

LEARNING OUTCOME BASED VOCATIONAL CURRICULUM

JOB ROLE: FITNESS TRAINER

QUALIFICATION PACK CODE : SPF/Q1102

SECTOR: PHYSICAL EDUCATION

Classes 11 and 12

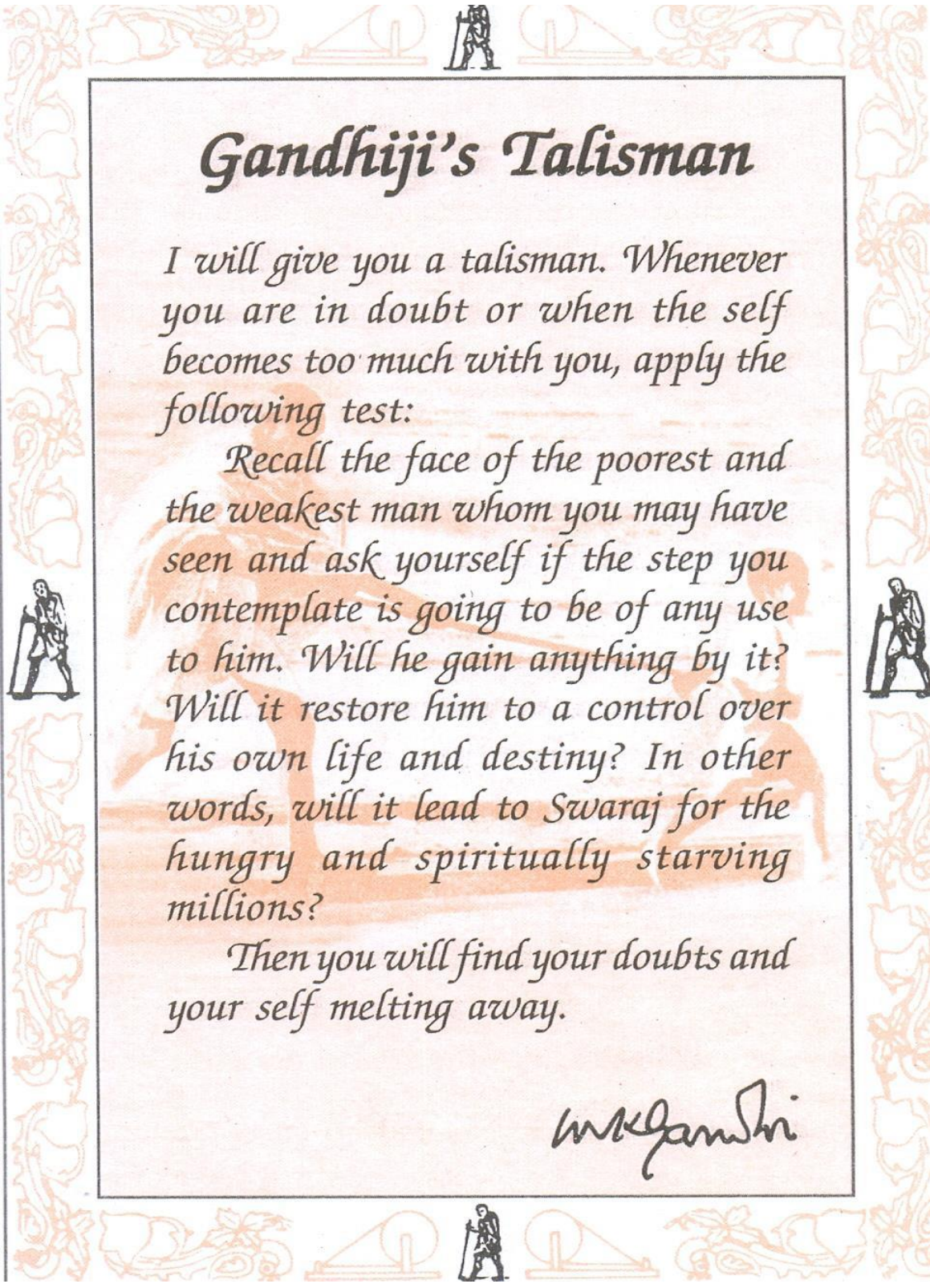


PSS CENTRAL INSTITUTE OF VOCATIONAL EDUCATION

(a constituent unit of NCERT, under MHRD, Government of India)

