



PROGRAMME GUIDE

**DIPLOMA IN VOCATIONAL
EDUCATION AND TRAINING**

(DISTANCE-CUM-CONTACT MODE)

2023-2024



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एन सी ई आर टी
NCERT

PSS Central Institute of Vocational Education

(a constituent unit of NCERT, under Ministry of Education, Government of India)

Shyamla Hills, Bhopal - 462 002 , Madhya Pradesh, India

www.psscive.ac.in

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**Programme Guide for
Diploma in Vocational Education
and Training
(Distance-Cum-Contact Mode)**

July, 2023

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PROSPECTUS and DVET PROGRAMME
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PREFACE

Dear Learners,

Welcome to the Diploma in Vocational Education and Training (DVET) programme!

As you are aware that the Vocationalisation of School Education under *Samagra Shiksha* has been aligned with the National Skill Qualifications Framework (NSQF), it has also linked the various elements of vocational education in schools with those of general education, businesses, and industry so that the vocational pass-outs can exit with employment-related skills. It envisages close partnership with the industry in the design, development, delivery, assessment, and certification of competencies.

The Vocational Teachers/Trainers need to be experts in pedagogy and domain-specific skills. They are expected to plan and develop course content, adopt different methods of instructions, liaison with VET stakeholders, including the industry for practical training and on-the-job training, assess and evaluate students' work to determine progress, provide feedback, and make suggestions for improvement in the competencies of the students. They should be able to prepare reports and maintain records for students and conduct training and assessment activities in classrooms and laboratories/workshops. They need to continuously participate in professional development activities for updating their competencies and adopt new pedagogical approaches for teaching employability skills, life skills, vocational skills, and 21st-century skills. The Diploma in Vocational Education and Training (DVET) programme has been designed to cater to the needs of those who aspire to become Vocational Teachers/Trainers and by joining this programme you have taken the right step toward developing your skills with the help of faculty members and consultants of PSSCIVE, and external experts from various domains of learning.

This Programme Guide will help you to understand the various aspects of the DVET programme which is being offered in distance-cum-contact mode, and would also help you to answer your queries. Besides giving an overview of the DVET programme, it provides you with information on the registration or admission process, course structure, teaching-learning methodology, assessment and certification process. It will also help you to make a choice of the elective subject in the sector in which you are interested or already working to provide training to the students.

Dr. Deepak Paliwal

Joint Director

PSS Central Institute of Vocational Education, Bhopal

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Part- A

GENERAL INFORMATION

DIPLOMA IN VOCATIONAL EDUCATION AND TRAINING

1. BACKGROUND

India has a significant demographic advantage, with more than 54% of its population below 25 years of age and over 62% in the working age group of 15-59 years. However, this advantage is predicted to last only until 2040, giving India a narrow time frame to capitalize on its demographic dividend and address its skill shortages.

To meet the challenges posed by this demographic shift, the Indian education system has undergone significant changes in recent years. Vocational Education and Training (VET) have emerged as a crucial tool in developing the skills of the young population and building human resources for economic growth.

The government has made efforts to reorganize the overall vocational education system and introduce vocational courses along with general educational subjects from Grades IX to XII. The Vocationalisation of School Education component aims to introduce vocational subjects as an additional or compulsory subject at the secondary level and as compulsory (elective) at the senior secondary level.

The Ministry of Skills Development and Entrepreneurship has identified 24 priority sectors based on skill gap studies, covering various technical and non-technical fields such as Agriculture, Tourism, Apparel, Automotive, and Hospitality. The National Occupation Standard developed by NSDC for priority sectors prepares students for the knowledge, vocational/technical skills, and core skills/values needed to perform various tasks related to certain crafts and trades.

However, vocational teachers recruited by VET institutions or vocational training providers in the states and union territories generally lack vocational teaching skills and vocational pedagogy due to the non-availability of formal education in vocational education. To address this, the Diploma in Vocational Education and Training (DVET) course has been designed and developed to prepare teachers/trainees with vocational pedagogy. The DVET course will help teachers/trainers to transact vocational courses as per the objective of vocationalisation of education, using learning outcome-based and activity-based approaches.

Overall, India's demographic advantage and the growing importance of skills and innovation in the global economy present both opportunities and challenges. The government's focus on vocational education and training, as well as efforts to bridge the skills gap, can help the country harness its demographic dividend and achieve sustained economic growth in the years to come.

2. OVERVIEW OF THE PROGRAMME

To address the need for trained vocational teachers in the country, the PSS Central Institute of Vocational Education (PSSCIVE) has developed a Diploma programme in Vocational Education and Training. This programme is offered through a combination of distance and contact learning to provide access to in-service teachers who wish to enhance their skills in vocational education and training.

The Diploma programme consists of eight compulsory papers and two elective papers, and trainees are required to complete an internship and project work. The curriculum and course materials for each paper are prepared by qualified faculty from PSSCIVE and experts in the relevant field. The programme will be delivered in a blended teaching-learning mode, which includes a combination of distance learning, face-to-face contact learning, and a practicum component.

The practicum component of the programme provides learners with opportunities for school and industry-based training, enabling them to acquire the necessary knowledge and skills required for effective teaching and training. Through the internship programme and project work, teachers/trainees will develop the necessary understanding and skills required for conducting skill-based training in the relevant field.

The syllabus section of this document provides the rationale, objectives, and unit contents of each paper in the Diploma programme. By completing this programme, teachers/trainees will be equipped with the necessary skills to provide quality vocational education and training. The DVET Program offered by PSSCIVE conforms to the guidelines set out in the National Education Policy of 2020.

RECOGNITION

Pandit Sunderlal Sharma Central Institute of Vocational Education, Bhopal is a constituent unit of National Council of Educational Research and Training (NCERT), under Ministry of Education, Government of India.

2.1 Aims and Objectives

2.1.1 Aims

The aim of the program is to enhance the skills and knowledge of teachers and professionals in the field of vocational education and training, with the aim of strengthening the vocational education system.

2.1.2 Objectives

The DVET program aims to instill the following in its trainees:

- The ability to teach vocational education and training concepts effectively through instruction and learning
- The process of developing, implementing, and evaluating curricula
- The utilization of appropriate methods and media to enhance vocational teaching and learning outcomes
- The selection of valid and reliable methods for student assessment and evaluation
- The integration of ICT tools in teaching, learning, and evaluating vocational courses
- The provision of vocational guidance and support systems for students
- The development of employability skills
- The enhancement of research capabilities related to vocational education and training issues
- The application of vocational skills in a work-related environment

2.2 Target Group

The program is appropriate for individuals seeking to establish a career in the field of vocational education and training, and is accessible to both pre-service and in-service candidates.

2.3 Duration:

The DVET program spans over one year and is divided into four trimesters, as outlined below:

Trimester	Mode	Activity	Duration
I	Distance	Self-learning, online classes, assignment, portfolio, examination.	3 months (October - December)
II	Distance	Self-learning, online classes, assignment, portfolio, examination.	3 months (January - March)
III	Distance cum-Contact	Online classes, hands-on activities, field trip, assignment, portfolio, expert lectures, examination.	3 months (April – June) Distance (April – May) Contact (May – June)
IV	Contact	Internship and Project Work at any location in India	3 months (July – September)

2.4 Medium of Instruction

As English is the language of instruction, a fundamental level of written and spoken English proficiency will be necessary.

2.5 Study Centre

PSS Central Institute of Vocational Education (PSSCIVE), Shyamla Hills, Bhopal

3. ADMISSION REQUIREMENT

3.1 Qualification

To be eligible for the Diploma in Vocational Education and Training program, applicants must possess the qualifications listed below:

Essential: A Bachelor's Degree or an equivalent qualification in any field from a University or Institution recognized by the Government.

Desirable: At least one year of experience teaching vocational courses in a school or working in an industrial setting.

3.2 Number of Seats and Reservation Policy

The maximum numbers of seats are 40 (forty). The PSSCIVE provides reservation in admission for various categories of learners, including Scheduled Castes, Scheduled Tribes, non-creamy layer of OBC, Economically Weaker Sections (as notified by MHRD through OM 12-4/019-U1 in

January 2019), and Physically Handicapped learners, in accordance with the Government of India rules for admission to its DVET programme. However, any learner found to have submitted a forged certificate under any category will not only have their admission cancelled but also face legal action, as per the rules of the Government of India. Reservation of seats: EWS-10%, OBC(NCL)-27%, SC-15%, ST-7.5%, and PH-4%.

3.3 Admission Procedure

To seek admission in the Diploma Programme, candidates must download the APPLICATION FORM format from the PSSCIVE website (www.psscive.ac.in) and fill it as per the instructions provided. Candidates must pay a non-refundable application fee of Rs. 500 (online payment preferred) and submit the completed application by speed post / in-person to DVET Coordinator, PSS Central Institute of Vocational Education (PSSCIVE), Shyamla Hills, Bhopal – 462 002, well before the due date. Applications that are received after the designated due date will not be considered, regardless of the reason for their delay. Applications without the application fee, incomplete data, without a signature, or proof of claim will not be accepted.

Screening of the applications will be conducted by a Screening Committee constituted by the Joint Director, PSSCIVE, Bhopal. A merit list will be prepared based on the marks obtained in the qualifying examination and as per the government of India reservation policy. Candidates who are selected will be informed through e-mail/telephone/post, and the list of selected candidates will be available on the Institute's website (www.psscive.ac.in). After selection, candidates must pay a Programme Fee of Rs. 10,000 to confirm their admission.

Physical cross verification of documents will be conducted at an appropriate time, and if any discrepancy is found, the admission of the candidate will be cancelled, and disciplinary action will be taken. For any queries, candidates can send an e-mail message to DVET (dvet@psscive.ac.in).

3.4 Programme Fees and other Expenses

Application Fee

An application fee of Rs. 500 (non-refundable) must be paid by any online mode (Account details are given below) from any Nationalized bank and the payment details must be entered in the application form.

Programme Fee

The selected candidates are required to pay a programme fee of Rs. 10, 000 (Rupees Ten Thousand only) (non-refundable) by any online mode (Account details are given below) from any Nationalized bank. Tuition fee (Rs.2000/-) is exempted for applicants belonging to SC/ST.

(a)	Admission Fee	:	1,000
(b)	Tuition Fee (No Tuition fee for SC/ST)	:	2,000
(c)	Study Material, Examination fee, etc.	:	7,000

Programme Fee	Total	:	10,000
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Payment of fees can be made by any online mode from any Nationalized bank.

The account details are given below:

1. Name of the Account: **PT SUNDERLAL SHARMA C I V E**
2. Account Number: **10121604354**
3. Name of the Bank: **STATE BANK OF INDIA**

4. Name of the Branch: **R.C.E. Bhopal**
5. IFSC Code: **SBIN0002889**

Scheme of Fee Support to SC/ST Students

The PSSCIVE has a policy of exempting programme fees for students belonging to the SC/ST category. This policy is reviewed for every admission cycle. However, certain SC and ST students are not eligible for fee exemption, including those who are employed or receiving fellowships or fee exemptions from other agencies, as well as those whose parents or guardians' income from all sources exceeds Rs 8 lakhs during the financial year according to Government of India norms. When applying for admission, applicants must provide an income certificate issued by an authorized government agency. It's important to note that the fee exemption is limited to the extent of the Programme Fee stated in the Prospectus.

Hostel and Canteen Facility

During the contact learning period of Trimester-3, candidates are required to bear the expenditure towards boarding and lodging. However, for non-local candidates, boarding and lodging facilities are available upon request at the Training Hostel of PSSCIVE, in accordance with NCERT norms. To avail of these facilities, candidates must indicate their requirements in the application form and make advance payment for the entire period upon arrival at the PSSCIVE Hostel.

Accommodation

The availability of hostel facilities is subject to request, and it follows a first-come, first-served basis. The charges for accommodation in a shared room with AC are Rs. 100 per day. Please note that the hostel does not permit family members to stay with guests.

Meals

The Institute offers a canteen facility to its patrons, which serves solely vegetarian meals. The cost of meals may differ based on the type of meal chosen.

*Please note that the charges for both accommodation and meals are subject to change in accordance with NCERT norms.

4 PROGRAMME STRUCTURE

Course Preparation

A team of experts, consisting of professionals from various universities and specialized institutions across the country, as well as in-house faculty, carefully prepare the Reference Study Materials. The content undergoes thorough scrutiny by content experts and in-house faculty and is then edited by language experts at PSSCIVE before being sent for printing. In addition, audio and video materials are produced in consultation with course writers, in-house faculty, and producers. The faculty and external experts preview and review the material and make any necessary modifications before dispatching the final materials to the DVET students.

The DVET programme comprises theoretical instructions, practical work and internship. The theory courses are with the basic elements of vocational education and training system and pedagogy of vocational education.

Credit System

The DVET programme is structured around a 'Credit System', which helps students to gauge the amount of academic effort required to successfully complete each course. In this system, each credit is equivalent to 30 hours of student study, encompassing all learning activities such as reading and comprehending print material, listening to audio, watching video, attending online sessions, teleconferences and writing assignment responses. Therefore, a 3-credit course will entail 90 hours of study.

To complete the DVET programme, students must successfully complete all assignments, practicals, projects, term-end examinations, and other requirements for each paper in the programme. The programme consists of a total of 36 credits and has 1100 marks.

The structure of the DVET programme spans over a period of 12 months, divided into four trimesters. Each paper is identified by a code and title, indicating the credits, marks, mode of learning, and duration.

Evaluation and Examination

The scheme of examination will be made available on the website of PSSCIVE. In Trimester I and II, the students will be evaluated under three components i.e. Assignments 30%, Portfolio 20% and Written examination 50% weightage. Trimester III is in distance cum contact mode and the trainee will be evaluated on four parameters, Assignment 10%, Portfolio 10%, Skill/Practical based continuous assessment 60% and Written examination 20%. Trimester IV is in distance mode and the trainee will be assessed and evaluated in internship and project work.

4.1 TRIMESTER - I

Mode: Distance (Guided Self-Learning)

Duration: (October - December) (3 months)

Sr. No.	Paper Code	Paper title	Credits	Marks
1.	DVET-101	Vocational Education and Training System	03	100
2.	DVET-102	Curriculum Development, Implementation & Evaluation	03	100
3.	DVET-103	Instructional Design and Development	03	100
TOTAL			09	300

4.2 TRIMESTER – II

Mode: Distance (Guided Self-Learning)

Duration: (January - March) (3 months)

Sr. No.	Paper Code	Paper title	Credits	Marks
4.	DVET-201	Assessment and Evaluation	02	50
5.	DVET-202	Vocational Guidance and Counselling	02	50
6.	DVET-203	Employability Skills Development	03	100
7.	DVET-204	Research in Vocational Education and Training	03	100
TOTAL			10	300

4.3 TRIMESTER - III

Mode: Distance-cum-contact

Duration: 3 months (April – June) (3 months)

Distance (April – May) ; Contact (May – June)

Sr. No.	Paper Code	Paper title	Credits	Marks
8.	DVET-301	ICT Application in Vocational Education and Training	03	100
* Elective Papers Two (choose any ONE relevant Sector from the following)				
Sector: AGRICULTURE				
9.	DVET 302-Ag	Advances in Agriculture	03	100
10.	DVET 303-Ag	Advances in Horticulture	03	100
Sector: IT/ITeS				
11.	DVET 302-IT	Multimedia and Web Technology	03	100
12.	DVET 303-IT	Python Programming	03	100
Sector: HEALTH CARE				
13.	DVET 302-Hc	Changing Health Care and Education Context	03	100
14.	DVET 303-Hc	Infection, Prevention and Control	03	100
Sector: RETAIL				
15.	DVET 302-Re	Fundamentals of Marketing and Salesmanship	03	100
16.	DVET 303-Re	Retail Marketing Management	03	100
Sector: AUTOMOTIVE				
17.	DVET 302-Au	Automobile Technology Development	03	100
18.	DVET 303-Au	Automobile Sales and Marketing	03	100
Sector: APPAREL, MADE-UPS AND HOME FURNISHING				
19.	DVET 302-Ap	Hand Embroidery	03	100
20.	DVET 303-Ap	Hand Embroidery- Adda work	03	100
		TOTAL	09	300

* Contact programme will be for 30 days.

4.4 TRIMESTER - IV

Mode: Contact

Duration: (July – September) (3 months)

Sr. No.	Paper Code	Paper title	Credits	Marks
1.	DVET-401	Internship in School (1 month)	2	50
2.	DVET-402	Internship in Industry (1 month)	2	50
3.	DVET- 403	Project Work (1 month)	4	100
TOTAL			08	200

Student Support Services

To cater to the unique needs of each learner, the academic faculty and staff, along with other learners, encourage online/mobile interaction. Learners can engage in discussion forums, refer to library books, and access web-based resources such as video/audio programs and use ICT tools. Additionally, learners can participate in online peer-to-peer discussions and virtual interactions with teachers and experts. They can also seek support from the Coordinator for administrative and academic matters through virtual means.

