historyMajor components of obstetrical historyImportance of culture in the health assessment	Assess the health of the patient
3	<ul style="list-style-type: none">Explain the significance and purpose of physical examinationTechniques of physical examination viz, (Inspection, Palpation, Percussion, Auscultation, Manipulation)	Demonstrate the knowledge of significance, purpose and techniques of the physical assessment of the patient
4	<ul style="list-style-type: none">Role of GDA in assisting the health examination of a patientPrecautions to be taken while examining height and weight of the patientTechnique for chest and abdomen examination	Provide assistance in various examinations of the patient viz. eyes, ears, nose, throat, neck, chest, etc.
5	<ul style="list-style-type: none">Various techniques of collecting the specimen of urine, stool, sputum, blood, etc.	Collect the specimen of urine, stool, sputum, blood, etc. using different methods
6	<ul style="list-style-type: none">Explain the significance and importance of a waste basket in patient's unitProcedures of bedding standards for the patient	Use various equipment and supplies in furnishing the patient's unit
Unit-IV Sterilization and Disinfection (08 Marks)		
S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none">Different types of disinfectionDifferentiate between concurrent and terminal disinfectionExplain the process of fumigation with sulphur	Demonstrate the knowledge of process of disinfection
2.	<ul style="list-style-type: none">Importance of care of rubber goods.Procedure to undo the contaminated glovesProcedure of removing different kinds of stains	Demonstrate the knowledge of care of articles in a hospital

	<ul style="list-style-type: none"> Ways of care of syringes and needles 	
3.	<ul style="list-style-type: none"> Cleaning techniques of different areas of hospital Role of hand hygiene in prevention of infection Various cleaning techniques used in hospital 	Provide assistance in disinfection of wards in a hospital
4.	<ul style="list-style-type: none"> Asepsis and its types Methods of transmission of infection Importance of prevention of cross infection 	Demonstrate the knowledge of general surgical asepsis practices
5.	<ul style="list-style-type: none"> Surveillance procedures of Operation Theatre (OT) Fumigation procedure in OT Duties of GDA in OT 	Demonstrate the knowledge of disinfection of operation theatre
6.	<ul style="list-style-type: none"> Methods and steps of dressing State different types of dressing Explain the general rules of dressing 	Demonstrate the knowledge of surgical dressing
7.	<ul style="list-style-type: none"> Knowledge of disease, pathogen, infection three vertices of the epidemiological triangle? Differentiate different types of microorganisms 	Describe the diseases caused by microorganism
8.	<ul style="list-style-type: none"> State the common diseases Enlist the names of bacteria and viruses causing diseases in human 	Demonstrate the knowledge of common human diseases and their causal agents
9.	<ul style="list-style-type: none"> Meaning of Hospital Acquired Infection (HAI) Activities to be performed by GDA for controlling (HAI) 	Demonstrate the knowledge of Hospital Acquired Infections
10.	<ul style="list-style-type: none"> Physical agents and chemical agents used in disinfection and sterilization 	Perform disinfection of wards and equipment

Unit-V Introduction to Medication(05Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none"> Types of intravenous drug delivery method Advantages and disadvantages of the various conventional drug delivery systems 	Demonstrate the knowledge of different types of drug delivery system operated in the hospital
2.	<ul style="list-style-type: none"> Discuss Role of GDA in patient safety. Explain model of patient safety State sources of hazards in patient's safety in different drug delivery systems 	Maintain patient's safety and effectiveness in drug delivery
3.	<ul style="list-style-type: none"> Different routes of administering the drugs in the patient's body. Explain the importance of internal drug delivery route 	Administer the drug in the patient's body through correct route
4.	<ul style="list-style-type: none"> Criteria to choose drug dosage forms. Two main types of capsules. Various drug dosage forms 	Demonstrate the knowledge of various drug dosage forms
5.	<ul style="list-style-type: none"> Novel drug delivery method. Explain DPI and MDI. Transdermal drug delivery system with its advantage 	Demonstrate the knowledge of Novel Drug Delivery System

6.	<ul style="list-style-type: none"> Classify the controlled drug delivery system on the basis of mechanism of release Osmotic pressure control system Name the mechanisms used to deliver a drug in controlled time and amount 	Demonstrate the knowledge of controlled drug delivery system
7.	<ul style="list-style-type: none"> Explain drug administration Classify medicine groups Legal aspects of record keeping 	Demonstrate the knowledge of basic principles of drug administration
8.	<ul style="list-style-type: none"> Enlist different forms of medicine Importance of forms v/s route in drug administration Read the instruction on the label of the medicine Various signs of allergy Meaning of standard abbreviation used in the medication chart 	Demonstrate the knowledge of forms and routes of medication
9.	<ul style="list-style-type: none"> Common side effects of anti-depressant Classification of drugs 	Classify the drugs
10.	<ul style="list-style-type: none"> Enlist the drugs used for dysrhythmia Categorize the drugs in treatment of cardiovascular system 	Demonstrate the knowledge of drugs of ca
11.	<ul style="list-style-type: none"> Techniques of disposing a medicine Preventive measures to control the mistakes in drug administration Control measures used to prevent the spread of infection 	Demonstrate the knowledge of storage and administration of medicine

Unit-VI Immunization(06 Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none"> Explain the meaning of Immunity Differentiate between innate and adoptive immunity Differentiate between passive, active immunity 	Differentiate between various types of immunity
2.	<ul style="list-style-type: none"> Importance of immunization Side effects of immunization Various aspects of Immunization schedule chart 	Prepare immunization schedule chart
3.	<ul style="list-style-type: none"> Key components of a universal immunization programme (UIP) 	Identify the key components of universal immunization programme (UIP)
4.	<ul style="list-style-type: none"> Key components of a Pulse Immunization Programme 	Identify the key components of pulse immunization programme

Unit-VII Physiotherapy(05 Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none"> Explain Physiotherapy. Holistic approach used in physiotherapy State basic principles of physiotherapy 	Demonstrate the knowledge of basic principles of physiotherapy
2.	<ul style="list-style-type: none"> State basic principles of good body mechanics Reasons for the use of proper body mechanics 	Demonstrate the knowledge of principles and techniques of good body mechanics
3.	<ul style="list-style-type: none"> Purpose of exercise State the precautions to be taken by the patients while performing physical exercises 	Demonstrate the knowledge of exercise

4.	<ul style="list-style-type: none"> Define active range of motion (ROM) exercise Explain the selection criteria of active ROM exercise Types of active ROM exercises 	Demonstrate the knowledge of active range of motion exercise
5.	<ul style="list-style-type: none"> Define passive range of motion exercise State the care to be taken while giving passive exercise 	Demonstrate the knowledge of Passive Range of Motion exercise
6.	<ul style="list-style-type: none"> Procedure of breathing exercise Procedure of coughing exercise Explain the working of trifle 	Demonstrate the knowledge of breathing and coughing exercises

Unit-VIII Bio Medical Waste Management (05 Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none"> Define bio- medical waste Enlist the risks involved in poor waste in hospital Management Importance of hospital waste management with respect to hospital staff and general public Explain how bio-medical waste management helps in environment protection Enlist the routes of transmission of infection in hospitals 	Demonstrate the knowledge of bio-medical waste management
2.	<ul style="list-style-type: none"> Enlist the sources of biomedical waste Areas of bio medical waste generation in hospital Method of disposing off of micro biological and bio technological waste in hospitals 	Demonstrate the knowledge of the sources and disposal methods of biomedical waste
3.	<ul style="list-style-type: none"> Explain autoclaving and shredding Transportation process of bio- medical waste Procedure of treatment of general waste and biomedical waste in hospital State the importance of colour coding criteria recommended by WHO 	Demonstrate the knowledge of segregation, packaging, transportation and storage of bio-medical waste
4.	<ul style="list-style-type: none"> State the functions of hospital waste management committee Duties of medical superintendent regarding bio- medical waste management Duties of matron in bio - medical waste management Importance of training on hospital waste management to different categories of staff in a hospital 	Identify the role of personnel involved in waste management