Shyamla Hills, Bhopal- 462 013, M.P., India

<http://www.psscive.ac.in>



Gandhiji's Talisman

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

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

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

M. K. Gandhi

LEARNING OUTCOME BASED VOCATIONAL CURRICULUM

JOB ROLE: FITNESS TRAINER

(QUALIFICATION PACK CODE: SPF/Q1102)

SECTOR: PHYSICAL EDUCATION

Classes 11 and 12



PSS CENTRAL INSTITUTE OF VOCATIONAL EDUCATION
(a constituent unit of NCERT, under MHRD, Government of India)
Shyamla Hills, Bhopal- 462 013, M.P., India

LEARNING OUTCOME BASED VOCATIONAL CURRICULUM

Physical Education- Fitness Trainer

January, 2020

© PSSCIVE, 2020

<http://www.psscive.ac.in>

No part of this work may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording or otherwise, without written permission from the Publisher, with the exception of any material supplied specifically for the purpose of being used by the purchaser of the work.

The views and opinions expressed in this publication are those of the contributors/ authors and do not necessarily reflect the views and policies of PSS Central Institute of Vocational Education, Bhopal. The PSSCIVE does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

Published by:

Joint Director
PSS Central Institute of Vocational
Education, NCERT, Shyamla Hills,
Bhopal



PATRONS

Prof. Hrushikesh Senapaty, Ph.D.,
Director,
National Council of Educational
Research and Training (NCERT),
New Delhi

Prof. Rajesh Khambayat, Ph.D.,
Joint Director
PSS Central Institute of Vocational
Education, Bhopal

COURSE COORDINATOR

Prof. Vinay Swarup Mehrotra,
D.Phil.,
Head
Curriculum Development and
Evaluation Centre (CDEC) and
NSQF Cell,
PSS Central Institute of Vocational
Education, Bhopal

FOREWORD

The Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), a constituent unit of National Council of Educational Research and Training (NCERT) is spearheading the efforts of developing learning outcome based vocational curriculum and courseware aimed at integrating both vocational and general qualifications to open pathways of career progression for students. It is a part of Vocationalisation of Education under *Samagra Shiksha*. The PSS Central Institute of Vocational Education (PSSCIVE) is developing curricula under the project approved by the Project Approval Board (PAB) of *Samagra Shiksha* of Ministry of Human Resource Development (MHRD), Govt. of India. The main purpose of the learning outcome based vocational curriculum is to bring about improvement in teaching-learning process and working competencies through learning outcomes embedded in the vocational subject.

It is a matter of great pleasure to introduce this learning outcome based vocational curriculum as part of the vocational training package for the job role of Fitness Trainer (SPF/Q1102). The curriculum has been developed for the higher secondary students of vocational education and is aligned to the National Occupation Standards (NOSs) of a job role identified and approved under the National Skill Qualification Framework (NSQF).

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

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

HRUSHIKESH SENAPATY
Director
National Council of Education Research and Training

PREFACE

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

In order to fulfil the growing aspirations of our youth and the demand of skilled human resource, the Ministry of Human Resource Development (MHRD), Government of India introduced the revised Centrally Sponsored Scheme of Vocationalisation of Secondary and Higher Secondary Education in 2012 with the aim to provide for the diversification of educational opportunities so as to enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and provide an alternative for those pursuing higher education. The scheme was subsumed in *Samagra Shiksha* in 2018 along with other schemes of school education. For spearheading the Vocationalisation Education, the PSS Central Institute of Vocational Education (PSSCIVE) was entrusted the responsibility to develop learning outcome based vocational curriculum, student workbooks, teacher handbooks and e-learning materials for the job roles in various sectors, with growth potential for employment.

The PSSCIVE firmly believes that the vocationalisation of education in the nation needs to be established on a strong footing of philosophical, cultural and sociological traditions and it should aptly address the needs and aspirations of the students besides meeting the skill demands of the industry. The curriculum, therefore, aims at developing the desired professional, managerial and communication skills to fulfil the needs of the society and the world of work. In order to honour its commitment to the nation, the PSSCIVE has initiated the work on developing learning outcome based vocational curriculum with the involvement of faculty members and leading experts in respective fields. It is being done through the concerted efforts of leading academicians, professionals, policy makers, partner institutions, Vocational Education and Training experts, industry representatives, and teachers. The expert group through a series of consultations, working group meetings and use of reference materials develops a National Curriculum. Currently, the Institute is working on developing curricula and courseware for over 50 job roles in various sectors, besides the curricula developed for 100 job roles.