Details of DVET Paper / Sector Coordinators:

DVET-101	Vocational Education and Training System	Dr. Abhijit Nayak nayak60@hotmail.com
DVET-102	Curriculum Development, Implementation & Evaluation	Dr. R. Ravichandran ravincert@gmail.com
DVET-103	Instructional Design and Development	Dr. Vinay Swarup Mehrotra drvs.mehrotra@gmail.com
DVET-201	Assessment and Evaluation	Dr. Saurabh Prakash saurabhp60@gmail.com
DVET-202	Vocational Guidance and Counselling	Dr. Vipin Kumar Jain drvkjain2012@gmail.com
DVET-203	Employability Skills Development	Dr. Vinay Swarup Mehrotra drvs.mehrotra@gmail.com
DVET-204	Research in Vocational Education and Training	Dr. R. Ravichandran ravincert@gmail.com
DVET-301	ICT Application in Vocational Education and Training	Dr. Dipak Shudhalwar dipakds@yahoo.com
DVET-302 and DEVT-303 (ELECTIVE PAPERS)	Agriculture Sector	Dr. Rajiv Kumar Pathak rkpathak.22@gmail.com
	IT/ITeS Sector	Dr. Dipak Shudhalwar dipakds@yahoo.com
	Health Care Sector	Dr. Abhijit Nayak nayak60@hotmail.com
	Retail Sector	Dr. Punnam Veeraiah vp672000@gmail.com
	Automotive Sector	Dr. Saurabh Prakash saurabhp60@gmail.com
	Apparel, Made-ups and Home Furnishing Sector	Dr. Pinki Khanna khannapinki.69@gmail.com
DVET-401	Internship School-based training	Dr. R. Ravichandran ravincert@gmail.com and concerned sector coordinator
DVET-402	Internship Industry based training	Dr. R. Ravichandran ravincert@gmail.com and concerned sector coordinator
DVET-403	Project Work	Dr. R. Ravichandran ravincert@gmail.com and concerned sector coordinator

5. STUDY MATERIAL

The instructional methodology employed for this programme will be a hybrid approach combining distance and contact modes of learning. This approach is designed to be more learner-oriented, with the learner actively participating in the teaching and learning process. To achieve this, the PSSCIVE will adopt a multimedia approach for instruction, utilizing a variety of tools such as print materials, Flip Books, audio-video resources, and online programmes. By incorporating these diverse methods, the programme aims to deliver a comprehensive and engaging learning experience for all participants.

Programme Guide

The DVET programme guide serves as a comprehensive resource, containing crucial information on various aspects of the programme. It encompasses details on guidelines, rules, programme structure, curriculum, syllabus, content transaction, evaluation, and certification. By referring to the programme guide, individuals can gain a thorough understanding of all the essential components of the DVET programme, ensuring they are equipped with the necessary knowledge to successfully navigate through it. Electronic version of the DVET PROGRAMME GUIDE is available for download at: <http://www.psscive.ac.in/programmes/dvet>

5.1 Reference Study Material

The DVET programme offers self-learning format course material for all its papers that has been designed to be easily understood by learners. The material has been prepared with the assistance of experienced experts in their respective fields. The main focus of the programme is the Print material, which serves as the Reference Study Material for all papers. Enrolled candidates will receive the Reference Study Material for Trimesters I, II, and III via speed post just before the respective Trimester begins. Additionally, the Guideline Manual for Internship and Project Work will be sent to students via speed post just before the end of Trimester III, in preparation for Trimester IV.

5.2 Audio-Video Materials

As a means of reinforcing the concepts and their application, additional learning material in the form of audio-video materials will also be included as part of the study material.

6. TRANSACTION OF THE PROGRAMME

The transaction of the programme is divided into four Trimesters. The details of the same are as follows:

6.1 Distance Learning (Trimester I and II)

Before the commencement of each trimester, enrolled learners will be provided with the Reference study material in a printed format. This material will comprise a concise write-up intended to orient learners to the nature of the material dispatched, the process of assessment activities applicable during both distance and contact learning. Learners will receive support in the form of expert online lectures and personal interaction to clarify any doubts, as per their needs.

6.1.1 Maintaining Portfolio

The portfolio is a crucial component for the candidate, as it serves as a record for the candidate's assignments, self-check and self-evaluation exercises, and activities. Maintaining this portfolio is a requirement for the candidate, who is responsible for documenting their work in it.

6.1.2 Portfolio Assessment

A portfolio is a comprehensive document that provides an accurate depiction of a trainee's accomplishments, validated by appropriate evidence. These achievements are exemplified by carefully selected samples of the trainee's work. To create this portfolio, the trainee must maintain a detailed record of their work, including completed worksheets, preforms, and self-check exercises, along with feedback received on assignments.

Additionally, the portfolio should include the trainee's self-evaluation and self-reflections on their work, as well as their progress in terms of acquiring knowledge and changes in attitude and behavior. To facilitate the evaluation of progress over time, each item in the portfolio should be dated.

Ultimately, the portfolio is a valuable tool that allows both the trainee and their instructor to assess the trainee's development throughout the course of their learning experience. When the trainee comes for contact learning, they should bring their portfolio as a means of showcasing their growth and development.

6.1.3 Assignments

Enrolled learners can expect to receive 5 to 6 assignments per paper, delivered separately by email. These assignments are related to specific units of the course material and come with detailed instructions and a calendar for submission. The paper coordinator will provide feedback on the completed assignments, and if deemed unsatisfactory, trainees will be given a deadline for re-submission. To keep track of assessment activities and feedback, candidates can refer to the sample proformas found under the 'portfolio assessment' section.

It's crucial to note that completing and submitting assignments on time is mandatory, as they are used to evaluate trainees' performance in the distance learning phase. Failure to submit assignments before the contact learning phase will result in the candidate being marked as absent. The timetable for assignment submission will be provided to enrolled candidates by email.

6.1.4 Term End Examination

At the conclusion of each trimester, a written theory exam will be administered, and all learners will be notified of the particulars.

6.2 Distance-cum-Contact Learning (Trimester III)

The Trimester III paper's theoretical component will be conducted through distance learning over 2 months period. However, for a duration of 30 days, there will be face-to-face (contact) learning sessions held at PSSCIVE in Bhopal. Contact mode will consist of hands on practical training, on-site visits, instructional sessions, teaching practice, assessments, examination, and orientation on Trimester IV activities. The specific dates of these sessions will be communicated

in advance to allow the candidate to make appropriate plans. The candidate's participation in the contact learning sessions will depend on the satisfactory completion of assignments assigned during the distance learning phase. Out-of-town trainees will be required to reside at PSSCIVE/ Bhopal during the contact learning period.

To prepare for the contact learning, the trainee must first review all materials from trimester III. Additionally, the trainee will be expected to complete preparatory tasks for the practical activities that will take place during the contact learning sessions held at PSSCIVE, Bhopal.

6.2.1 Transactional Approach

Maintaining Portfolio, Portfolio Assessment, Assignments, and Term End Examination will be similar to that of Trimester I and II.

6.2.1.1 Duration

The contact learning period spans 30 days, with classes held from 09:30 a.m. to 05:00 p.m. daily, and designated lunch breaks. The schedule of activities for the contact learning program, along with study materials, will be provided to all learners.

6.2.1.2 Orientation

The following are the key components of our orientation program:

Review of Distance Learning Work - We will hold feedback sessions to discuss the work completed during the distance learning phase, including assignments and activities completed in each paper. These sessions will also serve as an opportunity to clarify any questions regarding the study materials sent earlier.

Contact Learning Schedule - Our faculty have scheduled several activities to enrich your learning experience, including enrichment lectures, seminars, reflective sessions, workshops, and library or self-study opportunities.

Skill Development Practice Sessions - We will provide practice sessions to help you develop and enhance your skills. Additionally, we will organize field visits to provide hands-on experience and real-life application of your knowledge.

6.2.1.3 Transactional Approach

Contact learning allows trainees to engage in group activities and interact with faculty members, while receiving training in various aspects of their practice through discussions, demonstrations, seminars, workshops, role-playing, and simulations. These activities are complemented by practical experiences, opportunities for self-study, and access to library resources. The goal is to encourage trainees to study test manuals and journals to stay up-to-date and to reflect on and evaluate their progress at the end of each day.

To enhance the program, experts from both within and outside the institute may deliver a series of enrichment lectures on relevant topics to supplement classroom instruction. The program also includes continuous assessment to provide regular feedback and motivate trainees to improve themselves.

6.3 Internship and Project Work (Trimester IV)

6.3.1 Place, Duration and Approach

Internship or On-the-job experience is a vital component of any training program. It allows trainees to apply the ideas, theories, and techniques they have learned in a real-life setting. For this reason, the trainee will complete a one-month internship at a school in India under the guidance of an expert teacher and principal. Following this, they will undergo a one-month industry-based training program related to their chosen sector, under the supervision of an industry expert. In the final month of the trimester, the trainee must select a suitable topic for their project work, which they will work on for one month with the guidance of a sector coordinator and guide. The trainee can complete all their activities in their chosen elective sector or their guided sector.

The Internship and Project Work Guideline Manual for Trimester IV will provide detailed information on the requirements for the internship and project work, including the procedure for selecting a school and industry, as well as the evaluation process. The manual will be sent via speed post before the end of Trimester III.

7. RULES AND REGULATIONS

(i) Prior to the communicated due date, the selected candidate must pay the program fee to secure their admission. Failure to do so will result in automatic cancellation of admission. Please note that the fee is non-refundable once deposited.

(ii) Candidates who withdraw after completing the contact learning phase can transfer their earned credits based on their completed work and submitted assignments.

(iii) If a candidate withdraws from the program during the contact learning phase with the approval of the program's competent authority, they will need to repeat the contact learning from the beginning and bear all associated expenses.

(iv) Candidates are expected to complete self-check and self-evaluation exercises and activities, and keep a record of these as part of their "portfolio assessment."

(v) Candidates who do not satisfactorily complete assignments prior to the contact learning phase may be allowed to join the next year's contact learning with approval from the program's competent authority.

(vi) Failure to attend the contact learning will result in termination of the candidate's admission.

The following rules will apply during the contact learning:

- a) It is mandatory for all students to be present between 09:30 a.m. to 05:00 p.m., with a lunch break of 30 minutes.
- b) Discipline, punctuality, and regularity are expected to be observed by all.
- c) Attendance is required for all sessions/class periods. Unexcused absences will be considered as an absence for the whole day.
- d) To be eligible for the term-end-written examination, all assessment requirements must be completed.

- e) Leave will only be granted in exceptional cases.
- f) In the case of emergencies, written permission from the program coordinator is necessary to leave the station.
- g) If found engaging in anti-social, anti-national, or undesirable activities, the PSSCIVE may terminate the student.
- h) All assignments, including practicum reports, must be submitted according to the submission schedule. Only after submission of all requirements will the participant be given 'no dues' when leaving the department/Institute at the end of the contact learning.

8. SCHEME OF EVALUATION

The evaluation system for both theory and practical work includes the following aspects:

- a) Self-evaluation and self-check exercises are incorporated within each unit of study.
- b) Continuous evaluation is conducted through assignments and activities for each paper.
- c) A term-end examination is also conducted.
- d) Performance in the workshop/lab is assessed.
- e) Trainees are evaluated during their internship.
- f) Project work is also assessed.

The grading system is used to evaluate trainees, with the credits assigned to each paper indicating its weightage. The allotment of credits for a particular paper depends on the importance of its content and the time required for studying and learning it.

The day-to-day schedule for contact learning, internship, and project work will be provided separately to the enrolled trainees during the orientation.

The evaluation of trainees follows a system of continuous comprehensive evaluation. The modalities and criteria for the program evaluation are described in detail below.

8.1 Trimester I and II

Evaluation in Distance Learning relies on theoretical programs comprising 37 self-learning units grouped into seven self-learning papers sent to trainees over a six-month period. The table presented in the "programme structure" section of the document displays the credits assigned to each paper, indicating its importance in the overall program.

The trainee's assessment will consist of three components: assignments, portfolio, and a written examination. The following details the different evaluation components and the assigned weightage for each.

Components of Evaluation and Credits of Trimester I and II

S. No.	Type of Evaluation	Details of Evaluation	Weightage
1.	Assignments	5-6 of each paper	30%

2.	Portfolio	Record of work done on self-evaluation, self-check exercises, and activities across various units in all modules	20%
3.	Written Examination	Conducted at the end of the contact learning	50%
		Total	100%

The details of each activity are given below.

(Use A4 size white paper and it must be hand-written)

The first page should have the following information for each activity of each paper.

Activity: Portfolio or Assignment

Paper Code & Paper Title

Name and Enrollment Number

Signature with Date

8.1.1 Assignments Evaluation

The completion of assignments is mandatory and carries 30% weightage of the total credits. Only candidates who have satisfactorily completed their assignments will be eligible to participate in Contact Learning. Each paper requires the completion of 5-6 assignments, which will be evaluated by the paper coordinator. The assignments must be submitted on A4 sheets and will not cover curriculum portions included in the written examination. Assignments will be sent to the students by email. The completed hand-written assignments should be sent by SPEED POST to DVET Cell. Submission deadline for Assignment will be 5 December for Trimester I and 5 March for Trimester II.

Proforma for Report of the Assignments for Papers of Trimester- I & II			
Paper Code	Title of the Assignment	Date of submission	feedback by the paper coordinator

8.1.2 Portfolio Assessment

The student will prepare portfolio as given below.

DVET Trimester-1 / II Portfolio on self-reading	
Student NAME:	Enrollment No.
Paper Code:	
Paper Title:	
Unit(s) studied	
No. of Self-check Exercises completed	
No. of Self-evaluation Exercises completed	
No. of Activities completed	
Reasons for not completing (if any)	
Any difficulty faced (please specify)	

Total number of pages attached to this	
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The student will have to submit the completed **hand-written** self-evaluation exercises and the activities listed in the reference study material sent to them, by SPEED POST to DVET Cell. Submission deadline for Portfolio will be 5 December for Trimester I and 5 March for Trimester II.

8.1.3 Written Examination Evaluation (Trimester- I & II)

The evaluation of Trimester-I and Trimester-II papers heavily relies on a written examination, which accounts for 50% of the total evaluation. This examination will be conducted online, with question papers being sent to candidates via email in accordance with the trimester schedule. You are required to use A4 white sheets to answer them (hand-written). Upon completion, candidates are expected to promptly send a scanned copy of their answer sheet to the DVET cell. Furthermore, the hard copy of the answer sheet should be sent via speed post on the same day to the DVET cell for evaluation by the institute's examiner. Examination will be during last week of December for Trimester I and last week of March for Trimester II. There is no provision for the re-evaluation of written examination answer scripts.

The question paper will have questions from all the units with choice, and the pattern is given below.

Term End Theory Examination December 2023

Trimester-1 DVET-101 Vocational Education and Training System

3 hours

Max Marks 50

Answer the following questions to the point in brief. You are required to use A4 white sheets to answer them. Each question carries 10 marks.

Write the following details on the top of the first page of your answer sheet.

Student NAME:

Enrollment Number:

Paper CODE & TITLE:

Signature:

Date:

Q 1

or

Q 2

Q 3

or

Q 4

Q 5

or

Q 6

Q 7

or

Q 8

Q 9

or

Q 10

8.2 TRIMESTER – III

During this trimester, trainee evaluation is determined by one mandatory and two optional papers from a single sector. These papers are provided in the form of study material consisting of three papers, which are sent to the trainee prior to evaluation. The table provided in the "programme structure" section of the document illustrates the credit weightage assigned to each paper, indicating its significance in the overall program.

The trainee's evaluation is comprised of four components: assignments, portfolio, written examination, and skill/practical-based assessment. The following details outline each component and its respective weightage for evaluation.

Components of Evaluation and Credits of Trimester-III

S. No.	Type of Evaluation	Details of Evaluation	Weightage
1.	Assignments	5-6 of each paper	10%
2.	Portfolio	Record of work done on self-evaluation, self-check exercises, and activities across various units in all modules	10%
3.	Skill/practical-based Assessment	Continuous assessment during the trimester	60%
4.	Written Examination	Conducted at the end of the contact learning	20%
		Total	100%

The details of each activity are given below.

Use A4 size white paper and it must be hand-written.

The first page should have the following information for each activity of each paper.

Activity: Portfolio or Assignment

Paper Code & Paper Title

Name and Enrollment Number

Signature with Date

8.2.1 Assignments Evaluation for Papers of Trimester-III

The assignments in theory programmes make up 10% of the total credit weightage. It is mandatory for candidates to submit their assignments, and satisfactory completion is required to progress to Trimester IV of the programme. For each paper in the contact learning, candidates must complete 5-6 assignments, which will be assessed by the paper coordinator. The assignments must be submitted on A4 sheets and will not cover curriculum portions included in the written examination. Assignments will be sent to the students by email. The completed hand-written assignments should be submitted to DVET Cell during contact learning.

Proforma for Report of the Assignments for Papers of Trimester- I & II

Paper Code	Title of the Assignment	Date of submission	feedback by the paper coordinator

8.2.2 Portfolio Assessment for Papers of Trimester-III

The student will prepare portfolio as given below.

DVET Trimester- III Portfolio on self-reading	
Student NAME:	Enrollment No.
Paper Code:	
Paper Title:	
Unit(s) studied	
No. of Self-check Exercises completed	
No. of Self-evaluation Exercises completed	
No. of Activities completed	
Reasons for not completing (if any)	
Any difficulty faced (please specify)	
Total number of pages attached to this	

The student will have to submit the completed **hand-written** self-evaluation exercises and the activities listed in the reference study material sent to them, by hand to DVET Cell during contact learning.

Trainee – Paper Coordinator Interaction Record Form for Papers of Trimester-III				
Name of the Trainee:				
Enrollment No. of the Trainee:				
Paper Code and Title:				
Name of the Paper Coordinator :.....				
Report of the interaction with the paper coordinator for Papers of Trimester- III				
Date*	Issues*	No. of Times*	Mode of Communication	Signature of the paper coordinator/DVET coordinator

8.2.3 Skill/Practical Based Assessment for Papers of Trimester-III

The skill/practical-based activities and continuous assessment will be in contact mode at PSSCIVE, Bhopal and carries 60% weightage of the total credits/Marks.