Unit-IX Medical Records(07 Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none"> Explain the purpose of health service planning Explain the significance of documentation in decision analysis Importance of documentation in assuring quality services to patients 	Prepare complete medical record
2.	<ul style="list-style-type: none"> Explain the importance of mentioning the date and time during recording Importance of confidentiality in maintaining 	Identify the principles of documentation

	medical record of the patient <ul style="list-style-type: none"> Describe the procedure of making corrections and omissions in healthcare documents 	
3.	<ul style="list-style-type: none"> Explain LAMA Explain change of shift note Purpose of transfer and discharge note 	Demonstrate the knowledge of content of medical documentation
4.	<ul style="list-style-type: none"> Explain different format and methods of documentation Enlist the documents maintained by the hospital in MLC and RTA cases Explain POMR 	Identify the role of GDA in maintaining record

“Part- C”

Practical Work----- (50 Marks)

- ❖ **Practical Experiment**
 - 1
 - 2
- ❖ **Artifacts objects created by students**
- ❖ **Demonstration**
- ❖ **Projects (Individual and Group)**
- ❖ **Portfolio**
- ❖ **Written Test**
- ❖ **Viva voce**
- ❖ **Student Participation**

4. Tourism and Hospitality-I

Job Role: Customer Service Executive (Meet & Greet)

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Etiquette & Hospitable conduct	25	08
	Gender & Age Sensitive service practices	16	06
	Health & Hygiene	16	06
	Safety at Work Place	16	08
	Learn a foreign or local language	12	05
	Customer Centric Service	25	07
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Etiquette and Hospitable Conduct(08 Marks)

S.No	Theory	Learning Outcome
1	<ul style="list-style-type: none">Hospitality & Need of Hospitable Conduct. Goal of Hospitality. Components of Hospitality. Customer Centricity. Role of Food and Beverage Service in a hospitable conduct. Define, need and necessities of etiquettes and Manners. Telephone Etiquettes, Language, Positive Body Language and good hospitable Dressing and Uniform sense. Precautions to be taken while dealing with the Guest. Customer Grievances and complaints handling. Special Attention Guest. How to Measure Customers satisfaction. Customer Contribution to the Brand Value	Understand the Meaning, Components and Goal of Hospitality Describe the Importance of Behavioral, Personal and Hospitality Etiquette. Provide Insight to Customer Satisfaction and loyalty.

Unit-IV Gender and Age Sensitive Service Practices(06 Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none">Women’s rights and respect at workplace. Company’s policies to prevent sexual harassment. Facilities available at work for female colleagues such as transport, night drop, night shifts, reporting abuse, maternity leaves and other grievances. Recreational facilities for children tourist. Motivating women at workplace to utilize their skills such as involvement in decision-making process. Behavioral etiquettes while dealing with female colleagues and guests.	Describe facilities and services available for females at workplace. Narrate different age and gender specific customer services Explain the importance of following standard etiquette with women at workplace

Unit-V Health and Hygiene(06 Marks)

S.No	Theory	Learning Outcome
1.	Regular cleaning of work area. Handling waste waste/trash can. Handling pest control activities at work place. Proper ventilation of area. Cleaning of food storage, prepared, displayed and serving area. Standard Operating Procedure for: Safe cleaning. Importance of identification and reporting of poor organizational practices. Importance of food sanitation and cross contamination of food and precaution during the food production and food service. Regular hand washing procedure. Thumb rule for regular personal hygiene. Maintain personal hygiene, grooming, dental care, Importance of reporting personal health issues. Thumb rule for taking precautionary health measures.	<ul style="list-style-type: none">➤ Ensure cleanliness around workplace.➤ Gain insights into personal hygiene practices.➤ Enumerate the importance of taking precautionary health measures.

Unit-VI Safety at Workplace(08 Marks)

S.No	Theory	Learning Outcome
1.	Assessing F&B workplace Hazards. Minimization of food service place hazards. Hotel evacuation procedures for fire, bomb threats, and mass destruction. Knowledge of storage Area: Safe Lifting Techniques in Banquets, Storage of acids & chemicals, Safety techniques for Handling, lifting and moving furniture and fixtures in Restaurants and in food service area. Standard Safety Procedure for Handling Electrical tools. Standard Safety Procedure for Handling floors Standard Safety Procedure for handling sharp Tools. First aid kits in the work place. Handling of Personal Protective Equipment's. Safety use of P.P.E for specific task on service area and display safety signs where necessary.	<ul style="list-style-type: none"> • Appreciate the precautions to be taken to avoid F&B department hazards • Comprehend the Standard Safety Procedure near service area. • Use First aid and personal protective equipment's while doing hazardous work.

Unit-VII Learn a foreign or local language(s) including English(05 Marks)

S.No	Theory	Learning Outcome
1.	Role of English in hospitality industry. Role of foreign language in hospitality industry. Development of short communication sentences. Listening and understanding the foreign language words. Speaking without hesitation and fear of being incorrect. Sharing and solving of complaints	<ul style="list-style-type: none"> ➤ Use language in effective communication ➤ Demonstrate clear and concise communication

Unit-VIII Customer-Centric Services(07 Marks)

S.No	Theory	Learning Outcome
1.	Definition, type of customer and customer profile. Target customer and their needs. Customer relation and complaints. Customer views, reviews on product and services and expectations. Use of customer feedback, complaints & rating for improvements. Customer behavior, loyalty and dealing with customer without disturbing his privacy. Providing honesty and transparency to customer while dealing. Treating customer with due respect and fairly. Implementation of market strategy for market development. Customer needs wants, expectations and their fulfillments. Introduction of new product and service and customer satisfaction. Feedback cycle and dealing with the negative feedback .Customer retention and offer promotion to improve customer satisfaction	<ul style="list-style-type: none"> ➤ Dealing with customer and assessment of quality of service ➤ Working towards the achievement of customer satisfaction. ➤ Fulfilling the customer needs and requirements

“Part- C”**Practical Work----- (50 Marks)**❖ **Practical Experiment**

- 1
- 2

❖ **Artifacts objects created by students**❖ **Demonstration**❖ **Projects (Individual and Group)**❖ **Portfolio**❖ **Written Test**❖ **Viva voce**❖ **Student Participation**

4. Tourism and Hospitality-II

Job Role: Food and Beverage Services Associate

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Resolving Customer Service Issues.	30	08
	Give a positive impression of oneself & the organization	30	12
	Work effectively with others	25	08
	Maintenance of safe secure and hygienic environment	25	12
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Resolving Customer Service Issues(08 Marks)

S.No	Theory	Learning Outcome
1	<ul style="list-style-type: none">• Listing and understanding the customer problems.• Discussion about the problem with the customer.• Informing and assuring about the problem solution.	Will be able to deal with customer problems.
2	<ul style="list-style-type: none">• Satisfaction of customer by having best solution.• Analysis of problem, solution and feedback collection.• Behavior while dealing with the customer.	Will be able perform analysis of solution given and feedback collection from the guests.
3	<ul style="list-style-type: none">• Providing the best available solutions to customers/guests.• SOP to deliver best solutions/information's to guest.• Dealing with other guests while dealing the guest problems.	Will be able to resolve customer service issues.

Unit-IV Give a positive impression of oneself and the organization.(12Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none">• Effective communication role in greeting the guest.• Using friendly manner and good behavior to assure guest and repeat business.• Choosing best way of communication for effective and impressive communication.	Role of effective communication in guest dealing.
2.	<ul style="list-style-type: none">• Explanation about products and services to the customers.• Sharing issue with senior and management.• Image building of products and services and organization.	Appreciate the importance of Delivering information to customers.
3.	<ul style="list-style-type: none">• Importance of prompt response to problem and solution• Explanation about the required time for problem solution.• Policy and guidelines to deal with the customer problems.	Responding to problems.

Unit-V Work effectively with others. (08Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none">• Politeness and respect while talking to the guest.• Instruction command and line organization.• Multi tasking and way to improve productivity.• Personality, behavior, and sincerity.	Understand the importance of Working in organization.