We extend our gratitude to all the contributors for selflessly sharing their precious knowledge, acclaimed expertise, valuable time and positively responding to our request for development of curriculum. We are grateful to MHRD and NCERT for the financial support and cooperation in realizing the objective of providing learning outcome based vocational curriculum and courseware to the States and other stakeholders under the PAB (Project Approval Board) approved project of *Samagra Shiksha* of Ministry of Human Resource Development (MHRD), Government of India.

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

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

RAJESH P. KHAMBAYAT
Joint Director
PSS Central Institute of Vocational Education

ACKNOWLEDGEMENTS

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

We are grateful to the Director, National Council of Educational Research & Training (NCERT) for his support and guidance. We also acknowledge the contributions of our colleagues at the Technical Support Group of *Samagra Shiksha*, MHRD, National Skill Development Agency (NSDA) and National Skill Development Corporation (NSDC) and Sports and Fitness Sector Skill Council (SPEFL-SC) for their academic support and cooperation.

We are grateful to the experts for their earnest efforts and contributions in the development of this learning outcome based vocational curriculum. Their names are acknowledged in the list of contributors.

The contributions made by Dr. Vinay Swarup Mehrotra, Professor and Head, Department of Agriculture and Animal Husbandry and Curriculum Development and Evaluation Centre (CDEC), Dr. Vipin Kumar Jain, Associate Professor and Head, Department of Humanities, Science, Education and Research and Dr. Dipak D. Shudhalwar, Associate Professor and Head, Department of Engineering and Technology, PSSCIVE in development of the curriculum for the employability skills are duly acknowledged.

The assistance provided by Mr. Jivan Koli, Computer Operator, PSSCIVE and Mr. Rajesh Yadav, Computer Operator (Contract), PSSCIVE in layout, design and composing of the material is duly acknowledged.

CONTENTS

S.NO.	TITLE	PAGE NO.
	Foreword	i
	Preface	ii
	Acknowledgements	iv
1.	Course Overview	1
2.	Scheme of Units	2
3.	Teaching/Training Activities	3
4.	Assessment and Certification	4
5.	Unit Content	
	CLASS 11	
	Part A Employability Skills	
	Unit 1: Communication Skills – III	7
	Unit 2: Self-management Skills – III	7
	Unit 3: Information and Communication Technology Skills – III	8
	Unit 4: Entrepreneurial Skills – III	9
	Unit 5: Green Skills – III	9
	Part B Vocational Skills	
	Unit 1: Introduction to Fitness	10
	Unit 2: Role and Responsibilities of a Fitness Trainer	11
	Unit 3: Starting and Managing a Fitness Center	12
	CLASS 12	
	Part A Employability Skills	
	Unit 1: Communication Skills – IV	13
	Unit 2: Self-management Skills – IV	13
	Unit 3: Information and Communication Technology Skills – IV	14
	Unit 4: Entrepreneurial Skills – IV	15
	Unit 5: Green Skills – IV	15
	Part B Vocational Skills	
	Unit 1: Diet	16
	Unit 2 : Kinesiology and Physiology	17
	Unit 3: Health and Safety	17
	Unit 4: Exercise	18
6.	Organization of Field Visits	19
7.	List of Equipment and Materials	20
8.	Vocational Teacher's/ Trainer's Qualification and Guidelines	20
9.	List of Contributors	22

1. COURSE OVERVIEW

COURSE TITLE: FITNESS TRAINER

Fitness trainer performs the task of training the individual physically through the means of exercises, procuring the materials required for starting a fitness center, testing and commissioning the machines, weights and relaxing equipment in the fitness center, training the clients to use machine and weight for exercise and ensures the development of the client's physical fitness. He/she does troubleshooting of the problems, which occurs while maintaining the fitness center.

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

- Apply effective oral and written communication skills to interact with people;
- Identify the principal components of a computer system;
- Demonstrate the basic skills of using computer;
- Demonstrate self-management skills;
- Demonstrate the ability to provide a self-analysis in context of entrepreneurial skills;
- Demonstrate the knowledge of the importance of green skills in meeting the challenges of sustainable development and environment protection;
- Demonstrate the knowledge about components, type, importance and scope of fitness;
- Develop the exercise plan for client;
- Procure the machine, weight and material required for setting up fitness center;
- Install, test and commission the rest room and nutrition bar in fitness center;
- Train the clients to make them able to use machines for better outcome of their exercise;
- Troubleshoot the problems with the machines and weight at fitness center; and
- Demonstrate the knowledge of the kinesiology, physiology, anatomy, biomechanics and periodization in training program and exercise plan designing.