8.2.4 Written Examination Evaluation for Papers of Trimester-III

The written exam for trimester III constitutes 20% of the overall paper evaluation and is the third component of the assessment. The exam will take place at the Institute in off line mode during contact learning. There is no provision for the re-evaluation of written examination answer scripts.

8.3 Trimester-IV

The details of credits and marks for the internship and project work are given in the table below.

Sr. No.	Paper Code	Paper title	Credits	Marks
1.	DVET-401	Internship School-based training	2	50
2.	DVET-402	Internship Industry based training	2	50
3.	DVET- 403	Project Work	4	100
Total			08	200

The total credits are distributed on different aspects of the internship, the table below shows all the criteria for school-based and Industry based internships.

8.3.1 Internship - School-Based Training

Assessment will be done by the teacher coordinator / Head Master/Principal as detailed below.

SCHOOL-BASED INTERNSHIP ASSESSMENT

Criteria										
Preparation of Lesson plan (10 Marks)	Vocational Theory Teaching (10 Marks)	Vocational Practical Activities (Demo, Lab. work/ Workshop Management) (10 Marks)	Employability Skills (2 x 5 = 10 Marks)					School Activities as assigned By Head Master (10 Marks)	Total Marks (50)	
			E1	E2	E3	E4	E5			

Abbreviations:

- E1- Communication Skill
- E2- Entrepreneurial Skill
- E3- ICT Skill
- E4- Green Skill
- E5- Self Management

8.3.2 Internship - Industry-Based Training

INDUSTRY-BASED INTERNSHIP ASSESSMENT

Assessment will be done by the industry coordinator / Head as detailed below.

Marks (Grading scale) for Assessment Excellent-05, Very Good-04, Good-03, Satisfactory -02, Unsatisfactory-1

Assessment Criteria

Maximum Total Marks of 100 for this Assessment will be divided by 2 which will be the actual mark awarded for this activity.

Sr. No.	Key Criteria	Excellent (5 marks)	Very Good (4 marks)	Good (3 marks)	Average (2 marks)	Unsatisfactory (1 mark)
1.	Punctuality on work					
2.	Behaviour (professional manner)					
3.	Dressed appropriately					
4.	Effectively performed activities and tasks assigned					
5.	Showcasing employability skills					
6.	Progress in sector-specific skills acquisition					
7.	Attention to accuracy and details					
8.	Strong analytical skills – demonstrated critical thinking and problem-solving skills					
9.	Ability to adapt to a variety of tasks and activities					
10.	Took initiative to do and get the task done, including overcoming obstacles					
11.	Met stated deadlines					
12.	Basic Computer/technical skills					
13.	As a Team member					
14.	Good interpersonal skills					
15.	Willingness to ask for help and guidance					
16.	Seemed interested in and enthusiastic about the internship experience					
17.	Self-motivated, showed initiative and creative approach					
18.	Was able to set priorities					
19.	Experience with intern					
20.	Overall performance					

The above assessment will be done by the assigned industry coordinator/supervisor and manager.

8.3.3 Project Work

The project work encompasses a series of steps, including initial planning and preparation, identification of themes, needs analysis, determination of aims and objectives, literature review, project planning, organization and implementation, report preparation, seminar presentation, and viva-voce. These aspects will be evaluated by two supervisors, one from the internal sector coordinator at PSSCIVE Bhopal, and the other from an industry/institution approved by the institute. The trainees' projects will be assessed based on their scope, relevance, and implementation prospects. The evaluation will be conducted according to the distribution of marks determined by the internal and external supervisors and the evaluation criteria outlined below:

Project Work Assessment (External)

Assessment will be done by the industry coordinator / Head as detailed below.

Project planning (synopsis, need analysis, scope, relevance etc) (10 Marks)	Project work execution (20 Marks)	Project Report (10 Marks)	Seminar presentation (20 Marks)	Total Marks (60 Marks)

Internship and Project Work Assessment (Internal)

Assessment by the Sector coordinator and DVET coordinator as detailed below.

	Report (10 Marks)	Seminar presentation (10 Marks)	Viva (20 Marks)	Total Marks (40 Marks)
School-Based Internship (40 Marks)				
Industry Based Internship (40 Marks)				
Project Work (40 Marks)				

Note: If the trainee is declared as unsuccessful due to unsatisfactory performance/ grade in internship or project work, she/he will be required to repeat the same in the next year.

8.4 Grading

A grading system is used to evaluate and communicate the level of achievement or performance of a student in a particular course or subject. It serves as a quantitative measurement of a student's understanding and knowledge of the subject matter, and helps to determine their academic progress and level of success. A grading system provides a standardized method for evaluating academic performance, and serves as an important tool for measuring and communicating academic progress.

The evaluation of performance is done through the use of grades. Trainees in the program are graded not only on their overall performance, but also on individual course activities they complete throughout the program such as assignments, tests, assessment work, internships, and project work. These activities will be converted into points to calculate the Cumulative Grade Point Average (CGPA). A ten-point grading scale will be used to grade students. PSSCIVE uses 10-Point Grading System as per UGC Guidelines to evaluate the achievements of learners in the DVET Programme.

10-Point Grading System of PSSCIVE as per UGC Guidelines*

Letter Grade	Numerical Grade	Percentage
A	10	>85
B	9	> 75 to < 85

C	8	> 65 to < 75
D	7	> 55 to < 65
E	6	> 50 to < 55
F	5	> 40 to < 50
G	0	39 and below
Ab	0	Absent

*Modified

The final marks will be rounded off to the nearest whole number, without including any decimal points. Additionally, when evaluating trainees' performance on various tasks, the qualitative descriptions mentioned above should be taken into consideration. A Grade Point is calculated by dividing the marks obtained by 10 if it is out of 100. Credit Point, on the other hand, is obtained by multiplying Grade Point with the respective course credits. Cumulative Grade Point Average (CGPA) is a comprehensive indicator of a student's overall academic performance across all trimesters. It is computed by dividing the total credit points earned by the student in all courses throughout the program by the total credits of all courses across all trimesters. CGPA is typically presented with two decimal places for accuracy.

8.5 Conditions for Award of Diploma in Vocational Education and Training

- (i) To be awarded the DVET diploma, the trainee must successfully complete all activities and exams listed in the program guide, achieving a minimum grade of "F" in all papers, including the internship and project work.
- (ii) A minimum overall final grade of "E" in the DVET program is required for trainees to receive the diploma.
- (iii) Candidate registration remains valid for only one year from the date of admission.
- (iv) Candidates who are absent, or got grade 'G' in any paper, or does not obtain an overall final "E" grade must repeat the paper in which he/she is absent or has grade 'G' or less, during the subsequent academic session by re-registration.

Re-Registration

Students who had not successfully qualified for the award of DVET diploma shall apply for Re-registration in the immediately upcoming DVET programme. They shall enroll only in the papers in which they are unsuccessful. It is recommended that learners submit the Re-registration form within the designated timeframe, which will be notified by the PSSCIVE periodically. The DVET Cell can provide learners with the Re-registration form. No further attempts/ Re-registration will be given for completing the DVET programme.

Award of Diploma in Vocational Education and Training

The Diploma in Vocational Education & Training (DVET) will be awarded by PSSCIVE to candidates who successfully complete the program, and a final cumulative Grade Card will be issued. Both these documents will have the NCERT logo. The AADHAR details of candidates will also be displayed on them.

Sexual Harassment / Ragging

PSSCIVE has implemented a policy that aims to prevent, prohibit, and penalize sexual harassment of women in accordance with the guidelines of the Supreme Court. Additionally, in accordance with the directives of the Hon'ble Supreme Court of India, ragging is strictly prohibited. If any instances of ragging are brought to the attention of the authorities, the implicated student will be given an opportunity to provide an explanation. If the explanation

is deemed unsatisfactory, the student will be expelled from PSSCIVE. DVET admissions are exclusively based on merit.

Grievance Redressal

The submission of grievances by students must be done in writing and sent solely through registered or speed post / in-person to either the DVET Coordinator or Joint Director at PSSCIVE in Bhopal.

Disputes on any matter related to DVET

The PSSCIVE enforces suitable administrative and disciplinary actions to ensure seamless operations in compliance with the existing regulations and standards. If any conflicts arise regarding Admission and other DVET Matters, legal action, if required, must be filed exclusively in Bhopal as the place of jurisdiction.



Part- B

SYLLABUS

TRIMESTER-I (Distance Learning)

Paper - 1

Code - DVET 101

VOCATIONAL EDUCATION AND TRAINING SYSTEM

Recommended Study Hours: 120

Total Credits: 03

Total Marks: 100

1.1 Rationale

The term Vocational Education and Training (VET) means learning a skill that is related to work. It provides practical skills needed for becoming employable and to gain employment. VET provides people with occupational or work-related knowledge and skills. The VET sector is responsible for developing the skills and knowledge of individuals for work. It includes VET undertaken in industries, enterprises, government agencies, and community and school or college settings. On acquiring the right kind of skills, a learner gets better equipped for employment in the long run. Vocational education and training should be seen as complementing academic education. For example, if you are learning microbiology in academic education and composting through vocational education, then you would be able to apply your knowledge of microbiology in preparing good compost. The skills acquired through the process of vermicomposting can be utilized to make a living. Similarly, if you are learning arts, you can take up a course of animation in vocational education which would help you to acquire the skills needed for entertainment or gaming industry.

Over the last few years, the Ministry of Human Resource Development (MHRD), Government of India has introduced vocationalisation of education programme in schools and higher and technical education institutions under the National Skills Qualification Framework (NSQF), with the objective of preparing lifelong learners. Similarly, the Ministry of Skill Development and Entrepreneurship (MSDE) has introduced short duration skill development programmes outside the school and college system to enable dropouts of schools or colleges to acquire certain skill sets that will help them in gaining employment. Vocational education and training, therefore, serves as an alternative for those who want to acquire skills at an early stage and do not want to go for higher education. Even if they wish to pursue higher education, they can do so in the same trade or related trade under the NSQF.

In this Paper, you will learn about the major forms of vocational education and training (VET), challenges in VET, management of VET, planning and financing of VET and innovative models and best practices in VET.

1.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Describe the VET systems in India
- Describe the major forms of Vocational Education and Training;
- Identify the major challenges in Vocational Education and Training;

- Demonstrate the knowledge of appropriate models or approaches that explain the processes in VET teaching and learning practices;
- Describe VET teaching and learning practices at International, National and State level;
- Demonstrate the knowledge of improved approaches for supporting VET teaching and learning; and
- Describe specific examples of good practice as case studies for innovation in VET system.

1.3 Units and Unit Contents

UNIT I: VOCATIONAL EDUCATION AND TRAINING IN INDIA: AN OVERVIEW

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Vocational Education and Training (VET)-Need and Importance
- 1.4 Vocational Education and Training in India - A Historical Perspective
- 1.5 Committees and Commission on work-based education
- 1.6 Committees and Commissions on Vocational Education and Training and their Recommendations
- 1.7 VET in the Current Education System in India
- 1.8 Socio-economic context of VET
- 1.9 Policy Framework of VET in India
- 1.10 Management of Vocational Education in India and New Age Skills
- 1.11 Summary
- 1.12 Self-Evaluation Exercises
- 1.13 Answer Keys of Self-Check Exercises
- 1.14 References
- 1.15 Suggested Readings

UNIT 2: MAJOR FORMS OF VOCATIONAL EDUCATION AND TRAINING

- 2.1 Introduction to Major Forms of Vocational Education and Training
- 2.2 Objectives
- 2.3 Vocationalisation of Education in India
- 2.4 Formal, Informal and Non-formal Skilling System
- 2.5 Continuing Vocational Education and Training System
- 2.6 Apprenticeship Training
- 2.7 Summary
- 2.8 References
- 2.9 Suggested Readings

UNIT 3: PLANNING AND MANAGEMENT OF VOCATIONAL EDUCATION AND TRAINING

- 3.1 Introduction on Planning and Management of Vocational Education and Training
- 3.2 Objectives
- 3.3 National Qualifications Framework
- 3.4 National Policies Governing VET
- 3.5 Planning of VET in India
- 3.6 Financing of VET

- 3.7 Public–Private Partnership
- 3.8 Role of International Agencies in TVET
- 3.9 Summary
- 3.10 References
- 3.11 Suggested Readings

UNIT 4: INNOVATIVE MODELS AND BEST PRACTICES IN VET

- 4.1 Introduction to Innovative Models and Best Practices in VET
- 4.2 Objectives
- 4.3 Introduction to Innovation
- 4.4 Models of TVET
- 4.5 Innovations in Teaching- learning in VET
- 4.6 Best Practices in VET
- 4.7 Best Practices - Employers engagement in Work- Based Learning
- 4.8 Professional Development of VET Practitioners
- 4.9 New Technologies Facilitating VET
- 4.10 Collaboration and Networking for Promotion of VET
- 4.11 Summary
- 4.12 Answer Keys of Self-Check Exercises
- 4.13 Self-Evaluation Exercise
- 4.14 References

UNIT 5: CHALLENGES IN VOCATIONAL EDUCATION AND TRAINING SYSTEM

- 5.1 Introduction
- 5.2 Objectives of the Unit
- 5.3 Skill development through Harnessing the Demographic Dividend
- 5.4 Social Stigma (Traditional and modern system of VET)
- 5.5 Mismatch between Demand and Supply of Skilled Manpower
- 5.6 Policy support from Government
- 5.7 Recognition of Prior Learning
- 5.8 Linkages with Industry
- 5.9 Training of teachers/ trainers
- 5.10 Summary
- 5.11 Self-Evaluation Exercises
- 5.12 Answer Keys of Self -Check Exercises
- 5.13 References
- 5.14 Suggested Readings

CURRICULUM DEVELOPMENT, IMPLEMENTATION & EVALUATION

Recommended Study Hours:120

Total Credits: 03

Total Marks: 100

2.1 Rationale

Curriculum is a vehicle to reach destination. It guides us to attain predetermined objectives/ outcomes. It is considered as planned, purposeful, progressive, and systematic process in order to create positive improvements in the educational system. Curriculum has a broad scope because it is not only about the school, the learners and the teachers. It is also about the development of a society in general.

In education, a curriculum is broadly defined as the totality of student experiences that occur in the educational process. The term often refers specifically to a planned sequence of instruction, or to a view of the student's experiences in terms of the educator's or schools' instructional goals. Curriculum may incorporate the planned interaction of pupils with instructional content, materials, resources, and processes for evaluating the attainment of educational objectives. Curriculum is split into several categories, the explicit, the implicit (including the hidden), the excluded and the extra-curricular.

In today's knowledge economy, curriculum plays a vital role in improving the economy of a country. It also provides answers or solutions to the world's pressing conditions and problems, such as environment, politics, socio-economics, and other issues on poverty, climate change and sustainable development.

Every time there are changes or developments happening around the world, the school curricula are affected. There is a need to update them in order to address the society's needs.

2.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Describe the meaning and nature of curriculum& its design.
- Explain different approaches to curriculum design and development.
- Demonstrate the knowledge of planning and curriculum design and development based on different models.
- Demonstrate the knowledge of the process of developing curriculum.
- Identify different components/ elements of Curriculum Implementation.
- Demonstrate the understanding of a given curriculum of a vocation.
- Select suitable method & media as per parameters.
- Describe the need of curriculum evaluation
- Apply the CIPP mode of Curriculum Evaluation

2.3 Units and Unit Contents

UNIT 1: INTRODUCTION TO CURRICULUM

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Meaning and Definition of Curriculum
- 1.4 Need and Importance of Curriculum
- 1.5 Phases of Curriculum: Curriculum Development, Curriculum Implementation and Curriculum Evaluation
- 1.6 Stakeholders of Curriculum
- 1.7 Summary
- 1.8 Self-Evaluation Exercises
- 1.9 Answer Keys of Self-Check Exercises
- 1.10 References
- 1.11 Suggested Readings

UNIT 2: DETERMINANTS OF CURRICULUM

- 2.1 Introduction
- 2.2 Objectives
- 2.3 Features of the Curriculum
- 2.4 Determinants of Curriculum
- 2.5 Summary
- 2.6 Self-Evaluation Exercises
- 2.7 Answer Keys to Self-Check Exercises
- 2.8 References
- 2.9 Suggested Readings

UNIT 3: MODELS AND APPROACHES OF CURRICULUM DEVELOPMENT

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Guiding Principles of Curriculum Development
- 3.4 Approaches to Curriculum Development
- 3.5 Models of Curriculum Development
- 3.6 Types of Curriculum
- 3.7 Curriculum Reforms by NCERT for Elementary to Higher Secondary Education
- 3.8 Summary
- 3.9 Self-Evaluation Exercises
- 3.10 Answer Keys to Self-Check Exercises
- 3.11 References
- 3.12 Suggested Readings

UNIT 4: CURRICULUM IMPLEMENTATION

- 4.1 Introduction
- 4.2 Objectives
- 4.3 Developing and Understanding of Curriculum Implementation
- 4.4 Components of Curriculum Implementation
- 4.5 Vocationalisation of School Education
- 4.6 Implementation Mechanism of Vocational Curriculum
- 4.7 Summary

- 4.8 Self-Evaluation Exercises
- 4.9 Answer Keys to Self- Check Exercises
- 4.10 References
- 4.11 Suggested Readings

UNIT 5: EVALUATION OF CURRICULUM

- 5.1 Introduction
- 5.2 Objectives
- 5.3 Basics of Curriculum Evaluation – Why, What and How
- 5.4 Methods of Evaluating Individuals and Curricula
- 5.5 Perspectives of Curriculum Evaluation
- 5.6 Evaluation of Open and Distance Education Curriculum
- 5.7 Purpose for Evaluating Distance Education Curriculum
- 5.8 Evaluation of Vocational Education and Training Curriculum
- 5.9 Scheme of the Assessment, Evaluation and Examination of Job Role Based Vocational Courses
- 5.10 Summary
- 5.11 Self-Evaluation Exercises
- 5.12 Answer Keys to Self-Check Exercises
- 5.13 References and Suggested Readings

INSTRUCTIONAL DESIGN AND DEVELOPMENT

Recommended Study Hours: 120

Total Credits: 03

Total Marks: 100

3.1 Rationale

The success of an educational program largely depends on the attainment of its stipulated outcomes/objectives for which it is designed, developed and launched. The attainment of these stipulated outcomes/objectives, in turn, largely is a result of how systematic and scientific, instructions are planned, organised and executed for learning to occur.