2.	<ul style="list-style-type: none"> • Keeping the promises and work target achievements. • Skilled required to deal with the guest (apart from communication) 	Organizational culture and citizenship.
3.	➤ Respect showing by: • Punctuality • Completing task on time • Eliminating waste • Integrity.	Respect a customer by showing good behavior.
Unit-VI Maintenance of Safe Secure and Hygienic Environment.(12Marks)		
S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none"> • Points to remember to maintain good appearance. • Workplace Hazards from equipment's and its prevention. • Managing emergency situations 	Maintenance of personal health and hygiene.
2.	<ul style="list-style-type: none"> • PPE using, storage and advantages. • Sign of safety and its usefulness in the industry. • Equipment operations and precautions. 	Personal Protection during work.
3.	<ul style="list-style-type: none"> • Type of fire and fire extinguishers. • Role of fire exit and first aid. • Importance of training in prevention of emergencies like fire, bomb threat etc. 	Fire and Fire Extinguishers
4.	<ul style="list-style-type: none"> • Medical Aids, CPR Used during emergencies. • Correct procedure for hospitalization and medical facilities. 	Use of Modern devices and prevention of accidents.

"Part- C"

Practical Work----- (50 Marks)

- ❖ Practical Experiment
 - 1
 - 2
- ❖ Artifacts objects created by students
- ❖ Demonstration
- ❖ Projects (Individual and Group)
- ❖ Portfolio
- ❖ Written Test
- ❖ Viva voce
- ❖ Student Participation

5. Private Security

Job Role: CC TV Video Footage Auditor

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-I	10	05
	Basic ICT, Entrepreneurship & Green Skills-I	10	05
Total		20	10
Part - B Vocational Skills	Tagging of Audit Findings and Maintaining a Library	20	10
	Security Incident Reporting And Documentation	20	09
	Backing Up Of CCTV Video Footage	25	12
	Occupational Health And Safety	20	09
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		110	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Tagging of Audit Findings and Maintaining a Library(20 Marks)		
S.No	Theory	Learning Outcome
1	<ul style="list-style-type: none">• Importance of tagging audit findings/incidents Tagging the exception anomaly Adding a tag to single or multiple cameras• Maintenance of institutional library of audit findings /incidents that have been tagged Trends and patterns of the tagged audit findings	<p>Demonstrate the knowledge of tagging audit findings</p> <p>Demonstrate the knowledge of maintaining a library</p>
Unit-IV Security incident reporting and documentation(20 Marks)		
S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none">• Introduction to CCTV footage recording and reporting• The 5 Ws and 1H (what, when, where, why, who and how) that are essential for information gathering• Reporting unusual occurrences/ abnormalities detected, at predefined intervals in a standardized manner on a daily basis• Interpretation of the ‘patterns’ based on historical data gathered through systematic audit/incident reports.• Recording and reporting procedure and formats (as per the respective industry vertical). Reports on the following: Daily Activities, Incidents, Accidents, Maintenance of Equipment, Summary reports, etc.• Sources of evidence related to safety/security incidents, importance of preserving the evidence.• Relevant signage’s and notice	<p>Demonstrate the knowledge of recording and preparation of reports</p>
Unit-V Backing up of CCTV video footage(25 Marks)		
S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none">• Introduction to CCTV video footage• CCTV video footage backup policies, procedures, and priorities (as per the respective industry vertical to which the establishment belongs)• Backing up CCTV video footage at multiple locations for the purpose of recovery (USB Flash drive, cloud, DVR, etc.)• Importance of confidentiality and data protection• Compliance with a legal obligation when processing	<p>Demonstrate the knowledge of storing and retrieving the CCTV video footage</p>

	<p>data for a particular purpose is a legal requirement</p> <ul style="list-style-type: none"> • Policies and procedures for deleting video footages when not required or necessary 	
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Unit-VI Occupational Health and Safety(20 Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none"> • Introduction to health and hygiene. • Issues in health and hygiene. • Maintaining the work area in clean and tidy condition. • Personal hygiene and grooming • Rules governing the use of the computer laboratory and electronic devices. • Injuries which may arise from the prolonged use of computer systems (repetitive strain injury, carpal tunnel syndrome, computer vision syndrome) • Emergencies and hazards at workplace • First-aid procedures. • Fire safety. 	<p>Demonstrate the knowledge of health and hygienic at workplace.</p> <p>Demonstrate the knowledge of procedures and techniques for preventing injuries and hazards</p>

“Part- C”

Practical Work----- (50 Marks)

- ❖ **Practical Experiment**
 - 1
 - 2
- ❖ **Artifacts objects created by students**
- ❖ **Demonstration**
- ❖ **Projects (Individual and Group)**
- ❖ **Portfolio**
- ❖ **Written Test**
- ❖ **Viva voce**
- ❖ **Student Participation**

6. Agriculture-I

Job Role: Dairy Farmer/Entrepreneur

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Maintaining healthy performance of livestock	50	12
	Performing hand and machine milking	25	08
	Maintaining health and safety standard at the work place	25	08
	Entrepreneurship	10	12
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
Student Participation			
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Maintaining healthy performance of Livestock(12 Marks)		
S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none">• Signs of healthy and unhealthy animals	Understand the healthy animal parameters
2.	<ul style="list-style-type: none">• Concept of wellbeing of animals• Concept of animal welfare• Animal welfare regulations	Treat animals as per animal welfare regulations.
3.	<ul style="list-style-type: none">• Routine monitoring and reporting of physical condition of the animals• Abnormal behaviour of dairy animals	Monitor the physical condition of the animals at suitable intervals, and recognize, record and report any abnormal signs
4.	<ul style="list-style-type: none">• Importance of external parasites• Effects of external parasites on animals• Prevention of external parasites• Treatment and control of external parasite	Check livestock for presence of external parasites
5.		Understand the health maintenance procedure of livestock
6.	<ul style="list-style-type: none">• Heat detection techniques• Artificial Insemination (AI)• Diagnosis of pregnancy and management of pregnant animals	Understand the pregnancy in farm animals
7.	<ul style="list-style-type: none">• Management of pregnant animals	Take Care during Pregnancy
8.	<ul style="list-style-type: none">• Management of calves• Importance of colostrum feeding• Substitute for colostrum• Housing, weaning and feeding schedule of calves• Composition of calf starter• Dehorning methods• Castration of calves	Understand handling of calves
9.	<ul style="list-style-type: none">• Model format for maintenance of health and treatment of animals	Record the health checkup of the animal and treatment provided
Unit-IV Performing hand and machine milking(04 Marks)		
S.No	Theory	Learning Outcome

1.	<ul style="list-style-type: none"> • Structure of udder • Physiology of milk letdown • Inhibition of milk letdown • Pre milking activities • Milking methods • Post milking activities 	Understand the pre-milking, milking and post
2.	<ul style="list-style-type: none"> • Mastitis and its importance • Mastitis detection methods • Control and prevention of mastitis 	Understand the Mastitis disease and precautions to be taken
3.	<ul style="list-style-type: none"> • Parts of milking machine and their functions 	Identify and use the milking machine and equipment
4.	<ul style="list-style-type: none"> • How milking machine works 	Understand the adjustments of the machine and equipment
5.	<ul style="list-style-type: none"> • Methods of milking • Full hand milking versus stripping and knuckling methods 	Understand the right milking technique
6.	<ul style="list-style-type: none"> • Sources of contamination in milk • Steps of clean milk production 	Follow procedure for clean milk production

Unit-V Entrepreneurship (12 Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none"> • Laws of dairy economics • Entrepreneurship opportunities in dairy sector • Peculiar economic facts in dairy sector • Factors influencing economics of dairy farming 	Understand the dairy farming economics and finance
2.	<ul style="list-style-type: none"> • Institutional finance for dairy farming • Common lending terms and conditions of financial institutions 	Collect information on financing institutions for dairy farming
3.	<ul style="list-style-type: none"> • Planning a dairy business 	Estimate the budget for dairy farming
4.	<ul style="list-style-type: none"> • Market information updates with special focus on e-marketing • Importance of market information of inputs and outputs 	Understand and update the market information
5.	<ul style="list-style-type: none"> • Manage the records of the Business 	Importance of record keeping
6.	<ul style="list-style-type: none"> • Marketing of milk and milk products 	Understand the method of marketing
7.	<ul style="list-style-type: none"> • Developing confidence with other market players 	Develop contact with market players

Unit-VI Maintain Health and Safety at the Workplace (08 Marks)

S.No	Theory	Learning Outcome
1.	<ul style="list-style-type: none"> • Importance of cleanliness and hygiene at the work place • Safe handling of equipment and animals 	Maintain a clean & efficient workplace
2.	<ul style="list-style-type: none"> • Prevention of transmission of infectious diseases and first aid measures • First aid measures in instances of poisoning, sunstroke, 	Render appropriate emergency measures

	electrocution, burn injuries and prolapse of uterus etc. in dairy animals	
	First aid for dairy animals	Practice General safety
	<ul style="list-style-type: none"> • Maintaining hygiene and bio security at dairy farm, and • disposal of carcass 	and first aid

“Part- C”

Practical Work----- (50 Marks)

- ❖ **Practical Experiment**
 - 1
 - 2
- ❖ **Artifacts objects created by students**
- ❖ **Demonstration**
- ❖ **Projects (Individual and Group)**
- ❖ **Portfolio**
- ❖ **Written Test**
- ❖ **Viva voce**
- ❖ **Student Participation**

6. Agriculture-II

Job Role: Organic Grower

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with general education subjects.