COURSE REQUIREMENTS: The learner should have the basic knowledge of science.

COURSE DURATION: 600 hrs

Class 11: 300 hrs.

Class 12: 300 hrs.

Total: 600 hrs.

2. SCHEME OF UNITS

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 11 and 12, opting for vocational subject along with general education subjects. The unit-wise distribution of hours and marks for Class 11 is as follows:

CLASS 11			
	Units	No. of Hours for Theory and Practical 300	Max. Marks for Theory and Practical
Part A	Employability Skills		
	Unit 1: Communication Skills – III	25	10
	Unit 2: Self-management Skills – III	25	
	Unit 3: Information and Communication Technology Skills – III	20	
	Unit 4: Entrepreneurial Skills – III	25	
	Unit 5: Green Skills – III	15	
	Total	110	10
Part B	Vocational Skills		
	Unit 1: Introduction to Fitness	65	40
	Unit 2: Role and Responsibilities of a Fitness Trainer	40	
	Unit 3: Starting and Managing a Fitness Center	60	
	Total	165	40
Part C	Practical Work		
	Practical Examination	06	15
	Written Test	01	10
	Viva Voce	03	10
	Total	10	35
Part D	Project Work/Field Visit		
	Practical File/Student Portfolio	10	10
	Viva Voce	05	05
	Total	15	15
	Grand Total	300	100

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

CLASS 12			
	Units	No. of Hours for Theory and Practical 300	Max. Marks for Theory and Practical 100
Part A	Employability Skills		
	Unit 1: Communication Skills – IV	25	10
	Unit 2: Self-management Skills – IV	25	
	Unit 3: Information and Communication Technology Skills – IV	20	
	Entrepreneurial Skills – IV	25	
	Unit 5: Green Skills – IV	15	
	Total	110	
Part B	Vocational Skills		
	Unit 1: Diet	40	40
	Unit 2: Kinesiology and Physiology	35	
	Unit 3: Health and Safety	25	
	Unit 4: Exercise	65	
	Total	165	
Part C	Practical Work		
	Practical Examination	06	15
	Written Test	01	10
	Viva Voce	03	10
	Total	10	35
Part D	Project Work/Field Visit		
	Practical File/Student Portfolio	10	10
	Viva Voce	05	05
	Total	15	15
	Grand Total	300	100

3. TEACHING/TRAINING ACTIVITIES

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

CLASSROOM ACTIVITIES

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

PRACTICAL WORK IN LABORATORY/WORKSHOP

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

FIELD VISITS/ EDUCATIONAL TOUR

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

4. ASSESSMENT AND CERTIFICATION

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

KNOWLEDGE ASSESSMENT (THEORY)

Knowledge Assessment should include two components: one comprising of internal assessment and second an external examination, including theory examination to be conducted by the Board. The assessment tools shall contain components for testing the knowledge and application of knowledge. The knowledge test can be objective paper based test or short structured questions based on the content of the curriculum.

WRITTEN TEST

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

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

Duration: 3 hrs

Maximum Marks: 40

S. No.	Typology of Question	No. of Questions			Marks
		Very Short Answer (1 mark)	Short Answer (2 Marks)	Long Answer (3 Marks)	
1.	Remembering – (Knowledge based simple recall questions, to know specific facts, terms, concepts, principles, or theories; identify, define or recite, information)	3	2	2	13
2.	Understanding – (Comprehension – to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	2	3	2	14
3.	Application – (Use abstract information in concrete situation, to apply knowledge to new situations: Use given content to interpret a situation, provide an example, or solve a problem)	0	2	1	07
4.	High Order Thinking Skills – (Analysis and Synthesis – Classify, compare, contrast, or differentiate between different pieces of information; Organize and/ or integrate unique pieces of information from a variety of sources)	0	2	0	04
5.	Evaluation – (Appraise, judge, and/or justify the value or worth of a decision or outcome, or to predict outcomes based on values)	0	1	0	02
	Total	5x1=5	10x2=20	5x3=15	40

SKILL ASSESSMENT (PRACTICAL)

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

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

Project Work (individual or group project) is a great way to assess the practical skills on a certain time period or timeline. Project work should be given on the basis of the capability of the individual to perform the tasks or activities involved in the project.

Projects should be discussed in the class and the teacher should periodically monitor the progress of the project and provide feedback for improvement and innovation. Field visits should be organized as part of the project work.