The paper on instructional design and development is included in this course to develop the competence of the trainees in performing analysis of the learning needs of the learners and use instructional technology for developing instruction for vocational education at different levels of education.

The paper begins with providing the concept of learning and instruction and their relationship and gradually equips vocational teachers with different teaching methods, media (both traditional and digital) to handle and manage the class of vocational education in more interesting and fruitful manner. The paper will also equip vocational teachers to use different digital and ICT based media in classroom situations.

3.2 Learning based Outcomes

On completion of this paper, learners will be able to:

- Explain the concept of learning and instructions and their differences in the context of vocational education.
- Write learning objectives/outcomes in different domains of learning
- Demonstrate the process of communication and its role in teaching- learning process.
- Demonstrate the use of appropriate teaching methods for various topics of vocational subjects
- Describe the intent of instruction and guide the formation of instructional activities
- Plan, develop and select appropriate instructional media for an instructional purpose.
- Develop and demonstrate the use of PPT in Classroom.
- Demonstrate the application of different social media for cooperative and collaborative learning.
- Plan, develop and demonstrate instructional Plans based on 5E approach.

3.3 Units and Unit Contents

UNIT 1: LEARNING AND INSTRUCTIONS

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Basics of Learning

- 1.4 Basics of Teaching
- 1.5 Writing Learning Outcomes
- 1.6 Summary
- 1.7 Self-Evaluation Exercises
- 1.8 Answer Keys to Self-Check Exercises
- 1.9 References
- 1.10 Suggested Readings

UNIT 2: INSTRUCTIONAL METHODS

- 2.1 Introduction
- 2.2 Objectives
- 2.3 Instructional Strategies
- 2.4 Methods of Teaching
- 2.5 Traditional v/s Modern Methods of Teaching
- 2.6 ICT Enabled Methods of Teaching
- 2.7 E-learning Tools in Education
- 2.8 Methods of Teaching in Vocational Education
- 2.9 Criteria for Selection of Teaching Method
- 2.10 Methods of Teaching Motor Skills
- 2.11 Summary
- 2.12 Self-Evaluation Exercises
- 2.13 Answer Keys to Self-Check Exercises
- 2.14 References
- 2.15 Suggested Readings

UNIT 3: INSTRUCTIONAL MEDIA

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Classification of Instructional Media
- 3.4 Classification of Teaching and Training Aids
- 3.5 Selection of Suitable Media
- 3.6 Social Media
- 3.7 Summary
- 3.8 Self-Evaluation Exercises
- 3.9 Answers to Self-Check Exercises
- 3.10 References
- 3.11 Suggested Readings

UNIT 4: INSTRUCTIONAL DESIGN

- 4.1 Introduction
- 4.2 Objectives
- 4.3 History and Evolution of Instructional Design
- 4.4 Models of Instructional Design
- 4.5 Assessing Needs to Identify Instructional Goals

- 4.6 Summary
- 4.7 Self Evaluation Exercises
- 4.8 Answer Keys to Self-Check Exercises
- 4.9 References
- 4.10 Suggested Readings

UNIT 5: PLANNING AND MANAGEMENT OF INSTRUCTIONS

- 5.1 Introduction
- 5.2 Objectives
- 5.3 Instructional Plan Preparation
- 5.4 Annual Plan
- 5.5 Instructional Delivery
- 5.6 Management of Learning Situations
- 5.7 Summary
- 5.8 Self-Evaluation Exercises
- 5.9 Answer Keys to Self-Check Exercises
- 5.10 References
- 5.11 Suggested Readings

TRIMESTER-II (Distance Learning)

Paper 4

Code - DVET 201 ASSESSMENT AND EVALUATION

Recommended Study Hours :90

Total Credits : 2

Total Marks: 50

4.1 Rationale

Every one of us has undergone the rigors of assessment & Evaluation. With the growth of cognitive and psychometric theories and the advent of ICT technology in the recent years, the assessment & evaluation, has undergone a sea change. Assessment and evaluation process cannot be considered in isolation, but it has become an integral part of the teaching and learning process in students. Though students' assessment is designed to assist learning, it is noticed that it influences the learning to a great extent and hence quality of vocational skills learning is greatly influenced by the quality of assessment. Quality of assessment is therefore a key issue to be addressed. This course is introduced precisely with these aims in view.

The course will be extremely useful to the Vocational teachers in general. It will be particularly useful to those who would be required to undertake vocational education measurement and evaluation. Topics like RPL and Skills assessment are included to enhance professional competence of teachers and to address appropriately to the related concerns and issues.

4.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Explain the purpose of evaluation and assessment.
- Describe the role of students' evaluation in vocational education.
- Design tests to measure cognitive and psychomotor objectives using scientific principles of test design.
- Construct various types of item, questions and other testing tools for assessing and evaluating students' performance
- Plan and implement - valid and reliable schemes of assessment.
- Conduct skill test for assessing students' performance
- Appreciate and employ new trends in Assessment & Evaluation

4.3 Units and Unit Contents

UNIT 1: INTRODUCTION OF ASSESSMENT AND EVALUATION

- 1.1 Introduction
- 1.2 Learning Objectives
- 1.3 Terminology: Measurement, Assessment, Evaluation and Examination
- 1.4 Power test and Speed test

- 1.5 Achievement test, Aptitude test, Interest Inventory test, Personality test and Skill test – Concept and their Interrelationship
- 1.6 Assessment for Learning, Assessment of Learning, Assessment as Learning (Formative and Summative)
- 1.7 Competency-based Assessment and its Models

UNIT 2: TEST CHARACTERISTICS OF ASSESSMENT CONTENT

- 2.1 Introduction
- 2.2 Learning Objectives
- 2.3 Basic Characteristics- Validity, Reliability, Objectivity, Usability, Practicability- Their Meaning and Concept
- 2.4 Validity and its Concept
- 2.5 Reliability and its Concept
- 2.6 Difference between Validity and Reliability

UNIT 3: COGNITIVE DOMAIN ASSESSMENT

- 3.1 Introduction
- 3.2 Learning Objectives
- 3.3 Different Types of Items/Questions
- 3.4 Issues in Assessing Cognitive Abilities
- 3.5 Correction for Guessing and its Implication

UNIT 4: PERFORMANCE AND SKILL ASSESSMENT

- 4.1 Introduction
- 4.2 Learning Objectives
- 4.3 Assessment of Laboratory Work, Project Work and Workshop
- 4.4 Use of Checklists and Rating Scales
- 4.5 Issues in Performance Assessment

UNIT 5: NEW TRENDS IN ASSESSMENT AND EVALUATION

- 5.1 Introduction
- 5.2 Learning Objectives
- 5.3 Computerized Question Bank
- 5.4 Computer-Assisted / Adaptive Testing (CAT)
- 5.5 Rubric Based Assessment
- 5.6 Norm Reference and Criterion Reference Testing
- 5.7 Marks, Grades, Credit Based and Profile Reporting of Assessment
- 5.8 Portfolio Assessment
- 5.9 Student Portfolio

VOCATIONAL GUIDANCE AND COUNSELLING

Recommended Study Hours:90

Total Credits: 2

Total Marks: 50

5.1 Rationale

Guidance can be defined as the process of helping individuals to understand themselves and their world. It is the assistance given to individuals in making intelligent choices and adjustments. It is based on the beliefs that the ability to make such intelligent choices is not innate but like other abilities must be developed. Guidance is a service which believes that individuals of average intelligence should be able to understand that what is right and what is wrong for them. They should act voluntarily and not out of compulsion. In guidance, information about the individual's personal characteristics (interests, aptitudes personality characteristics etc.) and the world of work is provided and the individuals have to make their own decisions. It is assumed that the individuals who understand themselves and their world will become more productive and happier human beings.

Guidance and Counselling usually go together. Counselling is a process, which takes place in a one-to-one relationship. When a person is troubled by problems then he/ she seeks help from a professionally qualified person who helps others in reaching solutions to various types of difficulties. In a counselling process, the decision-making and learning operate at the emotional level whereas in guidance it is confined to the intellectual level.

Guidance usually does not confine itself to just finding jobs. It usually helps individuals to make wise choice, which suits to abilities and needs of the individuals. The main aim of the guidance service is to help young people attaining experiences, which are individually satisfying and socially effective.

Vocational Guidance has been defined by ILO as "the assistance given to an individual in solving problems related to occupational choices and progress with characteristics and their relation to occupational opportunity" (source: ILO, vocational guidance recommendations).

Providing guidance services in the educational systems is because we are concerned about the well-being of our youngsters. Through guidance services, students can have more knowledge about educational, vocational and social information so that they can plan their career. Guidance services also provide psychological and social data about the individual. The knowledge about students is very useful for teachers and counsellors in understanding them and guiding accordingly.

5.2 Learning based Outcomes

On completion of this Paper, trainee will be able to

- describe meaning and importance of guidance and counselling and its role in the present educational set up;
- describe the role of guidance services in the scheme of vocationalisation of secondary and senior secondary education;
- explain the process of career development;
- enlist the career guidance activities;
- plan and organize vocational guidance services;
- use formal and informal methods of psychological and educational assessment of students;
- develop and maintain career Information service;
- organize various vocational guidance activities.

5.3 Units and Unit Contents

UNIT 1: INTRODUCTION TO GUIDANCE AND COUNSELLING

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Concept of Guidance
- 1.4 Types of Guidance
- 1.5 Guidance and Counselling: Indian Scenario
- 1.6 Status of Guidance and Counselling Services in the Country
- 1.7 Counselling as a Specified Service of Guidance
- 1.8 Summary
- 1.9 Self-Evaluation Exercises
- 1.10 Suggested Guidelines for Self-Evaluation Exercises
- 1.11 Answer Keys to Self-Check Exercises
- 1.12 References
- 1.13 Suggested Readings

UNIT 2: GUIDANCE SERVICES IN THE CONTEXT OF VOCATIONAL EDUCATION AND TRAINING

- 2.1 Introduction
- 2.2 Objectives
- 2.3 Need and Importance of Vocational Guidance and Counselling in Vocational Education and Training (VET)
- 2.4 Role of Vocational Guidance Services in VET in School
- 2.5 Introducing Guidance Services in VET in School
- 2.6 Various Guidance Service in VET
- 2.7 Vocational Teacher as a Guidance Functionary: Skills, Roles, Functions and Ethics of Vocational Teachers as Guidance Functionary
- 2.8 Understanding Relationship between World of Work and Human Resource Development

- 2.9 Survey Method of Collecting Information Regarding Human Resource Requirement at Local Level
- 2.10 Summary
- 2.11 Self-Evaluation Exercises
- 2.12 Answer Keys to Self-Evaluation Exercises
- 2.13 Suggested Readings and References

UNIT 3: INDIVIDUAL DIFFERENCES, OCCUPATIONAL DIVERSITY AND CAREER GUIDANCE

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Understanding Individual Differences and Occupational Diversity
- 3.4 Career Development Concept and Approaches
- 3.5 Factors affecting Career Development and Career Choices
- 3.6 Process of Career Guidance
- 3.7 Summary
- 3.8 Self-Evaluation Exercises
- 3.9 Suggested Guidelines for Self-Evaluation Exercises
- 3.10 Answer Keys to Self-Check Exercises
- 3.11 References
- 3.12 Suggested Readings

UNIT 4: PSYCHO EDUCATIONAL ASSESSMENT OF STUDENTS

- 4.1 Introduction
- 4.2 Objectives
- 4.3 Assessment of Students
- 4.4 Students Appraisal through Non-Testing Techniques
- 4.5 Summary
- 4.6 Self-Evaluation Exercises
- 4.7 Answer Keys to Self-Check Exercises
- 4.8 References
- 4.9 Suggested Readings

UNIT 5: CAREER INFORMATION SERVICE

- 5.1 Introduction
- 5.2 Objectives
- 5.3 Careers Information: Concept, Importance and Sources
- 5.4 Sources of Career Information
- 5.5 Compilation, Classification and Filling of Careers Information
- 5.6 Dissemination of Careers Information – Individual and Group Activities
- 5.7 Evaluation and Updating of Careers Information
- 5.8 Summary

- 5.9 Self-Evaluation Exercises
- 5.10 Answer Keys to Self-Check Exercises
- 5.11 References
- 5.12 Suggested Readings

UNIT 6: VOCATIONAL GUIDANCE SERVICES IN SCHOOL: ROLE OF STAKEHOLDERS

- 6.1 Introduction
- 6.2 Objectives
- 6.3 Vocational Guidance Services in School
- 6.4 Various Stakeholders in School Guidance Programme and their Role
- 6.5 Setting up a Career Information Service
- 6.6 Summary
- 6.7 Self-Evaluation Exercises
- 6.8 Suggested Guidelines to Answer Self-Evaluation Exercises
- 6.9 Answer keys to Self-Check Exercises
- 6.10 Suggested Readings and References

EMPLOYABILITY SKILLS DEVELOPMENT

Recommended Study Hours:120

Total Credits : 3

Total Marks: 100

6.1 Rationale

The specific objectives of vocationalisation of secondary and higher secondary education are to enhance the employability of youth through demand driven modular vocational courses; to maintain their competitiveness through provisions of multi-entry multi-exit learning opportunities and vertical mobility; to fill the gap between the educated and the employable youth and to reduce the dropout rate at the secondary level.

The success of an individual as an employee or as an entrepreneur (employer) in a knowledge-based economy will depend upon skills, creativity, imagination, ability to create or innovate ideas, take risk, turn ideas into reality and the ability to cope up with change and adapt quickly to new environment and people. Employability skills curriculum introduced from Classes IX to XII includes communication skills, self-management skills, basic computer skills, entrepreneurial skills and green skills. These skills are very important for the success of an individual.

This paper on employability skills has been designed to enable the trainees to learn communicating effectively with employers, supervisors, and co-workers, setting priorities in work and personal life, using decision-making strategies, handling stress, using ICT skills for communication and data management, identifying business opportunities, developing entrepreneurial qualities and develop an understanding of the importance of green growth, green economy and opportunities for green jobs.

6.2 Learning based Outcomes

On completion of this paper, trainee will be able to:

- Demonstrate various methods of communication, elements of communication cycle and factors affecting perspectives in communication
- Apply measures to overcome barriers in communication
- Describe the principles of communication
- Apply the strategies that help in building self-confidence and use stress management techniques
- Identify various factors influencing self-motivation and developing personality traits
- Demonstrate the use of various components and peripherals of computer system
- Apply basic skills for use of various software for word processing, calculations and presentations.
- Create a document on word processor and edit, save and print
- Prepare spreadsheet and PPT
- Identify various types of business activities;

- Enlist the characteristics of successful entrepreneur
- Describe the importance of entrepreneurial values, attitude and motivation
- Describe the general and entrepreneurial behavioral competencies
- Describe the green economy, green skills, green jobs and main sectors of green economy

6.3 Units and Unit Contents

UNIT 1: COMMUNICATION SKILLS

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Meaning and Concept of Communication
- 1.4 Types of Communication
- 1.5 Characteristics of Effective Communication
- 1.6 Benefits of Effective Communication
- 1.7 Communication Network
- 1.8 Communication Skills
- 1.9 Common Teaching Methods for Communication Skills
- 1.10 Communication Models
- 1.11 Barriers to Communication
- 1.12 Self-Evaluation Exercises
- 1.13 Answer Keys to Self-Check Exercises
- 1.14 Summary
- 1.15 References and Suggested Readings

UNIT 2: INFORMATION AND COMMUNICATION TECHNOLOGY SKILLS

- 2.1 Introduction
- 2.2 Objectives
- 2.3 Basic Operations of a Computer System
- 2.4 Creating Documents
- 2.5 Preparing Spreadsheet
- 2.6 Preparing Power Point Presentation
- 2.7 Self-Evaluation Exercises
- 2.8 Answer Keys to Self-Check Exercises
- 2.9 Summary
- 2.10 References and Suggested Readings

UNIT 3: SELF-MANAGEMENT SKILLS

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Self-Management Skills
- 3.4 Personal Appearance and Presentation
- 3.5 Team Building Skills
- 3.6 Building Self-Confidence
- 3.7 Working Independently
- 3.8 Time Management Skills
- 3.9 Stress Management
- 3.10 Self-Evaluation Exercises
- 3.11 Answer Keys to Self-Check Exercises

- 3.12 Summary
- 3.13 References and Suggested Readings

UNIT 4: ENTREPRENEURSHIP SKILLS

- 4.1 Introduction
- 4.2 Objectives
- 4.3 Meaning and Concept of Entrepreneurship
- 4.4 Types of Businesses
- 4.5 Role and Rewards of Entrepreneurship
- 4.6 Entrepreneurship as a Career Option
- 4.7 Entrepreneurship Values, Attitude and Motivation
- 4.8 Self-Evaluation Exercises
- 4.9 Answer Keys to Self-Check Exercises
- 4.10 Summary
- 4.11 References and Suggested Readings

UNIT 5: GREEN SKILLS

- 5.1 Introduction
- 5.2 Objectives
- 5.3 Importance of Green Skills
- 5.4 Environment, Society and Ecosystem
- 5.5 Natural Resources and Conservation
- 5.6 Conserving Natural Resources
- 5.7 Green Economy and Sustainable Development
- 5.8 Components of Green Economy
- 5.9 Skill Development for Green Economy
- 5.10 Green Economy
- 5.11 Role of Government and Private Sector in Promoting Green Jobs
- 5.12 Self-Evaluation Exercises
- 5.13 Answer Keys to Self-Check Exercises
- 5.14 Summary
- 5.15 References and Suggested Readings

Paper - 7

Code - DVET 204

RESEARCH IN VOCATIONAL EDUCATION AND TRAINING

Recommended Study Hours :120

Total Credits : 3

Total Marks: 100

7.1 Rationale

Research on technical and vocational education and training (TVET) is an established sector of educational research, because TVET is considered as part of the national education system. The start point for TVET research is training occupation, while the employment occupation is subject of the labour market research.