The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12th			
Module Part and Name	Unit Name	No. of Hours for Theory and Practical (165)	Max. Marks Theory and Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	5
	Basic ICT, Entrepreneurship & Green Skills-II	30	5
Total		55	10
Part – B Vocational Skills	Harvesting and Post Harvesting Technology.	60	20
	Standards and Certification in Organic Farming	25	10
	Marketing of Organic Produce	25	10
Total		110	40
Part – C Practical Test	Practical Experiment Artifacts (objects created by students) Demonstration Projects (individual and group) Portfolio Written test Viva voce Student participation		50
Total		165	100

“Part – B”

Vocational Skills----- (40 Marks)

Unit – III Harvesting and Post Harvesting Technology (20 Marks)

Theory	Learning outcomes
1. Maturity and ripening in crops 2. Factors affecting maturity of crops 3. Maturity indices 4. Stage of harvesting 5. Time of harvesting (climatic conditions, distance from the market) 6. Harvesting equipment	1. Identify the factors and stage of harvesting in agricultural crops
1. Methods of harvesting (fruit picking method, harvesting of vegetables, harvesting of flowers, harvesting of grain and seed crops) 2. Tools, equipment and containers used for harvesting 3. Time of harvesting. 4. Precaution to be taken during harvesting 5. Disposal of waste	2. Describe the harvesting methods and processes
1. Post-harvest activities grading, trimming, packing /containering, labelling, cleaning, drying, pre-storage treatments, and quality control 2. Grading of crop based on size, colour and quality 3. Packaging of crop with appropriate material and method 4. Ideal Storage condition (temperature, moisture, etc.) 5. Equipment and machinery for post-harvest activities 6. Methods for the recycling or disposal of waste created by post-harvest activities	3. Describe the post-harvest activities carried out in accordance with specifications
1. Storage methods which are appropriate to the crops being harvested, their final destination, customer/market requirements 2. Transportation activities	4. Describe the methods of storage of organic produce

Unit – IV Standards and Certification in Organic Farming (10 Marks)

Theory	Learning outcomes
1. Factors affecting food quality 2. National standards for organic food production and produce 3. Harvesting standards 4. Processing methods standards 5. Packing standards 6. Labelling standards 7. Storage and transport standards	1. Describe the national standards for organic produce and products
1. Inspection of organic farm and produce 2. Certification process – Organic standards, compliance, planning, documentation, inspection, fee, record keeping, etc.	2. Describe the process of inspection and certification of organic food

1. Types and importance of record keeping 2. Organic Product Certificate – (i) Name and description of the seller name, (ii) description of the buyer, (iii) date of delivery of the product, (iv) date of issuing of certificate, (v) quantity, (vi) season (vii) Lot	3. Demonstrate the process of documentation and record keeping for organic product certification
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Unit – V Marketing of Organic Produce.

(10 Marks)

Theory	Learning outcomes
1. Types of Businesses • Sole proprietorship • Partnership • Limited partnership • Corporation • Co-operatives 2. Government schemes and subsidies for starting an organic farm	Describe the various type of businesses and policies and regulations for organic produce
1. Marketing functionaries 2. Marketing channels 3. Marketing strategies related to • Product • Price • Distribution • Promotion 4. E-mail marketing campaigns 5. Major problems in marketing.	2. Describe the marketing functionaries and strategies
1. Role and functions of the following agencies/organisations : National Mission for Sustainable Agriculture, Agricultural and Processed Food Products Export Development Authority (APEDA), National Centre for Organic Farming (NCOF), Mission Organic Value Chain Development for North-Eastern Region (MOVCD-NER),	Describe the various Institutions/ Agencies/ Organisations involved in promotion and marketing of organic produce

Practical (External) 50 Marks

A. Hand on Skill

(30 Marks)

1. Group discussion on the factors influencing the maturity of crops
2. Identification of stage of harvesting of different agricultural crops.
3. Demonstration of the use of harvesting tools and equipments.
4. Group discussion on the precautions to be taken on harvesting, time of harvesting of various crops, and discussion on the post-harvest activities.
5. Visit to a warehouse/Processing unit for understanding the various procedures adopted for grading, packaging and storage of agricultural produce.
6. Preparation of charts showing the requirement of storage conditions, such as temperature, humidity, etc. for various organic produce.
7. Importance of record keeping.
8. Visit to an organic farm for understanding record keeping.

B. Viva Voce

(10 Marks)

C. Student Portfolio / Practical Notebook

(10 Marks)

7. Telecommunication

Job Role: Optical Fibre Technician

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Introduction to Optical Fiber Industry	30	12
	Optical Fiber Cable and Tools	30	12
	Installation of Optical Fiber Cable	30	08
	Fault Restoration, Safety Measures and Networking	20	08
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
Student Participation			
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Introduction to Optical Fiber Industry		(12 Marks)
S.No	Theory	Learning Outcome
1.	Opportunities in the broadband industry – global and local scenario, Role of optical fiber technician in telecom industry, Duties and responsibilities of optical fibre technician, History and evolution of fibre optic communication, Advantages of fibre optic	Understand the opportunities in the broadband industry
2.	Communication in telecom industry.	Read and interpret OFC route plan
3.	OFC route plan and site inspection for safe and secure cable installation: OFC route plan, Route inspection, Route diagrams, and Different site conditions,	Inspect the site for safe and secure cable installation
Unit-IV Optical Fibre Cable and Tools		(12 Marks)
S.No	Theory	Learning Outcome
1.	Types of optical fibre: Structure of optical fibre and its types – glass fibres, plastic fibres, fibre sizes. Types of fibre based on modes of propagation – single mode and multi-mode fibre, step index and graded index fibre, Attenuation and dispersion,	Describe the types of optical fiber
2.	Indoor and outdoor cables, distribution cable, breakout cable, Armored cable, messenger cable, submarine cable, short and long run cables, hybrid and composite cables. NEC Standards for optical fibre, Cable markings and Colour codes in optical fibre cables.	Describe the types of optical fiber cable
3.	Fibre optic cable specification: Tensile strength, bend radius, crush and impact, Diameter of optical fibre.	Understand fibre optic cable specification
4.	Identify and use fibre optic tools in tool kit: Basic Hand Tools - screwdriver, cable cutting knife, Plier, scissors. Round tube cutter, Electrical tape, optical fibre stripper, Splicing tools - optical fibre splicing machine, cleaver (scribe and precision), protection sleeve, mechanical splice connector, Matching Gel, clamp spring, Cleaning Tools -Cleaning swab, Tissue paper, Isopropyl alcohol, Testing tools – OTDR, Tools for installing cables -Tubing cutter, Rotary cable slitting and ringing tool, cable jacket stripper, Buffer tube stripper, Termination kit - connectors and its types, Optical Spectrum Analyser and its type.	Identify and use fiber optic tools in tool kit
Unit-V Installation of Optical Fibre Cable(08 Marks)		
S.No	Theory	Learning Outcome