Field visits can be followed by a small-group work/project work. When the class returns from the field visit, each group might be asked to use the information that they have gathered to prepare presentations or reports of their observations. Project work should be assessed on the basis of practical file or student portfolio.

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

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

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

5. UNIT CONTENTS

CLASS 11

Part A: Employability Skills

S.No.	Units	Duration (Hrs)
1.	Communication Skills- III	25
2.	Self-management Skills – III	25
3.	Information and Communication Technology Skills - III	20
4.	Entrepreneurial Skills – III	25
5.	Green Skills – III	15
	Total	110

UNIT 1: COMMUNICATION SKILL – III			
Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Demonstrate knowledge of various methods of communication	1. Methods of communication - Verbal - Non-verbal - Visual	1. Writing pros and cons of written, verbal and non-verbal communication 2. Listing do's and don'ts for avoiding common body language mistakes	05
2. Identify specific communication styles	1. Communication styles- assertive, aggressive, passive-aggressive, submissive, etc.	1. Observing and sharing communication styles of friends, teachers and family members and adapting the best practices 2. Role plays on communication styles.	10
3. Demonstrate basic writing skills	1. Writing skills to the following: • Sentence • Phrase • Kinds of Sentences • Parts of Sentence • Parts of Speech • Articles • Construction of a Paragraph	1. Demonstration and practice of writing sentences and paragraphs on topics related to the subject	10
Total			25

7

UNIT 2: SELF-MANAGEMENT – III			
Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Demonstrate impressive appearance and grooming	1. Describe the importance of dressing appropriately, looking decent and positive body language 2. Describe the term grooming 3. Prepare a personal grooming checklist 4. Describe the techniques of self-exploration	1. Demonstration of impressive appearance and groomed personality 2. Demonstration of the ability to self-explore	10

2. Demonstrate team work skills	1. Describe the important factors that influence in team building 2. Describe factors influencing team work	1. Group discussion on qualities of a good team 2. Group discussion on strategies that are adopted for team building and team work	10
3. Apply time management strategies and techniques	1. Meaning and importance of time management – setting and prioritizing goals, creating a schedule, making lists of tasks, balancing work and leisure, using different optimization tools to break large tasks into smaller tasks.	1. Game on time management 2. Checklist preparation 3. To-do-list preparation	05
Total			25

UNIT 3: INFORMATION and COMMUNICATION TECHNOLOGY - III			
Learning Outcome	Theory (08 hrs)	Practical (12 hrs)	Duration (20 Hrs)
1. Create a document on word processor	1. Introduction to word processing. 2. Software packages for word processing. 3. Opening and exiting the word processor. 4. Creating a document	1. Demonstration and practice of the following: <ul style="list-style-type: none"> • Listing the features of word processing • Listing the software packages for word processing • Opening and exit the word processor • Creating a document 	10
2. Edit, save and print a document in word processor	1. Editing text 2. Wrapping and aligning the text 3. Font size, type and face. 4. Header and Footer 5. Auto correct 6. Numbering and bullet 7. Creating table 8. Find and replace 9. Page numbering. 10. Printing document. 11. Saving a document in various formats.	1. Demonstration and practicing the following: <ul style="list-style-type: none"> • Editing the text • Word wrapping and alignment • Changing font type, size and face 2. Inserting header and footer 3. Removing header and footer 4. Using autocorrect option 5. Insert page numbers and bullet 6. Save and print a document	10
Total			20

UNIT 4: ENTREPRENEURIAL SKILLS – III			
Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Describe the significance of entrepreneurial values and attitude	1. Values in general and entrepreneurial values 2. Entrepreneurial value orientation with respect to innovativeness, independence, outstanding performance and respect for work	1. Listing of entrepreneurial values by the students. 2. Group work on identification of entrepreneurial values and their roles after listing or reading 2-3 stories of successful entrepreneur 3. Exhibiting entrepreneurial values in Ice breaking, rapport building, group work and home assignments	10
2. Demonstrate the knowledge of attitudinal changes required to become an entrepreneur	1. Attitudes in general and entrepreneurial attitudes 2. Using imagination/intuition 3. Tendency to take moderate risk 4. Enjoying freedom of expression and action 5. Looking for economic opportunities 6. Believing that we can change the environment 7. Analyzing situation and planning action 8. Involving in activity	1. Preparing a list of factors that influence attitude in general and entrepreneurial attitude 2. Demonstrating and identifying own entrepreneurial attitudes during the following micro lab activities like thematic appreciation test 3. Preparing a short write-up on "who am I" 4. Take up a product and suggest how its features can be improved 5. Group activity for suggesting brand names, names of enterprises, etc.	15
Total			25