The research and development results from the effects of job design and work organization on human resources management and thus on the increasing productivity as well as competitiveness of companies and branches. As a dimension of education, economy, social politic, and labour market politic, TVET is a subject of interdisciplinary education research. The TVET research is a unique education sector, which is directly related to the shaping of transition from education to the employment system.

7.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Explain the area of vocational Education and Research
- Describe the overview and generis of vocational education and Research
- Demonstrate Vocational pedagogy
- Enlist the areas of Research in Vocational Education
- Recall VET research policy and planning
- Describe different system of research
- Explain Challenges faced by TVET system
- Formulate Research Problem
- Analyse and write the Report

7.3 Units and Unit Contents

UNIT 1: RESEARCH IN TECHNICAL & VOCATIONAL EDUCATION & TRAINING (TVET)

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Research Concept, Meaning and Scope
- 1.4 Types of Research
- 1.5 Distinct Characteristics of Research in TVET
- 1.6 Case Study and Survey Research in TVET
- 1.7 Conducting Action Research
- 1.8 Summary
- 1.9 Unit End Question

- 1.10 Unit End Activity
- 1.11 References and Suggested Readings

UNIT 2: PROCESS OF RESEARCH

- 2.1 Introduction
- 2.2 Objectives
- 2.3 What is a Research Problem?
- 2.4 Steps of Research Process
- 2.5 General Challenges with Research
- 2.6 Summary
- 2.7 Unit End Questions
- 2.8 Unit End Activity
- 2.9 References and Suggested Readings

UNIT 3: COLLECTION OF DATA IN RESEARCH

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Scales of Measurement
- 3.4 Tools and Techniques of Research
- 3.5 Characteristics of a Good Research Tool
- 3.6 Summary
- 3.7 Unit End Questions
- 3.8 Unit End Activity
- 3.9 References and Suggested Readings

UNIT 4: POPULATION, SAMPLE AND VARIABLE

- 4.1 Introduction
- 4.2 Objective
- 4.3 Population
- 4.4 Sample
- 4.5 Sampling
- 4.6 Types of Sampling
- 4.7 Characteristics of a Good Sample
- 4.8 Variables
- 4.9 Types of Variables
- 4.10 Summary
- 4.11 Unit End Questions
- 4.12 Unit End Activity
- 4.13 References and Suggested Readings

UNIT 5: PRESENTATION AND ANALYSIS OF DATA

- 5.1 Introduction
- 5.2 Objectives
- 5.3 Types of Data
- 5.4 Data Management
- 5.5 Analysis of Qualitative Data
- 5.6 Analysis of Quantitative Data
- 5.7 Measures of Dispersion
- 5.8 Descriptive Statistics and Introduction to Inferential Statistics

- 5.9 Correlation and Causation
- 5.10 Degree of Correlation
- 5.11 Interpretation of Correlation Coefficient
- 5.12 Measurement of Coefficient of Correlation
- 5.13 Karl Pearson's Correlation Coefficient
- 5.14 Summary
- 5.15 Unit End Questions
- 5.16 Unit End Activity
- 5.17 References and Suggested Readings

UNIT 6: RESEARCH REPORT WRITING

- 6.1 Introduction
- 6.2 Objectives
- 6.3 Research Report
- 6.4 Purpose of Research Report
- 6.5 Types of Reports
- 6.6 Steps of Report Writing
- 6.7 Planning Report Writing
- 6.8 Format of Report Writing
- 6.9 Chapterisation
- 6.10 Principles of Writing Report
- 6.11 Pagination, Typing, Font and Style
- 6.12 References
- 6.13 Summary
- 6.14 Unit End Questions
- 6.15 Unit End Activity
- 6.16 References and Suggested Readings

UNIT 7: ICT TOOLS IN EDUCATIONAL RESEARCH

- 7.1 Introduction
- 7.2 Components of ICT
- 7.3 Application of ICT in Research
- 7.4 Unit End Questions
- 7.5 Multiple Choice Questions
- 7.6 Unit End Activity
- 7.7 References and Suggested Readings

Trimester – III (Contact Learning)

Paper - 8

Code - DVET 301

ICT APPLICATIONS IN VOCATIONAL EDUCATION & TRAINING

Recommended Study Hours: 120

Total Credits: 3

Total Marks: 100

8.1 Rationale

Information and Communication Technologies have recently gained groundswell of interest. It is a significant area for enhancing the effectiveness of teaching –learning around the globe. The new development in ICT has highly changed the face of education over the last few decades.

Integrating ICT into vocational education seems to be a necessary issue for new generation educators/ administrators in the country. However, if teachers cannot make good use of the ICT tools, the money and time spent on the ICT is going to be a waste. There is a need to improve the technology-enhanced setting more stimulating and much better than in a traditional classroom environment. This course equips teachers with necessary knowledge and skills in adopting ICT in vocational education.

8.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Identify and name various components of Computer system
- Identify and name various input, output and peripheral devices
- Connect input, output and peripheral devices to computer
- Perform the basic computer operations.
- Create, edit and format the documents in word processor
- Create a worksheet, enter and edit data
- Create and deliver the presentations.
- Print the document
- Search the information on Internet using search engine
- Send/ receive email and manage the mailbox
- Download and upload files on Internet
- Use multimedia content and social media for educational purposes
- Access and use e-learning platform
- Integrate ICT and web tools for teaching and training

8.3 Units and Unit Contents

Unit-1: Overview of Computer

- 1.0. Introduction
- 1.1. Computer System
- 1.2. Characteristics and Limitations of a Computer
- 1.3. Generations of Computer
- 1.4. Hardware and Software
- 1.5. Classification of Computers
- 1.6. Classification of Computers According to Size & Storage Capacity
- 1.7. Central Processing Unit (CPU)
- 1.8. CPU Components
- 1.9. Using Computer Peripherals
- 1.10. Computer Memory
- 1.11. Summary

Unit-2: Word Processing

- 2.0. Introduction
- 2.1. GUI of MS-Word
- 2.2. Editing a Document
- 2.3. Working with Tables
- 2.4. Mail Merge
- 2.5. Spelling & Grammar
- 2.6. Printing Documents
- 2.7. Summary

Unit-3: Spreadsheet

- 3.0. Introduction
- 3.1. Excel User Interface
- 3.2. Introduction to Home Ribbon/Tabs
- 3.3. Using Formula and Functions
- 3.4. Printing Workbook
- 3.5. Charts
- 3.6. Data Validation
- 3.7. Data Sorting
- 3.8. Summary

Unit-4: Presentation

- 4.0. Introduction
- 4.1. Groups Categories
- 4.2. Opening PowerPoint
- 4.3. Creating New Presentations
- 4.4. Tables

- 4.5. Charts
- 4.6. Smart Art Graphics
- 4.7. Viewing Presentations
- 4.8. Printing Presentation
- 4.9. Summary

Unit-5: Internet and its Applications

- 5.0. Introduction
- 5.1. Internet
- 5.2. History of the Internet
- 5.3. Connecting to Internet
- 5.4. Working with Web Browser
- 5.5. Web Browser
- 5.6. Electronic Mail
- 5.7. Internet Searching – Search Engines and Websites
- 5.8. Downloading Files
- 5.9. Summary

Unit-6: ICT and Web Tools

- 6.0. Introduction
- 6.1. ICT as Tools of Learning and Teaching
- 6.2. E-Learning
- 6.3. Social Media for Teaching
- 6.4. Web Tools for Teaching
- 6.5. Summary

Trimester – III (Contact Learning)

Note: 02 elective papers (for paper no. 9 and 10) from any one of the relevant sector will be selected by the trainee. The sector wise details of elective papers are as follows.

Sector: Agriculture

Paper- 9

Code - DVET 302-Ag ADVANCES IN AGRICULTURE

Recommended Study Hours: 120

Total Credits: 3

Total Marks: 100

9.1 Rationale

Agriculture deals with the cultivation of crops and animals Husbandry for food, fiber, fuel, medicinal and other products required to sustain and enhance human life. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that nurtured the development of civilization. The history of agriculture dates back thousands of years, and its development has been driven and defined by greatly different climates, cultures, and technologies.

The major agricultural products can be broadly grouped into foods, fibres, fuels, and raw materials. Specific foods include cereals (grains), pulses, vegetables, fruits, oils, meats and spices. Fibres include cotton, wool, hemp, silk and flax and raw materials include timber and bamboo. Industrial agriculture based on large-scale monoculture farming has become the dominant agricultural method. Many other useful materials are also produced by plants, such as resins, dyes, drugs, perfumes, bio fuels etc. Over one third of the world's workers are employed in agriculture, second only to the service sector, although the percentage of agricultural workers in developed countries has decreased significantly over the past several centuries.

Agricultural food production and water management are increasingly becoming global issues that are fostering debate on a number of fronts. Significant degradation of land and water resources, including the depletion of aquifers, has been observed in recent decades, and the effects of global warming on agriculture. Genetically modified organisms are an increasing component of agriculture, although they are banned in several countries. Selective breeding and modern practices in animal husbandry have similarly increased the output of meat, but have raised concerns about animal welfare and the health effects of the antibiotics, growth hormones, and other chemicals commonly used in industrial meat production.

9.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Describe the importance of agriculture in Indian economy;
- Demonstrate the knowledge of processes and preparations involved in the basic agricultural practices for production of different crops;

- Demonstrate the knowledge of basic animal husbandry practices;
- Demonstrate the knowledge of importance and scope of commercial agriculture, value addition and agriculture entrepreneurship;
- Demonstrate the knowledge of field operations in production, processing and marketing of agricultural crops and produce.

9.3 Units and Unit Contents

UNIT 1: INTRODUCTION TO AGRICULTURE

- 1.1. History of Scientific Agriculture
- 1.2. Scope of Agriculture in India
- 1.3. Agro-ecological Zones of India
- 1.4. Disciplinary Streams in Agriculture
- 1.5. Principles of Sustainable Agriculture
- 1.6. Agriculture and National Economy
- 1.7. Entrepreneurship in Agriculture
- 1.8. Summary
- 1.9. Self-Evaluation Exercises

UNIT 2: SOIL MANAGEMENT

- 2.1. Introduction to Principles of Soil Science
- 2.2. Soil Testing and Integrated Nutrient Management
- 2.3. Global Warming and Conservation Agriculture
- 2.4. Biological Soil Health Management
- 2.5. Problems Soils of India and their Management
- 2.6. Summary
- 2.7. Self-Evaluation Exercise

UNIT 3: CROP PRODUCTION AND MANAGEMENT

- 3.1. Development of Plant Varieties
- 3.2. Advances in Seed Science and Technology
- 3.3. Precision Agriculture
- 3.4. Advances in Fertilizer Technology
- 3.5. Organic Agriculture and Biofertilizers
- 3.6. Integrated Pest and Disease Management
- 3.7. Managing Mechanised Crop Production
- 3.8. Water Management; Soil and Water Conservation
- 3.9. Post-Harvest Technology and Mmanagement
- 3.10. Summary
- 3.11. Self-Evaluation Exercises

UNIT 4: INTRODUCTION TO LIVESTOCK FARMING

- 4.1. Advances in Livestock Farming
- 4.2. Animal Health Management
- 4.3. Feed Management
- 4.4. Housing Systems for Livestock
- 4.5. Summary
- 4.6. Self-Evaluation Exercises

UNIT 5: MARKETING OF AGRICULTURAL PRODUCE

- 5.1. Introduction to Agricultural Marketing
- 5.2. Demand and Supply of Agricultural Produce
- 5.3. Diversification of Marketing Chains
- 5.4. Summary
- 5.5. Self-Evaluation Exercises

10.1 Rationale

Horticulture plays a pivotal role in the food and livelihood security of India. Though horticultural crops occupy only 8.5% of arable land, they contribute 24.5% of the GDP in agriculture. Economists view that commercialization of agriculture and promotion of agri-business in India is crucially dependent on the progress in Horticulture sector. India has the potential to be the horticulture heaven and plantation paradise.

The agricultural paradigm is already undergoing a shift with focus from cereal production to diversified farming. Horticultural crops besides improving biological productivity and nutritional standards also have enormous scope for enhancing profitability. This group of crops comprising fruits, vegetables, root and tuber crops, plantation crops, medicinal and aromatic plants, spices and condiments and ornamental crops.

Although, the country is second largest production of fruits and vegetables; the availability of fruits and vegetables still continues to be much below the dietary requirements. With increase in per capita income and accelerated growth of health-conscious population, demand for horticultural produce is on increase which is expected to further accelerate, which will require more production. But the production has to be competitive both in terms of quality and price. Thus, the potentialities, which exist, need to be harnessed and gains have to be sustained. Development of improved cultivars with high quality characteristics, productivity, resistance to pest and disease and tolerant to abiotic stresses. The technologies must improve the efficiency of water and nutrients and variability in yield, quality and also reduced post-harvest crop losses. Efforts will also be needed to ensure timely availability of quality seed and planting material. Consequently, horticultural development has to be seen as integrated approach, addressing important gaps, in harnessing the potential through targeted research with focus on enhancing efficiency. Thus, technology driven horticulture is expected to address the concern for complimentary and nutritional security, health care leading to ultimately economic development.

10.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Identify and categorize field and vegetable crops
- Select healthy seeds for sowing
- Demonstrate the ability to grow and maintain vegetable crops
- Describe the Plantation and spices
- Explain the Fruit crops
- Demonstrate the ability to grow and maintain medicinal and aromatic plants and
- Demonstrate the knowledge of floriculture and landscaping

- Describe nursery management
 - Describe nutrient management
 - Explain water management
 - Identify and manage Insect pest, diseases and weeds
 - Understand post-harvest management and
- Demonstrate the ability for preservation and processing of Horticulture produce

10.3 Units and Unit Contents

UNIT-1: INTRODUCTION TO HORTICULTURE

- 1.1. Introduction
- 1.2. Objectives
- 1.3. Importance and Scope of Horticulture
- 1.4. Disciplinary Streams in Horticulture
- 1.5. Nursery Management in Horticultural Crops
- 1.6. Special Horticultural Operations
- 1.7. Protected Cultivation
- 1.8. Kitchen and Terrace Gardening
- 1.9. Summary
- 1.10. Self-Evaluation Exercises
- 1.11. Answer Keys to Self-Check Exercises
- 1.12. Answer Keys to Self-Evaluation Exercises

UNIT-2: OLERICULTURE

- 2.1. Introduction
- 2.2. Objectives
- 2.3. Introduction to Vegetable Crops
- 2.4. Classification of Vegetable Crops
- 2.5. Package of Practices for Important Vegetable Crops [Tomato, Potato, Cauliflower, Radish and Bottle Gourd]
- 2.6. Summary
- 2.7. Self-Evaluation Exercises
- 2.8. Answer Keys to Self-Check Exercises
- 2.9. Answer Keys to Self-Evaluation Exercises

UNIT-3: POMOLOGY

- 3.1. Introduction
- 3.2. Objectives
- 3.3. Introduction to Pomology
- 3.4. Classification of Fruit Crops
- 3.5. Package of Practices for Important Fruit Crops (Mango, Guava, Orange, Banana, Grapes and Apple)
- 3.6. Summary
- 3.7. Self-Evaluation Exercises
- 3.8. Answer Keys to Self-Check Exercises
- 3.9. Answer Keys to Self-Evaluation Exercises

UNIT-4: FLORICULTURE AND LANDSCAPING

- 4.1. Introduction
- 4.2. Objectives
- 4.3. Introduction to Floriculture and Landscaping
- 4.4. Classification of Ornamental Plants
- 4.5. Package of Practices for Important Flowering Crops (Rose, Marigold, Jasmine, Gladiolus, Gaillardia, Chrysanthemum)
- 4.6. Principles and Features of Garden
- 4.7. Topiary and Rockery
- 4.8. Garden
- 4.9. Lawn Management
- 4.10. Summary
- 4.11. Self-Evaluation Exercises
- 4.12. Answer Keys to Self-Check Exercises
- 4.13. Answer Keys to Self-Evaluation Exercises

UNIT-5: PLANTATION, SPICES, MEDICINAL AND AROMATIC PLANTS

- 5.1. Introduction
- 5.2. Objectives
- 5.3. Introduction to Plantation and Spices
- 5.4. Introduction to Medicinal and Aromatic Plants
- 5.5. Package of Practices for Coconut, Turmeric, Alovera, and Citronella Cultivation
- 5.6. Summary
- 5.7. Self-Evaluation Exercises
- 5.8. Answer Keys to Self-Check Exercises
- 5.9. Answer Keys to Self-Evaluation Exercises

UNIT-6: POST HARVEST MANAGEMENT AND PRESERVATION

- 6.1. Introduction
- 6.2. Objectives
- 6.3. Introduction to Post-Harvest Management and Preservation
- 6.4. Harvesting Maturity
- 6.5. Post-Harvest Handling of Horticultural Produce
- 6.6. Cold Chain Management
- 6.7. Principles and Methods of Food Preservation
- 6.8. Commercial Processed Products of Fruits, Vegetables and Flowers
- 6.9. Summary
- 6.10. Self-Evaluation Exercises
- 6.11. Answer Keys to Self-Check Exercises
- 6.12. Answer Keys to Self-Evaluation Exercises

Sector: IT/ITeS

Paper-11

Code - DVET 302-IT

MULTIMEDIA AND WEB TECHNOLOGY

Recommended Study Hours:120

Total Credits: 3

Total Marks: 100

11.1 Rationale

Digital multimedia has created a revolution in communications, commerce, and entertainment. A powerful and accessible tool of creative expression, digital multimedia requires a broad platform of practical skills in the use of specific software and hardware, including operating systems, media editing programs, authoring applications, and software utilities.