1.	Handling of OFC cable: Factors effecting fibre optic cable – natural and man-made factors, Cable drum, Cable storage and handling, Inspection of the cable drum and OFC cable.	Demonstrate to handle OFC cables
2.	Cable installation process: Installation through trenching, aerial, Ducting process, Conduct figure 8' ing', Cable pulling and blowing, Fibre optic cable pull boxes, OFC preparation- Cable Jacket removal, Removal of jacket using wire stripper.	Carry out cable laying
3.	Post implementation of fibre cable laying: Splicing procedure – Fusion and Mechanical splicing process, testing of splicing, troubleshooting splicing, OFC termination, Splice trays, Splice enclosures.	Post implementation of fiber cables after laying
Unit-VI Fault Restoration, Safety Measures and Networking		(08 Marks)
S.No	Theory	Learning Outcome
1.	OFC testing using visual fault locator: Fault notification – process and guidelines, Fault localization and restoration, Rectification of faults, Results of investigation, and Reproduction of cable damage.	Test OFC using visual fault locator
2.	Observation of safety measures during installation of OFC: Material and chemical safety, Underground safety, Working safety, Using personal protective equipment (PPE's) – helmet, eye and face protection. Safety from LASER light, Ladder safety, Fibre safety in a trench.	Observe safety measures during installation of OFC
3.	Optical networking: Li – Fi Technology, Free Space Optics (FSO), Digital Television, Closed Circuit Television.	Optical networking

“Part- C”

Practical Work----- (50 Marks)

- ❖ Practical Experiment
 - 1
 - 2
- ❖ Artifacts objects created by students
- ❖ Demonstration
- ❖ Projects (Individual and Group)
- ❖ Portfolio
- ❖ Written Test
- ❖ Viva voce
- ❖ Student Participation

8. Media and Entertainment

Job Role: Texturing Artist

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	3D Animation	25	15
	Surface Shading and Maps	20	15
	Rendering, Compositing and File Formats	10	10
Total		55	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		110	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III 3D Animation(15 Marks)		
S.No	Theory	Learning Outcome
1.	Main menu bar of 3D software (character's and objects that are developed on 3D)	Describe essential Skills Movie Window in Autodisck Maya
2.	Surface types and in 3D, Compositing after the output, Roles and responsibilities of a Texturing Artist	Introduction to 3D
3.	Textures and shaders used for texturing	Demonstration of knowledge of texturing using shaders
4.	Surface materials - types and material nodes, Creating a real life 3D model	Describe the various types of surface materials
5.	Develop a 3D real life model	Create real life 3D Model
6.	Identify the properties of surface material	Identify the properties of surface materials
7.	Effect of lighting conditions on different surfaces, including the reflection and refraction.	Demonstrate the effect of lighting conductions on surfaces
Unit-IV Surface Shading And Maps (15 Marks)		
S.No	Theory	Learning Outcome
1.	Surface shading properties	Identify the surface shading and its properties
2.	Shading network in Autodesk Maya	Describe Shading Network in Autodesk Maya
3.	Creating and assigning materials to shader to surface in Autodesk	Describe assigning and creation of materials at various surfaces
4.	Types of texture maps ,Explain the purpose of various types of maps in texturing	Describe various texture maps
5.	UV Texture mapping in Autodesk MAYA	Describe UV texture mapping
6.	Process of creating bump maps	Creating Bump maps
7.	Creating specular maps in Photoshop	Specular Maps
8.	Creating seamless textures in Photoshop	Creating Seamless textures in Photoshop

Unit-V Rendering, Compositing And File Formats (10 Marks)

S.No	Theory	Learning Outcome
1.	Methods of rendering, performing basic rendering process, Perform basic compositing process	Perform rendering and compositing
2.	File formats used in production pipeline	Working with file formats
3.	Texture Library, Quick texturing, Colouring Particles.	Trouble Shooting

“Part- C”**Practical Work----- (50 Marks)****❖ Practical Experiment**

1. Demonstrate essential skills movie window in Autodesk Maya
2. Introduction to 3D
3. Demonstration of knowledge of texturing using shadders
4. Demonstrate the various type of surface materials
5. Demonstrate the various type of surface materials
6. Create real life 3D model
7. Identify properties of surface materials
8. Demonstrate the effect of lighting conditions on surfaces
9. Demonstrate the effect of lighting conditions on surfaces
10. Identify surface shading and its properties
11. Demonstrate shading network in Autodesk Maya
12. Demonstration of assigning and creation of materials at various
13. Demonstrate various texture maps
14. Demonstrate bump maps
15. Demonstrate Seamless Textures in Photoshop
16. Demonstrate rendering and Compositing
17. Working with file formats

❖ Artifacts objects created by students**❖ Demonstration****❖ Projects (Individual and Group)****❖ Portfolio****❖ Written Test****❖ Viva voce****❖ Student Participation**

9. Beauty and Wellness

Job Role: Beauty Therapist

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Make up Services	30	12
	Facial Beauty Services	30	12
	Salon Reception Duties	25	08
	Creating Positive Impression at workplace	25	08
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Make Up Services		(14Marks)
S.No	Theory	Learning Outcome
1.	Basic skin types, Basic skin tone.	Demonstrate the Knowledge of basic Skin types & skin tones.
2.	Types of makeup products:- (Foundation , Powder ,Blusher , Mascara, Eye shadows , Eye liner, Eyebrow pencil, Lip liner ,Lip stick/gloss	Demonstrate the Knowledge of various make up products.
3.	Application of foundation, Application of concealer, Application of face powder/loose powder, Application of blusher/shader/highlighter, Application of eye shadow, Application of eyeliner, Application of lip	Select & apply the right make up product to enhance facial features
4.	pencil, Application of lipstick	Select appropriate Bindi Designs
5.	Various styles of Bindi:- (Snake style ,Letter style, Question mark style)	Demonstrate Various Draping Techniques
Unit-IV Facial Beauty Services		(08 Marks)
S.No	Theory	Learning Outcome
1.	Benefits of steaming , Procedure of steaming , Facial Massage	Perform facial steaming
2.	Benefits of using right kind of electric, Brush, Galvanic electro facial skin treatment.	Perform Electric Facial skin treatment
Unit - V Salon Reception Duties		(08 Marks)
S.No	Theory	Learning Outcome
1.	Appointment booking, Scheduling appointments ,Handling clients	Perform Salon Reception Duties
2.	Store area management ,Waiting area	Maintain Reception Area
3.	Management, Retail area management.	Process Payments
Unit-VI Create A Positive Impression at Workplace		(10 Marks)
S.No	Theory	Learning Outcome
1.	Reception area and salon staff room management , Creation of a caring and comforting environment , Code of conduct and professional etiquettes , Working as an effective team member	Demonstrate the knowledge of creating positive impression at work place.
2.	Personal hygiene, Uniform and work accessories – Personal Protective Equipment, Maintaining good health and posture, Professional etiquettes.	Demonstrate professional etiquettes and personal grooming

“Part- C”
Practical (External):50 Marks

Hands on Skill

(30 Marks)

- 1: Identification of skin types
- 2: Application of foundation, concealer, face powder, eye shadow, lip pencil etc.
- 3: Group discussion on the advantages and disadvantages of various products used for makeup.
- 4: Demonstration of removal of makeup using toner, cold cream and cleansing oil
- 5: Demonstration of facial steaming
- 6: Demonstration of selection of products for makeup
- 7 Demonstration of bleach preparation and application
- 8: Threading procedure
- 9: Demonstration of Draping Saree or Lehanga
- 10: Facial Massage
- 11: Demonstration of procedures for maintaining personal hygiene

B) Viva Voice

10 Marks

C) Student portfolio / practical notebook

10 Marks

Details of Assessment Plan

1. There will be three components of evaluation:
 - a) Knowledge/Theory test
 - b) Practical test
2. The marks allocated for each evaluation will be as under:
 - a) Knowledge/theory test – 50 marks
 - b) Practical test – 50 marks

S.No.	Method of Assessment	Weight age (Max. Marks)	Minimum Pass Marks	Evaluator
1	Theory/Written Test	50	18	JKBOSE
2	Practical Test & Oral Test/Viva	50	25	Sector Skill Council(SSC)/JKBOSE
TOTAL		100 Marks		

PRACTICAL ASSESSMENT

EXTERNAL ASSESSMENT:

DISTRIBUTION	MARKS
Hands on Skill	15
Written Test	10
Viva Voce	15
Practical File / Student's Portfolio	10
TOTAL	50