UNIT 5: GREEN SKILLS – III			
Learning Outcome	Theory (07 hrs)	Practical (08 hrs)	Duration (15 Hrs)
1. Describe importance of main sector of green economy	1. Main sectors of green economy- E-waste management, green transportation, renewal energy, green construction, water management 2. Policy initiatives for greening economy in India	1. Preparing a poster on any one of the sectors of green economy 2. Writing a two-page essay on important initiatives taken in India for promoting green economy	08

2. Describe the major green Sectors/Areas and the role of various stakeholder in green economy	1. Stakeholders in green economy 2. Role of government and private agencies in greening cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries	1. Preparing posters on green Sectors/Areas: cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries	07
Total			15

Part B: Vocational Skills

S.No.	Units	Duration (Hrs)
1.	Unit 1: Introduction to Fitness	65
2.	Unit 2: Role and Responsibilities of a Fitness Trainer	40
3.	Unit 3: Starting and Managing a Fitness Center	60
Total		165

UNIT 1: INTRODUCTION TO FITNESS

Learning Outcome	Theory (30 hrs)	Practical (35 hrs)	Duration (65 hrs)
1. Describe the meaning and Components of Fitness	1. Fitness 2. Components of fitness <ul style="list-style-type: none"> • Cardio vascular endurance, • Muscular endurance, • Muscular strength, • Muscular power, • Flexibility, balance, • Speed • Reaction time • Agility • Body composition 3. Types of fitness - aerobic, anaerobic, muscular strength, and flexibility	1. Demonstrate and perform exercises related to components of fitness and different muscle group (with proper technique and posture) 2. Demonstrate different types of fitness exercises – aerobic, anaerobic, muscular strength, and flexibility.	20
2. Describe the benefits of fitness	1. Benefits of being fit - <ul style="list-style-type: none"> • Better physical health • Better personality • Social benefits of exercises • Improved Psychological health 	1. Group discussion on benefits of different exercises 2. Writing a paragraph on how fitness changes a person's life	25

3. Identify the employment opportunities in fitness industry and describe their role and functions	1.Fitness trainer 2.Personal trainer 3.Athletic trainer 4.Gym assistant 5.Health club manager 6.Physical therapist 7. Fitness model 8. Certified strength and conditioning specialist 9. Group Exercise Instructor	1. Visit to a fitness center and interact with various types of trainers. 2. List down the institutions offering fitness related certification and courses. 3. Role play of the identified opportunities	20
Total			65

UNIT 2: ROLES AND RESPONSIBILITIES OF A FITNESS TRAINER

Learning Outcome	Theory (15 hrs)	Practical (25 hrs)	Duration (40 hrs)
1. Describe the requirements to be met for becoming a fitness trainer	1.Training for acquiring essential qualification 2. Building a portfolio 3. Popular Institutes for fitness training <ul style="list-style-type: none"> • American Council on Exercise • American College of Sports Medicine • Athletic and Fitness Association • Human Kinetics • Aquatic Exercise Association 	1. Prepare a portfolio 2. Listing the Institutions and writing a note about the courses offered by them.	10
2. Differentiate between a fitness trainer and a personal trainer	1. Difference between job role of a fitness trainer and a personal trainer 2. Knowledge and skills to be acquired by a fitness trainer and a personal trainer	1. Visit the local areas where fitness trainer and personal trainers work and write down the major differences	10
3. Identify the roles and responsibilities of a fitness trainer	1. Work ethics of a fitness trainer 2. Responsibilities of a fitness trainer <ul style="list-style-type: none"> • Explain and demonstrate exercise routine to client • Reduce chances of injuries • Monitor client progress • Provide information on general fitness and health issues, • Provide immediate first aid 2. Recovery and Rehabilitation	1. Demonstrate exercises 2. Demonstrate how to monitor client's progress 3. Group discussion on general fitness and health issues, 4. Practical session on how to provide immediate first aid and rehabilitation methods.	20
Total			40