The World Wide Web (WWW) has become the major medium of communication and collaboration in this 21st century. So, it essential to have a clear understanding of the working principles of websites and to learn about creating simple and effective webpage. This course is designed to provide a basic knowledge required to design and develop websites with intuitive graphics. It will help the trainee to become familiar with principles that relate to web design and learn how to implement these theories into practice.

11.2 Learning based Outcomes

On completion of the course students will be able to:

- Explain the concept multimedia technology and digital graphics
- List the various multimedia devices and software
- List the various types of graphics format
- Design the graphics
- Draw Geometric objects and shapes
- Explain the concept of animation in Multimedia
- Record the Audio and video
- Explain the concept of web technology
- Create the web pages using various HTML tags
- Develop a user friendly web page.
- Define the CSS with its types
- Use CSS to provide the styles to the web pages at various levels.
- Develop the modern web pages using the HTML and CSS features with different layouts as per need of applications.

11.3 Units and Unit Contents

Unit-1: Basics of Multimedia

- 1.1. Multimedia Basics
- 1.2. Multimedia Devices
- 1.3. Internet
- 1.4. World Wide Web & Multimedia
- 1.5. Applications of Multimedia
- 1.6. Image Compression and Standard
- 1.7. Digital Graphics
- 1.8. Graphics Software
- 1.9. Animation
- 1.10. Summary

Unit-2: Audio & Video

- 2.1. Digital Representation of Sound
- 2.2. Audio Content
- 2.3. Creating a Video Clip
- 2.4. MPEG Audio
- 2.5. Summary

Unit-3: Web Technology

- 3.1. Introduction
- 3.2. World Wide Web (www)
- 3.3. Web Design Fundamentals
- 3.4. Summary

Unit-4: Web Development

- 4.1. Introduction
- 4.2. Basics of HTML
- 4.3. HTML Tag Reference
- 4.4. Global Attributes
- 4.4. Event Handlers
- 4.5. Document Structure Tags
- 4.6. Formatting Tags
- 4.7. Block Level Formatting
- 4.8. List Tag
- 4.9. Form Tags
- 4.10. Frame Tags
- 4.11. Executable Content Tags: Image maps
- 4.12. Tables
- 4.13. Frames
- 4.14. Form
- 4.15. Forms and Scripting
- 4.16. Action Buttons
- 4.17. Grouping Related Fields
- 4.18. Events and Event Handlers
- 4.19. Passing Form Data
- 4.20. Summary

Unit-5: Style Sheet and Web Publishing

- 5.1. Introduction
- 5.2. Web Hosting
- 5.3. Web Server
- 5.4. File Transfer Protocol (FTP)
- 5.5. Uploading the Contents in the Website
- 5.6. Maintenance of Website
- 5.7. Summary

Paper- 12

Code - DVET 302-IT PYTHON PROGRAMMING

Recommended Study Hours:120

Total Credits: 3

Total Marks: 100

12.1 Rationale

Python is an object-oriented programming language created by Guido Rossum in 1989. It is ideally designed for rapid prototyping of complex applications. It has interfaces to many OS system calls and libraries and is extensible to C or C++. Many large companies use the Python programming language include NASA, Google, YouTube, BitTorrent, etc. Python is widely used in Artificial Intelligence, Natural Language Generation, Neural Networks and other advanced fields of Computer Science. Python had deep focus on code readability.

12.2 Learning based Outcomes

On completion of this module, trainees will be able to

- Describe the software development life-cycle.
- Describe the principles of structured programming
- Explain an algorithm and its importance in computer programming.
- Install and run the Python interpreter
- Create and execute Python programs
- Comprehend the concepts of file I/O
- Read data from a text file using Python
- Recognize and construct common programming idioms: variables, loop, branch, subroutine, and input/output.

12.3 Units and Unit Contents

Unit-1: Python Basics

- 1.1. Introduction
- 1.2. Basics of Python Programming
- 1.3. Working with Python Interpreter
- 1.4. Structure of a Python Program
- 1.5. Keywords
- 1.6. Identifiers
- 1.7. Variables
- 1.8. Comments
- 1.9. Data Types
- 1.10. Mutable and Immutable Data Types
- 1.11. Deciding Usage of Python Data Types
- 1.12. Operators

- 1.13. Expressions
- 1.14. Statement
- 1.15. Input and Output Statements
- 1.16. Type Conversion
- 1.17. Debugging
- 1.18. Summary

Unit-2: Control Structures

- 2.1. Introduction
- 2.2. Control Structures
- 2.3. Selection
- 2.4. Indentation
- 2.5. Repetition
- 2.6. Break And Continue Statement
- 2.7. Nested Loops
- 2.8. Summary

Unit-3: Functions

- 3.1. Introduction
- 3.2. Functions
- 3.3. User Defined Functions
- 3.4. Scope of a Variable
- 3.5. Standard Library
- 3.6. Summary

Unit-4: Strings


- 4.1. Introduction
- 4.2. Strings
- 4.3. String Operations
- 4.4. Traversing a String
- 4.5. String Methods and Built-In Functions
- 4.6. String as Argument to Function
- 4.7. Summary

Unit-5: Lists

- 5.1. Introduction
- 5.2. List
- 5.3. List Operations
- 5.4. Traversing a List
- 5.5. List Methods and Built-In Functions
- 5.6. Nested Lists
- 5.7. Copying Lists
- 5.8. List as Argument to a Function
- 5.9. List Manipulation
- 5.10. Summary

Unit-6: Tuples and Dictionaries

- 6.1 Introduction
- 6.2 Tuples

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- 6.3 Tuple Operations
 - 6.4 Tuple Methods and Built-In Functions
 - 6.5 Tuple Assignment
 - 6.6 Nested Tuples
 - 6.7 Tuple Handling
 - 6.8 Introduction to Dictionaries
 - 6.9 Dictionaries are Mutable
 - 6.10 Dictionary Operations
 - 6.11 Traversing a Dictionary
 - 6.12 Dictionary Methods and Built-In Functions
 - 6.13 Manipulating Dictionaries
 - 6.14 Summary

Sector: Health Care

Paper-13

Code - DVET 302-Hc

CHANGING HEALTHCARE AND EDUCATION CONTEXT

Recommended Study Hours:120

Total Credits:03

Total Marks: 100

13.1 Rationale

Various regulatory bodies like quality agencies, medical councils, and national standards are involved in regulatory, quality, monitoring and assurance. At the same time, with the growth of population and demands there seems to be service shift like patient centered service, community based service, and personalized technologies are contributing to the rise and demand of health care services. While the Indian healthcare sector is poised for growth, it is still plagued by various issues and challenges such as dual disease burden, lack of infrastructure and man-power. Today's healthcare education and training emphasize on non-communicable diseases and reinvigoration of primary healthcare, experiences of specialties and context. Curricula, teaching, learning methods and assessments enable achievements of defined outcomes at key stages of medical education and training. This paper outlines current scenario of healthcare sector to acquaint learner with latest trends in healthcare.

13.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- To enrich knowledge of health care.
- To enable learner to explore and go beyond the module
- To acquaint latest trends in healthcare

13.3 Units and Unit Contents

UNIT 1: HEALTHCARE SYSTEM IN INDIA

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Healthcare Delivery System
- 1.4 Hospital
- 1.5 AYUSH Healthcare System
- 1.6 Telemedicine
- 1.7 Summary
- 1.8 Self-Evaluation Exercises
- 1.9. References
- 1.10. Suggested Readings

UNIT 2: HEALTH SCENARIO OF INDIA

- 2.1 Introduction
- 2.2 Objectives
- 2.3 Health Challenges in India
- 2.4 Major Health Problems In India
- 2.5 Non-Communicable Diseases
- 2.6 Summary
- 2.7 Self-Evaluation Exercises
- 2.8 References
- 2.9 Suggested Readings

UNIT 3: NATIONAL HEALTH PROGRAMME

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Health System Strengthening Programme
- 3.4 Reproductive, Maternal, Neonatal, Child and Adolescent Health
- 3.5 National Programme on Communicable Diseases
- 3.6 National Programme on Non-Communicable Diseases and Nutrition
- 3.7 Summary
- 3.8 Self-Evaluation Exercises
- 3.9 References
- 3.10 Suggested Readings

UNIT 4: BIOTECHNOLOGY

- 4.1 Introduction
- 4.2 Objectives
- 4.3 Basics of Biotechnology
- 4.4 Medical Biotechnology
- 4.5 Agricultural Biotechnology
- 4.6 Challenges in Biotechnology
- 4.7 Future of Biotechnology
- 4.8 Summary
- 4.9 References
- 4.10 Suggested Readings

Paper-14

Code - DVET 303-Hc

Infection Prevention and Control

Recommended Study Hours:120

Total Credits:03

Total Marks: 100

14.1 Rationale

IPC and quality standards of healthcare are essential for the well-being and safety of patients, their families, health workers and the community. A well-organized IPC is a basic requirement in every individual's life to access safe and quality healthcare and improving outcomes by reducing morbidity and mortality. The threats posed by epidemics, pandemics and antimicrobial resistance (AMR) have become increasingly evident as ongoing universal challenges and they are now recognized as a top priority for action on the global health agenda. Effective IPC is the cornerstone of such action.

14.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

1. Understand the spread of germs and disease by different means.
2. Identify source and reservoir of infection
3. Assess mode of infection transmission
4. Describe chain of infection.

14.3 Units and Unit Contents

UNIT 1: INFECTION AND TRANSMISSION

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Infection
- 1.4 Transmission of Infection
- 1.5 Level of Disease Occurrence
- 1.6 Summary
- 1.7 Self-Evaluation Exercises
- 1.8 References
- 1.9 Suggested Readings

UNIT 2: INFECTION PREVENTION AND CONTROL

- 2.1 Introduction
- 2.2 Objectives
- 2.3 Prevention of Infection Transmission
- 2.4 Infection Preventive Practices
- 2.5 Infection Control

- 2.6 Infection Prevention and Control in Hospital Setup
- 2.7 Immunisation
- 2.8 Summary
- 2.9 Self-Evaluation Exercises
- 2.10 References
- 2.11 Suggested Readings

UNIT 3: FOOD HYGIENE AND SAFETY

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Food Contamination and Prevention
- 3.4 Food Safety
- 3.5 Summary
- 3.6 Self-Evaluation Exercises
- 3.7 References
- 3.8 Suggested Readings

Recommended Study Hours:120

Total Credits: 3

Total Marks: 100

15.1 Rationale

Marketing is a factor which boosts industrialization and economic development. The growth of industry and economy depends upon the prevalence of demand. Marketing creates such demand by identifying the wants and needs of the customers. It increases the demand by identifying the gap in demand and supply position in the market. The increased demand and economic activity leads to enlarged markets, which set the stage for economies of scale in distribution and production that may not have existed before. Increased business operation results in generating new employment opportunities to the society and it also improves standards of living of the people by providing qualitative products and services to the society. It creates value for the products and services. The most of the products and services which we are now using are not the basic necessities. They are the facilities provided by the functions of marketing.

Many salespersons assume that when a customer enters their store it is because they want to purchase a product which they sell. However, many customers may need assistance before making a purchase decision. They may require more information about the product, a product demonstration or even information on guarantees. Selling skills refer to the effective inputs from employees to ensure that they do everything possible to make a sale. The employee should be aware of the importance of providing the customer with the information they require, handling objections and closing the sale. The selling skills include, personal selling techniques, customer relations, handling payment, patience, communication skills, reliability, politeness, always well-groomed and dressed, constant brand image and message portrayed, good knowledge of all products and services, and salesmanship. Sales do require a number of skills to be introduced in a person to be a successful salesperson. However, they are simple skills which are almost personality dependent.

In this subject we covered introductory aspects of marketing such as marketing concepts, functions, importance, information and environment. We also covered elements of marketing mix under which product mix, price mix, promotion mix & place mix and various types of modern marketing activities such as products & services marketing. We introduced topics like types of marketing which includes traditional and modern marketing, types of marketing in different marketing areas like agricultural, retail, marketing in various business areas; Product marketing, service marketing, agricultural marketing, International marketing, rural marketing and retail marketing.

We introduced retail marketing which include retail marketing concepts, sales management, salesmanship, retail merchandising, effective communication skills, consumer psychology and behavior, and emerging trends in retailing. This subject also covers retail business practices which include retail strategy, developing and applying retail strategy, Types of retailing, Credit transaction, Retailing of services. It includes how to influence customer buying behavior and classification of buyers. Retail business practice is also about various types of retailing like departmental store, supermarket, hypermarket, convenience store, catalogue retailers, etc.

There are various job roles in the retail sector like Retail Manager, Retail team leader, Cashier, Store operation assistant, Sales associate, Seller activation executive, Trainee associate, Digital cataloguer, Individual sales professional and Distribution salesman. Knowledge, skills, roles, functions, duties and responsibilities required for retail business professionals. We included details about various job roles to give practical knowledge. For the sake of student's future, we also include career opportunities in retail business.

15.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Describe the functions and importance of marketing.
- Differentiate between the marketing and selling.
- Collect and analyze the marketing information and identify sources and methods of analysis.
- Identify challenges with opportunities in the Indian marketing environment.
- Describe the elements of the marketing mix.
- Describe different types of product marketing and differentiate the functional aspects of them.
- Demonstrate the process of marketing the commercial services
- Identify types of marketing.
- Classify the types of retailing.
- Demonstrate the merchandising techniques.
- Identify career opportunities in retail business.
- Demonstrate creative selling and qualities of a good salesman.
- Demonstrate the process of selling and sales presentation techniques.
- Describe meaning of buyers, their behavior, classification and factors influencing purchase.
- Prepare the consumer profile as per specifications.
- Describe channels used for consumer and industrial goods.
- Perform the functions of specialized salesmen in different business activities.

15.3 Units and Unit Contents

UNIT 1: INTRODUCTION TO MARKETING

- Market - Meaning of market, types of markets.
- Marketing - Meaning and concept, Difference between selling and marketing.
- Meaning and benefits of marketing information system, Market segmentation, Targeting and Positioning.
- Marketing Environment - Internal and external (micro and macro) marketing environment, Ethical and social responsibility of Marketing.
- Marketing mix - Meaning and Importance of Marketing Mix, Product Mix, Concept of

Product Life Cycle, Pricing mix, Place mix, Channels used for consumer and industrial goods and Promotion mix.

- Marketing management – Meaning, nature, functions and process.

UNIT 2: TYPES OF MARKETING

- Types of Marketing - Traditional and Modern Marketing.
- Types of Modern Marketing - Social media marketing, E-mail marketing, Online marketing, Guerilla marketing, Mobile marketing, Network marketing, Point-of-sale marketing, Transactional marketing, Word of mouth marketing, Event marketing, SEO marketing.
- Marketing in various Business Areas - Product marketing, service marketing, agricultural marketing, International marketing, rural marketing, wholesale marketing and retail marketing.

UNIT 3: BASICS OF RETAIL MARKETING

- Introduction to Retail Marketing - Concepts of Retail Marketing, Types of Retail Formats, Functions of Retailers.
- Introduction to Sales Management - Concepts of Retail Sales Management, Types of selling, Selling Process, Sales Promotion Strategies, Salesmanship, Qualities of Good Sales Persons for Handling Queries.
- Retail Merchandising - Merchandise Strategies, Merchandising & Consumer Psychology. Sales presentation, Establish rapport.
- Communication; meaning, Benefits of effective communication, types of business communication, Handling objections and closing sales-After sales services.
- Challenges and opportunities in the Indian retail marketing environment, emerging trends in retail marketing, Technologies used in retailing.