- ❖ **Practical Experiment**
 - 1
 - 2
- ❖ **Artifacts objects created by students**
- ❖ **Demonstration**
- ❖ **Projects (Individual and Group)**
- ❖ **Portfolio**
- ❖ **Written Test**
- ❖ **Viva voce**
- ❖ **Student Participation**

10. Physical Education & Sports

Job Role: Fitness Trainer

Class (12th)

SCHEME OF ASSESSMENT

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Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Diet	30	12
	Kinesiology and Physiology	30	12
	Health and Safety	25	08
	Exercises	25	08
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Diet		12 Marks
S.No	Theory	Learning Outcome
1.	Balance diet, benefits of eating a balance diet, Importance of balance diet, types of diet-general diet, vegan diet, keto diet, mass gain diet, Components of balance diet (Carbohydrates, Proteins, Fats, Minerals, Vitamins and Water) and its functions, importance of hydration in fitness, Nutrition, Nutrients and its types, Malnutrition and its types, Remedies for mal nutrition. Diet, Purpose of diet, types of diet, factors affecting diet.	Describe meaning types and purpose of diet and Demonstrate the knowledge of planning diet for a client
Unit-IV Kinesiology and Physiology		12 Marks
S.No	Theory	Learning Outcome
1.	Meaning and Concept of Kinesiology, Definitions and Principles, Importance of Kinesiology for games and sports, Motion, Types of motion of a body, Laws of motions, Plane and Axis of human body, Muscular System, Types of Muscles, Functions and Characteristics of Muscles and Skeletal System and its functions, types of joints and their major movements.	Describe Kinesiology
2.	Cardio-vascular system; Function of heart, Function of lungs	Describe the physiology of human body
Unit - V Health and Safety		08 Marks
S.No	Theory	Learning Outcome
1.	Pre-data collection of medical history-major risk factors personal medical history, cardiovascular (CVD) risk profile and Health and fitness history questionnaire format.	Demonstrate knowledge about medical data collection and medical clearance
2.	Physical Assessment, Balance, Static and dynamic postural assessment, Cardiovascular assessment, Muscular Strength and muscular endurance assessment, Meaning of Posture, Types of good posture, Importance of good posture, Causes of poor posture, Meaning of Massage, Types and benefits of massage.	Identify physical fitness components assessed by fitness trainer
3.	Importance of physical activity readiness questionnaire, Physical condition cardiovascular conditions, Safety Measures and its preventions and First aid and medical Aid. (Measures).	Describe the purpose of physical activity readiness questionnaire
Unit-VI Exercises		08 Marks
S.No	Theory	Learning Outcome
1.	Warm-up Exercise (General and specific warm-up), Types of Warm Exercises, Guide lines that govern warm up programme., Meaning of Exercise, Types of Exercises, Benefits of Exercise, Importance of Exercises on human body.	Prepare on exercise plan and workout design
2.	Strength and Endurance-types of strength, types of endurance,	Develop strength and

	difference between strength and endurance, training methods of developing endurance	endurance
3.	Importance of proper exercise forms and techniques	Describe the mechanics of exercises
4.	Training method, frequency, intensity, volume interest, effect of training program, components of fitness and 1.	Cooling down and its methods, types of cooling down exercises.

“Part- C”

Practical Work----- (50 Marks)

❖ **Practical Experiment**

1

2

❖ **Artifacts objects created by students**

❖ **Demonstration**

❖ **Projects (Individual and Group)**

❖ **Portfolio**

❖ **Written Test**

❖ **Viva voce**

❖ **Student Participation**

11. Automotive

Job Role: Four Wheeler Service Technician

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Service Manual	10	04
	Serviceability, Replacement Or Repair Of Engine Components	20	08
	Transmission System	30	10
	Suspension System	20	08
	Auto electrical System	30	10
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
	Student Participation		
Total		110	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Service Manual (04 Marks)		
S.No	Theory	Learning Outcome
1.	Service Manual: Use of Service Manual, Areas covered under service manual, contents of manual.	Use of service manual Check for spill and leakage
Unit-IV Serviceability, Replacement Or Repair Of Engine Components (08 Marks)		
S.No	Theory	Learning Outcome
1.	General engine diagnosis, Replacement of piston rings Inspection and replacement of cylinder liner/bore sleeve, Inspection and replacement of connecting rod and engine bearing Testing of cooling system and replacement of defective components Regular servicing of MPFI system, CRDI system. Do test and Do test and	Do test and replace/repair of components in an auto engine.
Unit-V Transmission System (10 Marks)		
S.No	Theory	Learning Outcome
1.	Introduction to transmission system, overhauling of clutch, Servicing of differential unit and adjustment, Servicing of Propeller shaft , functions of Universal and slip joint .	Explain working of transmission system
Unit-VI Suspension System (08 Marks)		
Theory		Learning Outcome
1.	Introduction to suspension system, Leaf spring and shock absorber, Manual and power steering system.	Test working of suspension system
Unit-VII Auto Electrical System (10 Marks)		
Theory		Learning Outcome
1.	Electrical symbols, Use Of Electrical Symbol And Circuit Diagram , Multimeter and its uses: Digital multimeter, test procedures with the help of multimeter (Ammeter, Voltmeter, ohmmeter), General precautions while handling battery, Battery terminal test, leakage test. Gravity testing.	Auto electrical application in a vehicle

“Part- C”

Practical Work----- (50 Marks)

❖ Practical Experiment

1. Reading and understanding of service Manual.
2. Inspection and replacement of Piston Rings.
3. Measuring the dimensions of an object using Micrometer
4. Reading the verniercaliper and measuring the diameter of the cylinder.
5. Inspection and replacement of connecting Rod.
6. Measurement of Current Resistance and Voltage using multimeter.
7. Load testing of battery using load tester.
8. Practice of reading electrical symbols and circuit diagram.

❖ Artifacts objects created by students

❖ Demonstration

❖ Projects (Individual and Group)

❖ Portfolio

❖ Written Test

❖ Viva voce

❖ Student Participation

12. Apparels

Job Role: Specialized Sewing Machine Operator

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
Total		55	10
Part - B Vocational Skills	Introduction to Garment pre-production processes	22	9
	Feed-off the arm and bar-tack machines	22	9
	Flat lock machine, blind stitch machine, finishing machines and other equipment	22	9
	Maintain Organizational Health, Safety and Security at Workplace	22	7
	Quality Control in Stitching Process	22	6
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
Student Participation			
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Introduction to Garment Pre-Production Processes (10 Marks)		
S.No	Theory	Learning Outcome
1.	1. Importance of feed off the arm machine 2. Parts of feed off the arm machine 3. Threading of feed off the arm machine 4. Operating steps of feed off the arm machine	Demonstrate operationalization of Feed off the arm machine
2.	1. Importance of bar-tack sewing machine 2. Different parts of bar-tack sewing machine 3. Operating steps of bar-tack sewing machine	Demonstrate operationalization of bar-tack machine
Unit-IV Feed-Off The Arm And Bar-Tack Machines (09 Marks)		
S.No	Theory	Learning Outcome
1.	Meaning and Concept of Kinesiology, Definitions and Principles, Importance of Kinesiology for games and sports, Motion, Types of motion of a body, Laws of motions, Plane and Axis of human body, Muscular System, Types of Muscles, Functions and Characteristics of Muscles and Skeletal System and its functions, types of joints and their major movements.	Describe Kinesiology
2.	Cardio-vascular system; Function of heart, Function of lungs	Describe the physiology of human body
Unit - V Flat lock machine, blind stitch machine, finishing machines and other equipment (10Marks)		
S.No	Theory	Learning Outcome
1.	1. Introduction of flat lock machine 2. Parts of flat lock machine 3. Threading of flat lock machine 4. Operating steps of flat lock machine	Identify stitching process of flat lock machine
2.	1. Importance of blind stitch sewing machine 2. Different parts of blind stitch machine 3. Operating steps of blind stitch sewing machine	Identify operating system of blind stitch sewing machine
3.	Introduction, parts and operating steps of (Welt, attachment machine, Fusing machine), Pressing equipment used in garment industry: (Hand irons, Iron table, Buck press or steam press, Trouser pressing, Double-legger pressing, Carousel pressing, Steam finisher, Tunnel finisher, Creasing machine). Pleating machine	Identify and operate finishing machines and other equipment's
Unit-VI Maintain Organizational Health, Safety and Security at Workplace (07 Marks)		
S.No	Theory	Learning Outcome