UNIT 3: STARTING AND MANAGING A FITNESS CENTRE

Learning Outcome	Theory (30 hrs)	Practical (30 hrs)	Duration (60 hrs)
1. Establishment of a fitness center	1. Preparation of a plan for starting a fitness center <ul style="list-style-type: none"> • Target market • Location • Infrastructure • Facilities • Exercise machines and free weights • Administration and accounts section 2. Strategies to increase clientage 3. Maintenance of a fitness center	1. Visit a fitness center and study the various components and the facilities provided by the fitness center 2. Draw a layout of a fitness center. 3. Discuss the various procedures to be adopted for maintenance of equipment in a fitness center	20
2. Identify the various zones of a fitness center	1. Different areas of a Fitness Centre <ul style="list-style-type: none"> • Reception • Cardio zone • Strength zone • Spa zone • Nutrition bar 2. Equipment management in various zones	1. Visit at least 3 fitness centers and list down the equipment kept at various zones. 2. List down various items that are being served in nutrition bar (as per observation) 3. Read and explain the manual on managing a fitness center that you have visited.	15
3. Demonstrate the knowledge of managing a fitness center	1. Definition and Principles of Management 2. Creation of conducive environment 3. Marketing and advertisement	1. Make a presentation on the various management aspects of a fitness trainer 2. Prepare a brochure on services offered in a fitness center 3. Create a campaign in your school/institution for fitness awareness 4. Conduct a poster making competition for promotion of a fitness center (drawings, tag line, etc.)	25
Total			60

CLASS 12

Part A: Employability Skills

S.No.	Units	Duration (Hrs)
1.	Communication Skills- IV	25
2.	Self-management Skills – IV	25
3.	Information and Communication Technology Skills - IV	20
4.	Entrepreneurial Skills – IV	25
5.	Green Skills – IV	15
	Total	110

UNIT 1: COMMUNICATION SKILLS - IV

Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Describe the steps to active listening skills	1. Importance of active listening at workplace 2. Steps to active listening	1. Demonstration of the key aspects of becoming active listener 2. Preparing posters of steps for active listening	10
2. Demonstrate basic writing skills	2. Writing skills to the following: <ul style="list-style-type: none"> • Sentence • Phrase • Kinds of Sentences • Parts of Sentence • Parts of Speech • Articles • Construction of a Paragraph 	1. Demonstration and practice of writing sentences and paragraphs on topics related to the subject	15
Total			25

UNIT 2: SELF-MANAGEMENT SKILLS – IV

Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Describe the various factors influencing self-motivation	1. Finding and listing motives (needs and desires); 2. Finding sources of motivation and inspiration (music, books, activities); expansive thoughts; living fully in the present moment; dreaming big	1. Group discussion on identifying needs and desire 2. Discussion on sources of motivation and inspiration	10
2. Describe the basic personality traits, types and disorders	1. Describe the meaning of personality	1. Demonstrate the knowledge of different personality types	15

	<p>2. Describe how personality influence others</p> <p>3. Describe basic personality traits</p> <p>4. Describe common personality disorders- paranoid, antisocial, schizoid, borderline, narcissistic, avoidant, dependent and obsessive</p>		
Total			25

UNIT 3: INFORMATION AND COMMUNICATION TECHNOLOGY SKILLS - IV			
Learning Outcome	Theory (06 hrs)	Practical (14 hrs)	Duration (20 Hrs)
1. Perform tabulation using spreadsheet application	<p>1. Introduction to spreadsheet application</p> <p>2. Spreadsheet applications</p> <p>3. Creating a new worksheet</p> <p>4. Opening workbook and entering text</p> <p>5. Resizing fonts and styles</p> <p>6. Copying and moving</p> <p>7. Filter and sorting</p> <p>8. Formulas and functions</p> <p>9. Password protection.</p> <p>10. Printing a spreadsheet.</p> <p>11. Saving a spreadsheet in various formats.</p>	<p>• Demonstration and practice on the following:</p> <ul style="list-style-type: none"> • Introduction to the spreadsheet application • Listing the spreadsheet applications • Creating a new worksheet • Opening the workbook and enter text • Resizing fonts and styles • Copying and move the cell data • Sorting and Filter the data • Applying elementary formulas and functions • Protecting the spreadsheet with password • Printing a spreadsheet • Saving the spreadsheet in various formats 	10
2. Prepare presentation using presentation application	<p>1. Introduction to presentation</p> <p>2. Software packages for presentation</p> <p>3. Creating a new presentation</p> <p>4. Adding a slide</p> <p>5. Deleting a slide</p> <p>6. Entering and editing text</p> <p>7. Formatting text</p> <p>8. Inserting clipart and images</p> <p>9. Slide layout</p> <p>10. Saving a presentation</p> <p>11. Printing a presentation document.</p>	<p>1. Demonstration and practice on the following:</p> <ul style="list-style-type: none"> • Listing the software packages for presentation • Explaining the features of presentation • Creating a new presentation • Adding a slide to presentation. • Deleting a slide • Entering and edit text • Formatting text 	10