UNIT 4: RETAIL BUSINESS PRACTICES

- Retail strategy - Definition and importance, developing and applying retail strategy.
- Types of retailing - Departmental store, supermarket, hyper-market, convenience store, catalogue retailers, non-store retailing: vending machine, door to door selling mail order, E-retailing.
- Credit transactions – meaning, importance and application.
- Retail Services - meaning of Customer and buyer behavior - Classification of buyers - Buying motives - rational and emotional, Method to Identify factors influencing purchase of a product.

UNIT 5: CAREERS IN RETAIL BUSINESS

- Evolution of Indian retail – Traditional and recent trends.
- Career opportunities in retail business - Store operation assistant, cashier, trainee associate, sales associate, seller activation executive, digital cataloguer, individual sales professional, distribution salesman, retail team leader and retail manager, retail business professionals.
- Retail Business Professionals - Knowledge, skills, roles, functions, duties and responsibilities.

15.4 Instructional Strategies

A variety of instructional approaches and learning materials will be utilized for curriculum transactions. The instructional strategies that would be adopted will include, but not limited to the following:

- Interactive lecture
- Group discussion
- Role -playing
- Case Studies
- Discussion Strategies
- Experiential Learning
- Learner-centered Teaching
- Problem-Based Learning
- Teaching with Cases
- Team-Based Learning
- Quizzes
- Writing Assignments
- Audio and video programmes
- Teleconferencing and Video-conferencing
- Group Projects
- Surveys

RETAIL MARKETING MANAGEMENT

Recommended Study Hours: 120

Total Credits: 3

Total Marks: 100

16.1 Rationale

Retailing is leading business activities register a remarkable transformation. Till a few years ago, we bought most of daily use products from small shops in our neighborhood or a close by markets. Generally, the shop keeper sit in the shop and sell goods either individual as a sole proprietor with the help of few assistants. In the last few years, however, the concept of large departmental stores and malls has been introduced, which also provide the same products.

A retailer is one who stocks the manufactured goods and is involved in the act of selling to the final customer or the consumer, at a margin of profit. Retailing is the last link that connects the individual consumer with the manufacturing and distribution chain. It adds value in terms of bulk breaking and providing a wide variety of goods and services to customers as per their needs.

In this subject we covered retail organization and management includes the introduction to retailing, retail organization and management, human resource management in retailing, store planning, design and layout in retailing, office procedures and communication in retailing. We also covered the fundamentals of retail marketing management which provides the introduction to retail marketing, factors influencing the consumer behaviour in retailing, retailing strategy and marketing mix in retailing. We discussed the fundamentals of the retail sales management, which covers the introduction to sales management, sales promotion strategies qualities of good sales persons for handling queries and retail merchandising strategies. We introduce the retail inventory and supply chain management includes the introduction to inventory management in retailing, methods of stock valuation and recording, effective inventory management, modern methods of inventory management and disposal system.

16.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Describe the retailing and its organization.
- Explain the human resource management in retailing.
- Develop the store planning, design and layout in retail.
- Follow the office procedures and communication techniques in retailing.
- Classify the types of retail formats.
- Identify the factors influencing consumer behavior in retail.
- Implement retailing strategies and marketing mix in retailing.
- Describe the management information system in retailing.

- Perform sales management techniques and selling process in retail sales management.
- Select and implement the sales promotional policy and strategies.
- Identify the features of salesmanship and the qualities of a good salesperson.
- Demonstrate the retail merchandising strategies and consumer psychology.
- Evaluate and appreciate the person's tasks in retail sales management.
- Describe the usefulness of inventory management in a retail business.
- Understand the concept of retail sales management.
- Demonstrate the components of supply chain management in retailing.
- Evaluate the inventory and supply chain management system in a retail business.
- Describe e-commerce and electronic data processing in retailing.
- Design the online marketing and e-payment systems in retail business.
- Classify types of customers, customer relations and loyalty schemes in retail business.
- Handle the customer grievances and their retention in retail business.
- Appreciate and usefulness of e-commerce and retail business in our country.
- Identify the resources for teaching retail marketing management.
- Select the suitable methods and media for teaching retail subject.
- Demonstrate the product/services presentations.

16.3 Units and Unit Contents

UNIT 1: FUNDAMENTALS OF RETAIL MARKETING MANAGEMENT

- Introduction to Retailing - Organized and unorganized retail business, Retail Organization and Management, Office Procedures and Communication in Retailing.
- Retail marketing management - Merchandising management, pricing management, human resource management, sales management, relationship management, pricing strategies, retail communication, retail marketing strategies.
- Store planning – Store design, store layout and visual merchandising in retailing.

UNIT 2: RETAIL INVENTORY AND SUPPLY CHAIN MANAGEMENT

- Inventory management – Introduction, Role of Inventory Supervisor in Retail, Inventory Planning and Control, Shortages and Overages in Retail.
- Methods of Stock Valuation and Recording - Effective Inventory Management, Modern Methods of Inventory Management and Disposal System.
- Supply Chain Management - Introduction to Supply Chain Management (SCM), Distribution strategy in SCM, Principles of SCM.
- Participants in the Process of SCM - Steps of SCM in Retailing, Advantages and limitations of Supply Chain Management.

UNIT 3: RETAIL SALES MANAGEMENT

- Sales Management - Introduction to sales management, Concept of retail sales management.
- Retail Location - Meaning, importance, process and factors affecting location.
- Retail Merchandising - Concept of merchandising, conventional vs vertical marketing system.
- Consumer behavior - Consumer decision making process, Consumer buying process, Forms of buying behavior, Retail pricing.

- Customer service - Meaning and importance of customer service, managing the sales team, Effective selling methods.

UNIT 4: E-COMMERCE AND CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

- E-commerce - Introduction to E-commerce, Electronic Data Processing.
- E-retailing - E-Payment System, E-Marketing system, Types of Customers in Retail, Customer Loyalty Schemes.
- Customer Relationship Management - Process, Customer retention strategies, Handling customer grievances and Electronic Customer Relationship Management.

UNIT 5: TEACHING RESOURCES AND METHODOLOGY

- Retail industry - Structure, tools and techniques used in the retail industry.
- Resources – Teaching learning aids, media, white board, LCD projector, classroom management, communication tools and equipment in retail business.
- Teaching methodology – Demonstrations, role plays, case studies, group discussions, games, seminar, project, field visit, simulation methods.
- Retail presentations - Oral and written presentations in retailing, Demonstration of customer service.
- Training and developments of retail staff in retail sector.

16.4 Instructional Strategies

A variety of instructional approaches and learning materials will be utilized for curriculum transactions. The instructional strategies that would be adopted will include, but not limited to the following:

- Interactive lecture
- Group discussion
- Role-playing
- Case Studies
- Discussion Strategies
- Experiential Learning
- Learner-centred Teaching
- Problem-Based Learning
- Teaching with Cases
- Team-Based Learning
- Quizzes
- Writing Assignments
- Audio and video programmes
- Teleconferencing and Video-conferencing
- Group projects
- Surveys

Sector: Automotive

Paper 17

Code - DVET 302-Au

AUTOMOBILE TECHNOLOGY DEVELOPMENT

Recommended Study Hours:120

Total Credits: 3

Total Marks: 100

17.1 Rationale

Automobile Engineering is a branch study of engineering which teaches manufacturing, designing, mechanical mechanisms as well operations of automobiles. It is an introduction to vehicle engineering, which deals with motorcycles, cars, buses trucks, etc. This course talks about automobiles, their machinery and their maintenance. This course also enables trainee teachers to study the intricacies of automobiles for promoting it in the secondary vocational education.

17.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Get an overview of the latest new technologies and of the growing trend of Automobile Technology
- Innovation in Automobile Sector
- Automobile Industry analysis
- Impact of made in India in Automobile Sector
- Development of e-content in Automobile Sector
- Green Automobile
- Use ICT tools to make education more engaging, motivating and innovative
- Use of Industrial robotics in Automobile manufacturer
- Auto Cad
- Tools designing for Automotive components

17.3 Units and Unit Contents

UNIT 1: INNOVATION AND DEVELOPMENT IN AUTOMOBILE SECTOR

- 1.1 Introduction
- 1.2 Learning Objectives
- 1.3 Importance of Innovation in Automobile Sector
- 1.4 New Development in Automobile Sector
- 1.5 Safety in Automobile Vehicle
- 1.6 References

UNIT 2: BASIC AUTOMOBILE

- 2.1 Introduction

- 2.2 Learning Objectives
- 2.3 Important Features of a Car
- 2.4 Classification of Vehicle based on Types
- 2.5 Classification of Vehicle based on Fuel
- 2.6 Importance of Transmission System in a Vehicle
- 2.7 Role of Car Colour
- 2.8 Special Features in Car
- 2.9 References

UNIT 3: MAJOR SYSTEM AND COMPONENT OF AUTOMOBILE

- 3.1 Introduction
- 3.2 Learning Objectives
- 3.3 Chassis and Auto Body
- 3.4 Automobile Body or Superstructure
- 3.5 Engine and its Components
- 3.6 Lubrication System
- 3.7 Cooling System
- 3.8 Fuel Supply System
- 3.9 Transmission System
- 3.10 Steering System
- 3.11 Suspension System
- 3.12 Brake
- 3.13 Electrical or Electronic System
- 3.14 Air Conditioning in Car
- 3.15 References

UNIT 4: AUTOMOBILE SERVICE TOOLS

- 4.1 Introduction
- 4.2 Learning Objectives
- 4.3 Hand Tools
- 4.4 Measuring Tools
- 4.5 Electrical Tools
- 4.6 Special Tools
- 4.7 Service Workshop Equipment
- 4.8 References

UNIT 5: INDUSTRIAL ROBOTICS

- 5.1 Introduction
- 5.2 Learning Objectives
- 5.3 Industrial Robots
- 5.4 PLC (Programmable Logic Controller)
- 5.5 Use of PLC in Automotive Industry
- 5.6 Role and Function of Supervisory Control and Data Acquisition (SCADA)
- 5.7 References

17.4 Instructional Strategies

- Class presentations/Interactive lectures
- Reading and Class discussions
- Assignments
- Case Studies
- Preparation of tools of assessment
- Use of assessment techniques in classroom
- Practice in developing rubrics
- Developing a portfolio and Lab/Studio project

Paper - 18

Code - DVET 303-Au AUTOMOBILE SALES AND MARKETING

Recommended Study Hours: 120

Total Credits: 3

Total Marks: 100

18.1 Rationale

Automobile Sales and marketing is one of the important segment in Automobile sector. Proper Sales and Marketing is done with competent people involved in this sector.

This course talks about automobile Sales and Marketing. This course also enables trainee teachers to study the Sales and Marketing of automobiles in the secondary vocational education.

18.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Get an overview of the sales and marketing components in this sector
- Human resource personal involved in sales and marketing
- Role of show room hostess
- Role of sales executive dealer
- Customer relation executive and its working
- Customer retention
- Promotion of sales of Automotive products

18.3 Units and Unit Contents

UNIT 1: BASIC AUTOMOBILE

- 1.1 Introduction
- 1.2 Learning Objectives
- 1.3 Important Features of a Car
- 1.4 Classification of Vehicle based on Types
- 1.5 Classification of Vehicle based on Fuel
- 1.6 Importance of Transmission System in a Vehicle
- 1.7 Role of Car Colour
- 1.8 Special Features in Car
- 1.9 References

UNIT 2 : INNOVATION IN AUTOMOBILE SALES AND MARKETING

- 2.1 Introduction
- 2.2 Learning Objectives
- 2.3 New Innovation
- 2.4 Components of Automotive Sales
- 2.5 Research in Automotive Sales (Automobile growth and air pollution)
- 2.6 Future of Car Sales
- 2.7 References

UNIT 3: AUTOMOTIVE MARKETING STRATEGY

- 3.1 Introduction
- 3.2 Learning Objectives
- 3.3 Driving Better Profit in Automotive
- 3.4 Automotive Marketing Strategy Analysis
- 3.5 Social Media and its Role in Marketing
- 3.6 Total Quality Management in Automobile Industry
- 3.7 References

UNIT 4: HUMAN RESOURCE PERSONNEL INVOLVED IN SALES AND MARKETING

- 4.1 Introduction
- 4.2 Learning Objectives
- 4.3 The Need of HR for Marketing
- 4.4 Product Marketing Team Members and its Role
- 4.5 References

UNIT 5: GENERATION OF SALES LEAD THROUGH TELEMARKETING

- 5.1 Introduction
- 5.2 Learning Objectives
- 5.3 Telemarketing
- 5.4 References

UNIT 6: SHOW ROOM HOST AND ROLE

- 6.1 Introduction
- 6.2 Learning Objectives
- 6.3 Role and Importance of a Showroom Host
- 6.4 References

18.4 INSTRUCTIONAL STRATEGIES

A variety of instructional approaches and learning materials will be utilized for curriculum transactions. The instructional strategies that would be adopted will include but not limited to the following:

- Interactive lecture
- Group discussion
- Role Playing
- Discussion Strategies
- Experiential Learning
- Games/Experiments/Simulations
- Inquiry-Guided Learning
- Interdisciplinary Teaching
- Learner-centered Teaching
- Mobile Learning
- /Hybrid Course
- Problem-Based Learning
- Teaching with Cases

- Team-Based Learning
- Quizzes
- Writing Assignments
- Audio and video programmes
- Teleconferencing and Video-conferencing
- Group projects
- Surveys

Sector: Apparel, Made-Ups and Home Furnishing

Paper - 19

Code - DVET 302-Ap HAND EMBROIDERY

Recommended Study Hours:120

Total Credits: 3

Total Marks: 100

19.1 Rationale

Embroidery is the handicraft of decorating fabric or other materials with needle and threads. Embroidery is an expression of self, rendered with patience and dedicated hard work, it is an art rightly described as "painting by needle". Embroidery may also incorporate other materials such as, pearls, beads, quills, and sequins. Embroidery adds grace and elegance, life and style even into articles of everyday use. In modern days, embroidery is made on ladies garment, gents garment, and kid's garments especially on caps, hats, coats, dress shirts, denim, stockings, and sport shirts. Some of the basic techniques of the embroidery are chain stitch, buttonhole or blanket stitch, running stitch, satin stitch, cross stitch etc., these stitches remain the fundamental techniques of hand embroidery today. Embroidery in India includes dozens of regional hand embroidery styles that vary by region on the varied Indian clothing. Designs in Indian embroidery are formed based on the texture and the design of the fabric and the stitch. Hand embroidery takes its inspiration from nature and religion. The colours, the base, the theme and the style are reflective of a particular region. Embroidery on leather, velvet, net, cotton and silk is done all over the country. With the rising popularity of hand embroidery, international markets are winning more sales escalating the sales in India. Even the interiors and remote places of India and abroad, have noticed the magical worth of this handwork.

19.2 Learning based Outcomes

On completion of this Paper, trainees will be able to:

- Describe elements and principles of design
- Demonstrate colours, colour wheel, and application of colour schemes
- Explain terms related to hand embroidery
- Define types and transferring methods of tracing the design
- Identify and use the tools and materials for hand embroidery
- Perform the various basic and advance stitches of hand embroidery
- Perform various types of traditional embroideries
- Explain finishing and packaging of hand embroidered products

19.3 Units and Unit Contents

UNIT 1: INTRODUCTION TO APPAREL, MADE-UPS AND HOME FURNISHING (AMHF) SECTOR

- 1.1 Introduction
- 1.2 Objectives
- 1.3 About the Sector
- 1.4 About the Job Roles
- 1.5 Summary
- 1.6 Self-Evaluation Exercises
- 1.7 Answer Keys to Self-Check Exercises
- 1.8 References
- 1.9 Suggested Readings

UNIT 2: DESIGN CONCEPT

- 2.1 Introduction
- 2.2 Objectives
- 2.3 Definition of Design
- 2.4 Types of Design
- 2.5 Sources of Information
- 2.6 Definition of Motif
- 2.7 Arrangement of Motif
- 2.8 Enlargement and Reduction of Design
- 2.9 Summary
- 2.10 Self-Evaluation Exercises
- 2.11 Answer Keys to Self-Check Exercises
- 2.12 References
- 2.13 Suggested Readings

UNIT 3: ELEMENTS AND PRINCIPLES OF DESIGN

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Elements of Design
- 3.4 Colour Concept
- 3.5 Dimensions of Colour (Hue, Value and intensity)
- 3.6 Colour Schemes
- 3.7 Principles of Design
- 3.8 Summary
- 3.9 Self-Evaluation Exercises
- 3.10 Answer Keys to Self-Check Exercises
- 3.11 References
- 3.12 Suggested Readings

UNIT 4: BASICS OF HAND EMBROIDERY

- 4.1 Introduction
- 4.2 Objectives
- 4.3 Historical Background of Hand Embroidery
- 4.4 Embroidery Terms
- 4.5 Tools and Materials
- 4.6 Summary
- 4.7 Self-Evaluation Exercises
- 4.8 Answer Keys to Self-Check Exercises
- 4.9 References
- 4.10 Suggested Readings

UNIT 5: TECHNIQUES OF TRANSFERRING THE DESIGN ON FABRIC

- 5.1 Introduction
- 5.2 Objectives
- 5.3 Material Required for Tracing the Design on the Fabric
- 5.4 Different Types of Tracing Methods
- 5.5 Summary
- 5.6 Self-Evaluation Exercises
- 5.7 Answer Keys to Self-Check Exercises
- 5.8 References
- 5.9 Suggested Readings