1.	1. Importance of health 2. Types of hazards at workplace 3. Steps of reporting to concerned person in an organization at the time of emergency 4. Emergency action plan	Describe importance of health and safety at workplace
2.	Introduction to safety Importance of ergonomics at workplace Recommendations to improve the safety and health conditions in garment manufacturing units Important safety instructions while working on specialized machines Safety rules for safe working operations unspecialized sewing machine	Explain health and safety measures at workplace
3.	Social responsibility of companies Waste management in textile and apparel industry	Explain steps of storing materials and equipment
4.	Purpose and benefits of organizational policies Importance of organizational goals Workmen security system	Describe organizational policy, goals, rules & regulation and workmen security
Unit-VII Quality Control in Stitching Process		(04 Marks)
S.No	Theory	Learning Outcome
1.	Importance of quality in stitching process Types of problem and factors which affecting quality of stitching	Describe quality control process and its importance in garments
2.	Classification, cause and rectification of defects	Narrate types of faults & corrections required in Stitching process

“Part- C”

Practical Work----- (50 Marks)

- ❖ **Practical Experiment**
 - 1
 - 2
- ❖ **Artifacts objects created by students**
- ❖ **Demonstration**
- ❖ **Projects (Individual and Group)**
- ❖ **Portfolio**
- ❖ **Written Test**
- ❖ **Viva voce**
- ❖ **Student Participation**

13. Electronics and Hardware

Job Role: Field Technician- Air Conditioner

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
	Total	55	10
Part - B Vocational Skills	Repair And Maintenance Of Air Conditioner	30	10
	Advanced Technologies In Air Conditioning	30	10
	Troubleshooting IOT Applications In Air Conditioner	30	10
	Workplace Safety Measures	20	10
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
Student Participation			
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Repair and Maintenance of Air Conditioner		(10 Marks)
S.No	Theory	Learning Outcome
1.	Preventive maintenance of AC – filter, power chords, indoor unit, outdoor unit, switches. Fault finding using customer interaction, initial inspection, symptom, history of problem, age of appliance, status of upkeep Process for checking the electronic components of AC like compressor, capacitor, fan, motor, blower motor, PCB or control panel.	Identify the faults in AC
2.	Testing equipment – clamp meter, pressure gauge, Tools for repair and servicing - Wiring accessories, Tube cutter, Tube binder, Flaring tool, Brazing torch, Vacuum pump, Weight scale, Gas cylinder, Temperature meter.	Use tools and test equipment
3.	Some common problems, their possible causes and remedy of AC such as – unit not working, fuse off, low cooling, fan not working, fan working but not cooling, continuous switching on and off of the unit. Repairing of remote – sensor problem, push button, pad problem ,Procedure for repairing of different components such as fan, PCB, air sensor, grill sensor, brazing in case gas leak ,Checking the functionality of repaired components, Customer feedback Invoicing and billing.	Attempt common problem in AC maintenance
Unit-IV Advanced Technologies in Air Conditioning(10 Marks)		
S.No	Theory	Learning Outcome
1.	Internet technology: Internet of things (IoT), technology App control of AC using smart phone, Use of micro controller and sensors, Fuzzy logic technology.	Demonstrate the connectivity AC using Internet
2.	Dual inverter technology, Concept of air curtain fan, Concept of smart cooling, Slim size air conditioners ,Four dimensional air flow with wider angle, Concept of acoustic jacket. Auto clean technology, Anti corrosive technology, Blue fin technology, Protection from voltage fluctuations, Protection from leakage, Protection from fire. Fast cooling technology, Efficient cooling technology	Describe the advanced technology in air conditioning
Unit - V Troubleshooting IoT applications in Air Conditioner (10 Marks)		
S.No	Theory	Learning Outcome
1.	Common problem in IoT application, List of error codes of related issues.	Identify common problem related to IoT applications
2.	Software issues - Internet connection, Wi-Fi, Bluetooth version compatibility, Troubleshooting software issues.	Troubleshoot to resolve IoT software issues

	Steps to resolve software issues, Software setting - Update software and network setting.	
3.	Hardware issues - IoT circuit board, sensor, power connection, network cables, Steps for troubleshooting hardware issues, Steps to replace the faulty sensor and circuit board.	Troubleshoot to resolve IoT hardware issues
4.	Mobile app for checking the functionality, Various functions in mobile app ,Troubleshooting through mobile app.	Ensure the functionality using mobile app
Unit-VI Workplace Safety Measures (10 Marks)		
S.No	Theory	Learning Outcome
1.	Refrigerant cylinder – Handling and storage ,Precautions in safe handling, Effect of moisture, Use of recovery unit, Prevention of HFC become flammable	Use safe handling of refrigerant cylinder
2.	Vacuum pump and leak detector, Micron gauge, Manifold gauge in charging hoses, Safety by using power tool.	Safe Handling of tool

“Part- C”

Practical Work----- (50 Marks)

- ❖ **Practical Experiment**
 - 1
 - 2
- ❖ **Artifacts objects created by students**
- ❖ **Demonstration**
- ❖ **Projects (Individual and Group)**
- ❖ **Portfolio**
- ❖ **Written Test**
- ❖ **Viva voce**
- ❖ **Student Participation**

14. Plumbing

Job Role: Plumber (General)

Class (12th)

SCHEME OF ASSESSMENT

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class 12th opting for vocational subject along with mainstream education. The unit-wise distribution of hours and marks for Class 12th is as follows:

Class 12 th			
Module Part & Name	Unit Name	No. of Hours for Theory & Practical (165)	Max. Marks Theory & Practical (100)
Part - A Employability Skills	Communication & Self-Management Skills-II	25	05
	Basic ICT, Entrepreneurship & Green Skills-II	30	05
	Total	55	10
Part - B Vocational Skills	Installation of plumbing fixtures	30	9
	Troubleshooting and maintenance for plumbing	20	8
	Health and safety	15	7
	Working effectively with others	30	9
	Optimum utilization of resources	15	7
Total		110	40
Part - C Practical Work	Practical Experiment		50
	Artifacts objects created by Students		
	Demonstration		
	Projects Individual & Group		
	Portfolio		
	Written Test		
	Viva Voce		
Student Participation			
Total		165	100

Theory: 50 Marks

“Part-A”

Employability Skills----- (10 Marks)

**Syllabus of Employability Skills is available at Page No. 06*

“Part - B”

Vocational Skills----- (40 Marks)

Unit-III Installation of plumbing fixtures(10Marks)		
S.No	Theory	Learning Outcome
1.	Types, characteristics, materials, finishes, uses, limitations, working principle	Describe the types, characteristics, materials, finishes, uses, limitations, working principle and performance measures of various plumbing related fixtures.
2.	List the accessories, supports and fasteners required for installing various types of washbasin, sinks, water closet, urinals, bath tubs and showers.	List the accessories, supports and fasteners required for installing various types of washbasin,
3.	Sensor types of fittings and fixtures.	List the sensor types of fittings and fixtures.
4.	Explain the basic working principle of sensor faucet and the principles of solenoid ball valves and sensors in touch less system.	Basic working principle of sensor faucet and the principles of solenoid ball valves and touch less system.
5.	Correct practices for installing plumbing	Describe the correct practices for installing plumbing fixtures
6.	Importance of traps for the sanitary fittings, both deep seal traps and low seal traps.	Explain the importance of traps for the sanitary fittings, both deep seal traps and low seal traps
7.	Working and use of conservancy, water carriage, and the combination system.	Explain the working and use of conservancy, water carriage and
8.	Alignment and elevation techniques used in plumbing systems.	Discuss alignment and elevation techniques used in plumbing systems.
9.	Codes, standards and regulations applicable for the installation of plumbing fixtures.	List the codes, standards
10.	Types, characteristics, materials, finishes, uses, limitations, working principle	Describe the types, characteristics, materials, finishes, uses, limitations, working principle and

		performance measures of various plumbing related fixtures.
11.	List the accessories, supports and fasteners required for installing various types of washbasin, sinks, water closet, urinals, bath tubs and showers.	List the accessories, supports and fasteners required for installing various types of washbasin, sinks, water closet, urinals, bath tubs and showers.