UNIT 6: BASIC AND ADVANCE STITCHES OF HAND EMBROIDERY

- 6.1 Introduction
- 6.2 Objectives
- 6.3 Basic Flat and Loop Stitches
- 6.4 Advance Flat and Loop Stitches
- 6.5 Combination of Embroidery Stitches and their Application
- 6.6 Summary
- 6.7 Self-Evaluation Exercises
- 6.8 Answer Keys to Self-Check Exercises
- 6.9 References
- 6.10 Suggested Readings

UNIT 7: TRADITIONAL EMBROIDERIES OF INDIA

- 7.1 Introduction
- 7.2 Objectives
- 7.3 Traditional Embroidery of Gujarat

- 7.4 Traditional Embroidery of Rajasthan
- 7.5 Traditional Embroidery of Punjab
- 7.6 Traditional Embroidery of Lucknow, Uttar Pradesh
- 7.7 Traditional Embroidery of Bengal
- 7.8 Traditional Embroidery of Karnataka
- 7.9 Traditional Embroidery of Kashmir
- 7.10 Traditional Embroidery of Himachal Pradesh
- 7.11 Summary
- 7.12 Self-Evaluation Exercises
- 7.13 Answer Keys to Self-Check Exercises
- 7.14 References
- 7.15 Suggested Readings

UNIT 8: FINISHING AND PACKING OF FINAL PRODUCTS

- 8.1 Introduction
- 8.2 Objectives
- 8.3 Embroidery Finishing Process
- 8.4 Packing
- 8.5 Summary
- 8.6 Self-Evaluation Exercises
- 8.7 Answer Keys to Self-Check Exercises
- 8.8 References
- 8.9 Suggested Readings

19.4 Instructional Strategies

- Class presentations/Interactive lectures
- Reading and Class discussions
- Assignments
- Case Studies
- Preparation of tools of assessment
- Use of assessment techniques in classroom
- Practice in developing rubrics
- Developing a portfolio
- Lab/Studio project

Code –DVET 303-Ap HAND EMBROIDERY- ADDAWORK

Recommended Study Hours: 120

Total Credits: 3

Total Marks: 100

20.1 Rationale

Hand embroidery Adda work is a very intricate form of hand embroidery done to decorate the surface of the garments, accessories and other items. Adda work is used a lot by designers in their collection in the recent scenario. Adda work articles like costumes, purses, footwear's and head gears are quite famous not only in India but all over the world. A pen like needle, which resembles the shape of a crochet needle, gives rise to an intricate form of artwork called the 'Adda/Aari work'. This work is popular for its delicate and finest thread work, which enhances the essence of hand embroidery. Aari work has always been considered one of the most tedious forms of needlework. Today, with the help of advanced stitching procedures, and the role of more artisans, it takes lesser time to complete the embroidery work on any article. The main stitches used in adda work is chain stitch and the other stitches include butterfly stitch, paani filling stitch, mirror work, outline styles, leaf fillings, sequins and bead work etc. along with these there are some more stitches are included in aari work are not done using aari like dabka work, zardozi work, French knot, satin stitch using silk and other fine threads.

20.2 Learning based Outcomes

On Completion of this Paper, trainee will be able to:

- Explain terms related to adda/aari work
- Identify and use tools and materials used for adda/aari work
- Define types and transferring methods of tracing the design
- Describe elements and principles of design
- Demonstrate colours, colour wheel, and application of colour schemes
- Perform the various basic and advance stitches of adda/aari work
- Explain finishing and packaging of products of hand embroidery-adda work

20.3 Units and Unit Contents

UNIT 1: INTRODUCTION TO APPAREL, MADE-UPS AND HOME FURNISHING SECTOR

- 1.1 Introduction
- 1.2 Objectives
- 1.3 About the Sector
- 1.4 About the Job Roles
- 1.5 Summary
- 1.6 Self-Evaluation Exercises
- 1.7 Answer Keys to Self-Check Exercises
- 1.8 References
- 1.9 Suggested Readings

UNIT 2: DESIGN CONCEPT

- 2.1 Introduction
- 2.2 Objectives
- 2.3 Definition of Design
- 2.4 Types of Design
- 2.5 Sources of Inspiration
- 2.6 Definition of Motif
- 2.7 Arrangement of Motif
- 2.8 Enlargement and Reduction of Design
- 2.9 Summary
- 2.10 Self-Evaluation Exercises
- 2.11 Answer Keys to Self-Check Exercises
- 2.12 References
- 2.13 Suggested Readings

UNIT 3: ELEMENTS AND PRINCIPLES OF DESIGN

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Elements of Design
- 3.4 Colour Concept
- 3.5 Dimensions of Colour (Hue, Value and Intensity)
- 3.6 Colour Schemes
- 3.7 Principles of Design
- 3.8 Summary
- 3.9 Self-Evaluation Exercises
- 3.10 Answer Keys to Self-Check Exercises
- 3.11 References
- 3.12 Suggested Readings

UNIT 4: BASICS OF ADDA WORK

- 4.1 Introduction
- 4.2 Objectives
- 4.3 Historical Background of *Adda* work
- 4.4 Terminology related to *Adda*-work
- 4.5 Tools used for *Adda* Work
- 4.6 Raw Material used for *Adda* Work
- 4.7 Summary
- 4.8 Self-Evaluation Exercises
- 4.9 Answer Keys to Self-Check Exercises
- 4.10 References
- 4.11 Suggested Readings

UNIT 5: TECHNIQUES OF TRANSFERRING THE DESIGN ON FABRIC

- 5.1 Introduction
- 5.2 Objectives
- 5.3 Material Required for Tracing the Design on the Fabric
- 5.4 Different Types of Tracing Methods
- 5.5 Summary
- 5.6 Self-Evaluation Exercises
- 5.7 Answer Keys to Self-Check Exercises
- 5.8 References
- 5.9 Suggested Readings

UNIT 6: BASIC AND ADVANCE STITCHES OF ADDA WORK

- 6.1 Introduction
- 6.2 Objectives
- 6.3 Fabric Fixation on Adda
- 6.4 Basic Adda work Stitches
- 6.5 Advance Adda work Stitches
- 6.6 Contemporary and Fancy Stitches
- 6.7 Summary
- 6.8 Self-Evaluation Exercises
- 6.9 Answer Keys to Self-Check Exercises
- 6.10 References
- 6.11 Suggested Readings

UNIT 7: FUSION OF TRADITIONAL EMBROIDERY WITH ADDA WORK

- 7.1 Introduction
- 7.2 Objectives
- 7.3 Combination of Embroideries
- 7.4 Placement, Highlighting and Combination of Stitches on Printed and Woven Fabrics
- 7.5 Summary
- 7.6 Self-Evaluation Exercises
- 7.7 Answer Keys to Self-Check Exercises
- 7.8 References
- 7.9 Suggested Readings

UNIT 8: FINISHING AND PACKING OF FINAL PRODUCTS

- 8.1 Introduction
- 8.2 Objectives
- 8.3 Embroidery Finishing Process
- 8.4 Packing
- 8.5 Summary
- 8.6 Self-Evaluation Exercises
- 8.7 Answer Keys to Self-Check Exercises
- 8.8 References
- 8.9 Suggested Readings

20.4 Instructional Strategies

- Class presentations/Interactive lectures
- Reading and Class discussions
- Assignments and Case Studies
- Preparation of tools of assessment
- Use of assessment techniques in classroom
- Practice in developing rubrics
- Developing a portfolio and Lab/Studio projects

ABOUT PSSCIVE

The Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE) is an apex organization dedicated to research, development and training in the field of vocational education at school level. Established in 1993 by the Ministry of Education, Government of India, it operates as a constituent unit of the National Council of Educational Research and Training (NCERT), New Delhi. PSSCIVE is located on a scenic 38-acre campus in Shyamla Hills, Bhopal and offers six major academic disciplines, including Agriculture and Animal Husbandry, Business and Commerce, Engineering and Technology, Health and Paramedical Sciences, Home Science and Hospitality Management, Humanities Science Education and Research. The institute also serves as a UNEVOC (International Project on Technical and Vocational Education) Network Centre in India. This allows PSSCIVE to coordinate with UNESCO-UNEVOC International Centre, Bonn, Germany and exchange knowledge and experiences on all aspects of vocational education and training (VET), as well as discuss issues of common relevance with other countries. The Institute offers quality-training programs in vocational pedagogy and a wide array of disciplines for the key functionaries in vocational education and vocational teachers. The highly qualified team of the Institute possesses excellent professional skills and experience required to impart training for classroom teaching and training.

The evolution of the Institute in the last twenty-five years has witnessed various challenges and hurdles. In a span of these years, the Institute has made significant contributions, which include the following:

1. Contributed to the development of national policies on work education, vocationalisation of education and vocational education and training.
2. Contributed to the development of the National Vocational Education Qualifications Framework (NVEQF), which is subsumed in the National Skills Qualifications Framework (NSQF)
3. Contributed to the development of a framework for Recognition of Prior Learning (RPL)
4. Designed and developed guidelines, curricula and teaching materials for the States/UTs.
5. Guidelines document on various aspects of VET, including work education, guidance and counselling, field visits, student portfolio, quality of vocational trainers, etc.
6. 26 pre-vocational education modules for Grades 9 and 10
7. 100 learning outcome-based curricula for Grades 9 to 10 as per the job roles under the NSQF
8. Multimedia materials, including 34 video films for the popularization of vocational education and teaching-learning in various vocational subjects
9. More than 90 orientation programmes on vocationalisation of education for key functionaries and teachers
10. More than 500 teacher training programmes on vocational pedagogy and domain-specific learning.

Vision

To be a leading organization to strengthen vocational education and training system to meet the skills needs of the current and future workforce.

Mission

To build the capacity of vet institutions for meeting the skill needs of current and future workforce.

Values

- Zeal for Excellence
- Customer Satisfaction
- Teamwork for Success
- Better Performance

Major Activities:

The major activities organised by the Institute has been given below:

Advisory: Advises and assists the Ministry of Human Resource Development (MHRD), Government of India and State Governments in the implementation of vocationalisation of education programme in schools, under the National Skill Qualification Framework (NSQF).

Research: Promotes and conducts research to gain new knowledge and to bring about qualitative improvement in vocationalisation of education.

Development: Develops curricula, student textbooks and teacher guides with the help of experts in different disciplines and organizations or industries to cater to the educational resources for vocational education in schools.

Training: Conducts training programs for the key functionaries and vocational teachers in collaboration with State/UTs on aspects related to vocational pedagogy, employability skills and emerging technologies, such as information and communication technology in vocational education, entrepreneurship and innovation, industry 4.0, etc.

Extension: Share experiences and ideas through extension activities including awareness programs, information dissemination and publication of newsletter and journal.

Strengths and Capabilities

Vibrant and green campus

The campus facilities have been developed to encourage visitors and learners to explore, discover and enrich with academic knowledge and vocational skills. Our campus creates an interactive learning environment for learners and cultivates a passion for vocational learning. It also offers opportunities to develop interests and talents through various extracurricular activities. Each classroom and laboratory has been built with specialized facilities for trainees of different vocational disciplines so that they can gain know-how and practical skills in their chosen areas.

Teaching excellence

Our highly qualified team of PSSCIVE possesses academic and practical experience in vocational pedagogy, training and research. The Institute fulfils the tasks related to the pedagogical and organizational provision of vocational education and training in secondary schools, practical training centres and apprenticeship training.

Strong network with other organisations

We strive to forge long-term partnerships in support of our vocational course planning, design and development. We have direct and indirect support from the Industry in the form of sharing of information, interactive learning activities, opportunities for industry visits and hands-on training.

Departments

Agriculture and Animal Husbandry

Agriculture is the most important sector in the Indian economy, as it is not only the mainstay for food security but also provides livelihood to about 52% of the working population in India. In order to fulfil the need of skilled para-professionals in agriculture and allied sectors, the Department of Agriculture and Animal Husbandry has been involved in designing and developing vocational courses and teaching-learning materials in different areas of agriculture and allied sectors under the National Skill Qualification Framework. The Department is also involved in training key functionaries and teachers and conducting research in vocational education. The strategy for the future is to promote vocational courses for sustainable agriculture such as organic farming, vermicomposting production etc., and improvement in production, processing and quality of food.

Business and Commerce

The Department of Business and Commerce was established for developing guidelines, curricula and teaching-learning materials for the vocational education in various related sectors, such as retail, logistics, banking, financial services and insurance. Over the years, the department has developed its credibility of designing and developing courses and conducting training programs for vocational teachers.

Engineering and Technology

The Department of Engineering and Technology was established to design and implement programmes and activities for research, development of guidelines, curricula and teaching-learning materials for vocational courses related to various sectors, including Automotive, Electronics, Information Technology, IT-enabled Services, Power, etc. Besides research and development inputs, the Department conducts training sessions on the use and applications of Information and Communication Technology.

Health and Paramedical Sciences

The Department of Health and Paramedical Sciences is contributing to the development of high-quality middle-level skilled manpower in the health sector. The department strives for innovation and continuous improvement in the quality and relevance of the training programs and activities for the development of curricula and teaching-learning materials in the healthcare sector.

Home Science and Hospitality Management

The Department of Home Science and Hospitality has established its identity by organizing programs and activities for the development of curricula and courseware and conducting orientation and training programs for the teachers and instructors teaching home science-based vocational courses. It has developed courses for a wide variety of services in different sectors, including Apparel, Textiles, Tourism and Hospitality, etc.

Humanities Science Education and Research

The Department of Humanities, Science Education and Research, having a wider ambit, provides research and development inputs for guiding the process of development of curricula, courseware and other materials in areas like performing arts, commercial art, entrepreneurship development and rural development etc.

In order to fulfil the need of skilled para-professionals in the sector of Beauty and Wellness, the department has developed courses for four job roles such as Assistant Beauty & Wellness Consultant, Hair Stylist, Assistant Hair Stylist and Yoga Instructor. The DHSER has been involved in designing and developing vocational courses and teaching-learning materials under the National Skill Qualification Framework. The Department is also involved in training key functionaries, and teachers and preparing master trainers for vocational pedagogy. The department is also running the Diploma in Vocational Education and Training Course (DVET), DHSER also coordinate activities of Minority cell.

FACULTY PROFILE

Sr. No.	Name, Designation and Department of Faculties and their Key Areas
1.	<p>Dr. Rajiv Kumar Pathak</p> <p>Professor and Head, Department of Agriculture and Animal Husbandry, PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal - 462002 E-mail- rspathak22@gmail.com Key Areas: Vocational Education and Training, Horticulture, Floriculture Crop Cultivation, Vegetable Production.</p>
2.	<p>Dr. Saurabh Prakash</p> <p>Professor and Head, Department of Engineering and Technology, PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal - 462002 E-mail. saurabhp60@gmail.com Key Areas: Vocational Education and Training, Automobile Technology, Plumbing, Construction, Power.</p>
3.	<p>Dr. Vinay Swarup Mehrotra</p> <p>Professor, Department of Agriculture and Animal Husbandry and, Head, Curriculum Development and Evaluation Centre (CDEC) PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal - 462002 E-mail- drvs.mehrotra@gmail.com Key Areas: Agriculture, Curriculum Design and Development, Courseware Development, Policy Formulation and Analysis, Professional Development of Teachers.</p>
4.	<p>Dr. Abhijit Nayak</p> <p>Professor & Head, Department of Health & Paramedical Sciences, PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal - 462002 E-mail. nayak60@hotmail.com Key Areas : Vocational Education and Training, Ophthalmology, Nursing, Immunology.</p>
5.	<p>Dr. Pinki Khanna</p> <p>Professor & Head Department of Home Science and Hospitality Management and, Programme Planning and Monitoring Centre (PPMC) PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal - 462002 E-mail. khannapinki@yahoo.co.in Key Areas : Vocational Education and Training, Foods and Nutrition, Fashion Designing and Garment Technology, Textile Designing, Handicrafts.</p>

6.	<p>Dr. Ponnamm Veeraiah Professor & Head, Department of Business and Commerce, PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal - 462002 E-mail- vp672000@gmail.com Key Areas :Vocational Education and Training, Marketing Management, Retail Marketing Management, Logistics Management, Financial Management, Rural Marketing, International Marketing.</p>
7.	<p>Dr. Deepak Shudhalwar Professor and Head, ICT Centre Department of Engineering and Technology, PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal - 462002 E-mail. dipakds@yahoo.com Key Areas: Vocational Education and Training, Computer Science Information Technology, Curriculum Design and Development, Educational Technology.</p>
8.	<p>Dr. R. Ravichandran Associate Professor & Head, Department of Humanities Science Education & Research, PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal - 462002 E-mail. ravincert@gmail.com Key Areas: Curriculum, Pedagogy, Research, Vocational Education and Training, Employability Skills, Green Skills, ICT, and Professional Development of Teachers.</p>
9.	<p>Dr. Vipin Kumar Jain Associate Professor, Department of Humanities Science Education & Research, PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal - 462002 E-mail. drvkjain2012@gmail.com Key Areas : Vocational Education and Training, Entrepreneurship Development, Vocational Guidance and Counselling.</p>

JOINT DIRECTOR

Dr. Deepak Paliwal

JOINT DIRECTOR

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DVET PROGRAMME COORDINATOR

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DVET Cell

DVET Coordinator

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Part- A GENERAL INFORMATION

Dr. R. Ravichandran, Associate Professor and Head, Dept. of Humanities Science Education & Research, and Coordinator, DVET, PSSCIVE, Bhopal

Dr. V.K. Jain, Associate Professor, Dept. of Humanities Science Education & Research, PSSCIVE, Bhopal

Dr. Jayashree Mahapatra, Assistant Professor (Education), Dept. of Humanities Science Education & Research, PSSCIVE, Bhopal

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