Unit-IV Troubleshooting and Maintenance for Plumbing(08 Marks)

S.No	Theory	Learning Outcome
1.	Testing procedures to be performed to check proper functioning of the fixtures and pipe work installed.	List the various types of faults (such as leakages, improper joints, broken sewer; dripping faucet sand water lines, etc.) associated with plumbing systems (such as aerators, septic systems etc.).
2.	Remedial and preventive measures for common plumbing problems with respect to fixtures, pipes and fittings	List the testing procedures to be performed to check proper functioning of the fixtures and pipe work installed.
3.	Correct practices for troubles hooting and maintenance for plumbing fixtures and systems.	State the remedial and preventive measures
4.	Application of mechanical and hydraulic principles for learning blockages.	Discuss
5.	Methods of corrosion protection such as coating sand tape.	Explain the application
6.	Common organizational policies related to costing, scheduling, and procurement and documentation	List the methods of
7.	Testing procedures to be performed to check proper functioning of the fixtures and pipe work installed.	Discuss common organizational policies related to costing, scheduling, procurement and documentation for plumbing maintenance and repair work.

Unit - V Health and Safety (10 Marks)

S.No	Theory	Learning Outcome
1.	Differentiate between risks and hazards.(KU4)	Differentiate between risks and hazards.(KU4)
2.	Specific safety and health related problems faced in domestic, commercial and institutional setups.	Specific safety and health related problems faced in domestic, commercial and institutional setups.
3.	Various types of hazards (such as physical, fire, chemical compounds and electrical)	List the various types of hazards (such as physical,

		fire, chemical compounds and electrical) that could affect the work process.
4.	Various hazardous environments and common hazards that can occur during plumbing installation and maintenance along with their precautions and remedial measures.	List the Various hazardous environment and common hazards that can occur during plumbing installation and maintenance along with their precautions and remedial measures.
5.	Importance of various types of personal protective equipment (PPE).	Discuss the various 'Importances' of various types of personal protective equipment (PPE).
6.	General health and safety equipment commonly is kept at the workplace.	Discuss where the General health and safety equipment commonly is kept at the workplace.
7.	Various types of safety signs and their significance in the work process.	Explain the various types of safety signs and their significance in the work process.
8.	Various causes of fire and precautionary activities to prevent the fire accident.	Discuss the Various causes of fire and precautionary activities to prevent the fire accident.
9.	List the different techniques that employ various methods (such as using extinguishers, water hose, sprinklers, sand bucket, wet blanket, etc.) and materials such as water, powder, foam, CO ₂ , fire extinguishing chemical, sand, blanket, etc. used for extinguishing fire as per the type (as per class A, B, C and D).	List the different techniques that employ various methods (such as using extinguishers, water hose, sprinklers, sand bucket, wet blanket, etc.) and materials such as water, powder, foam, CO ₂ , fire extinguishing chemical, sand, blanket, etc. used for extinguishing fire as per the type (as per class A, B, C and D).
10.	Rescue techniques applied during a fire hazard or electrocution.	
11.	Basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, minor burns, poisoning, eye injuries etc.	Describe rescue techniques applied during a fire hazard or electrocution.
12.	Potential injuries and health problems associate with in correct	Discuss Appropriate, Basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, minor

		burns, poisoning, eye injuries etc.
Unit-VI Working effectively with others		(06 Marks)
S.No	Theory	Learning Outcome
1.	State the importance of effective communication in the workplace	State the importance of effective communication in the workplace
2.	Typical organizational hierarchy and the various categories of people that one is required to communicate and coordinate with	Typical organizational hierarchy and the various categories of people that one is required to communicate and coordinate with
3.	List various components of effective communication	List various components of effective communication
4.	State the importance of using inclusive language (verbal, non-verbal and written) that is gender, disability and culturally sensitive	State the importance of using inclusive language (verbal, non-verbal and written) that is gender, disability and culturally sensitive
5.	Importance of team work and developing effective working relationships for professional success	Importance of team work and developing effective working relationships for professional success
6.	Importance and ways of managing interpersonal conflict effectively	Importance and ways of managing interpersonal conflict effectively
7.	Discuss how to express and address grievances appropriately and effectively	Discuss how to express and address grievances appropriately and effectively
8.	State the importance of ethics and discipline for professional success.	State the importance of ethics and discipline for professional success.
9.	Discuss the legislation, standards, policies, and procedures relevant to own employment and Performance conditions.	Discuss the legislation, standards, policies, and procedures relevant to own employment and Performance conditions.
10.	Discuss importance of dress code in organizations.	Discuss importance of dress code in organizations.
11.	Impact of gender, disability, cultural and age-related stereotyping biases, at the workplace and in society	Impact of gender, disability, cultural and age-related stereotyping biases, at the workplace and in society

12.	List the different types of disabilities and the challenges faced by persons with disability (PwD)	List the different types of disabilities and the challenges faced by persons with disability (PwD)
13.	State the laws, acts, provisions and schemes defined for PwD by the Government bodies	State the laws, acts, provisions and schemes defined for PwD by the Government bodies
14.	Discuss gender, disability and cultural biases, stereotypes and impact on others	Discuss gender, disability and cultural biases, stereotypes and impact on others
15.	Discuss basic gender concepts such as gender power relations, gender roles, access and control, gender sensitivity, gender equity and equality	Discuss basic gender concepts such as gender power relations, gender roles, access and control, gender sensitivity, gender equity and equality
16.	Discuss the importance of gender sensitivity and equality	Discuss the importance of gender sensitivity and equality
17.	List the indicators of harassment and discrimination based on gender, disability, caste, religion or culture that occurs at a typical workplace	List the indicators of harassment and discrimination based on gender, disability, caste, religion or culture that occurs at a typical workplace
18.	State general organizational norms and procedures applied to protect against harassment	State general organizational norms and procedures applied to protect against harassment and discrimination
19.	Discuss the importance of reporting incidents of harassment and discrimination to appropriate authority.	Discuss the importance of reporting incidents of harassment and discrimination to appropriate authority.

Unit-VII Optimum Utilization Of Resources

(06 Marks)

S.No	Theory	Learning Outcome
1.	Discuss the practices and impact of inefficient utilization of material and water	Discuss the practices
2.	Describe ways of efficiently managing material	Describe ways of efficiently managing material and water in the process.

3.	Explain the basics of electricity.	Explain the basics of electricity.
4.	List common electrical and thermal equipment used in	List common electrical
5.	Describe the use of prevalent energy efficient devices.	Describe the use of prevalent energy efficient devices.
6.	List in dictators of common electrical problems.	List indicators of common electrical problems.
7.	Discuss common practices	Discuss common practices of conserving electricity.
8.	Explain the importance of checking if the equipment/machine is functioning normally before commencing work and ensuring it is rectified.	Explain the importance of checking if the equipment/machine is functioning normally before commencing work and ensuring it is rectified
9.	Explain the usage of different colors of dustbins.	Explain the usage of different colors of dustbins.
10.	Differentiate between recyclable and non-Recyclable, and hazardous waste generated.	Differentiate between recyclable and non-recyclable, and hazardous waste generated.
11.	Discuss efficient waste management practices.	Discuss efficient waste management practices.
12.	Discuss the common ways employed by organizations, to minimize waste generated from plumbing activities.	Discuss the common ways employed by organizations, to minimize waste generated from plumbing activities.
13.	Discuss common sources of pollution and ways to minimize it	Discuss common sources
14.	Explain the importance of reporting mal functioning (fumes/sparks/emission/vibration/noise) and lapse in the maintenance of equipment on time.	Explain the importance of reporting mal functioning (fumes/sparks/emission /vibration/noise) and

“Part- C”

Practical Work----- (50 Marks)

- ❖ **Practical Experiment**
 - 1
 - 2
- ❖ **Artifacts objects created by students**
- ❖ **Demonstration**
- ❖ **Projects (Individual and Group)**
- ❖ **Portfolio**
- ❖ **Written Test**
- ❖ **Viva voce**
- ❖ **Student Participation**

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