		<ul style="list-style-type: none"> • Inserting clipart and images • Sliding layout • Saving a presentation • Printing a presentation document 	
Total			20

UNIT 4: ENTREPRENEURIAL SKILLS - IV

Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Identify the general and entrepreneurial behavioral competencies	1. Barriers to becoming entrepreneur 2. Behavioral and entrepreneurial competencies – adaptability/decisiveness, initiative/perseverance, interpersonal skills, organizational skills, stress management, valuing service and diversity	1. Administering self-rating questionnaire and score responses on each of the competencies 2. Collect small story/ anecdote of prominent successful entrepreneurs 3. Identify entrepreneurial competencies reflected in each story and connect it to the definition of behavioral competencies 4. Preparation of competencies profile of students	10
2. Demonstrate the knowledge of self-assessment of behavioral competencies	1. Entrepreneurial competencies in particular: self-confidence, initiative, seeing and acting on opportunities, concern for quality, goal setting and risk taking, problem solving and creativity, systematic planning and efficiency, information seeking, persistence, influencing and negotiating, team building	1. Games and exercises on changing entrepreneurial behavior and development of competencies for enhancing self-confidence, problem solving, goal setting, information seeking, team building and creativity	15
Total			25

UNIT 5: GREEN SKILLS - IV

Learning Outcome	Theory (05 hrs)	Practical (10 hrs)	Duration (15 Hrs)
1. Identify the role and importance of green jobs in different sectors	1. Role of green jobs in toxin-free homes, 2. Green organic gardening, public transport and energy conservation, 3. Green jobs in water conservation	1. Listing of green jobs and preparation of posters on green job profiles 2. Prepare posters on green jobs.	

	<p>4. Green jobs in solar and wind power, waste reduction, reuse and recycling of wastes,</p> <p>5. Green jobs in green tourism</p> <p>6. Green jobs in building and construction</p> <p>7. Green jobs in appropriate technology</p> <p>8. Role of green jobs in Improving energy and raw materials use</p> <p>9. Role of green jobs in limiting greenhouse gas emissions</p> <p>10. Role of green jobs minimizing waste and pollution</p> <p>11. Role of green jobs in protecting and restoring ecosystems</p> <p>12. Role of green jobs in support adaptation to the effects of climate change</p>		15
Total			15

Part B–Vocational Skills

S.No.	Units	Duration (Hrs)
1.	Unit 1: Diet	40
2.	Unit 2: Kinesiology and Physiology	35
2.	Unit 2: Health and Safety	25
3.	Unit 3: Exercises	65
Total		165

UNIT 1: DIET			
Learning Outcome	Theory (20 hrs)	Practical (20 hrs)	Duration (40 hrs)
1. Describe meaning, types and purpose of diet	<p>1. Balanced diet</p> <p>2. Types of nutrients- macro nutrients, micro nutrients</p> <p>3. Types of diet- general diet, goal-oriented diet: paleo diet, blood type diet, vegan diet, keto diet, Mass gain diet</p> <p>4. Importance of Hydration in fitness</p>	<p>1. Visit local market to identify and list food items that falls under different nutrient categories.</p> <p>2. List down the role played by the water in human body</p> <p>3. Group work on listing down food material which come under specific type of diet</p>	20

	5. Importance of Pre and Post workout diets		
2. Demonstrate the knowledge of planning diet for a client	1. Information form generation 2. Basal metabolic rate 3. Allergic food data collection 4. Bowel system report	1. Calculate your own and 5 of your friends' basal metabolic rate 2. Make a diagram of bowel system and list down the process how it works step by step 3. Create a diet plan as per clients' budget	20
Total			40

UNIT 2: KINESIOLOGY AND PHYSIOLOGY

Learning Outcome	Theory (20 hrs)	Practical (15 hrs)	Duration (35 hrs)
1. Describe kinesiology	1. Anatomical position 2. Fundamental position 3. Planes and axis of motion 4. Anatomical movement descriptors • Muscular system • Skeletal muscle 5. Energy system	1. Group activity 2. Partner activity -Mark anterior and posterior muscles of human body with marker 3. Draw a diagram of energy system and label it	25
2. Describe the physiology of human body	1. Cardiovascular system • Functions of heart • Functions of lungs	1. Calculate resting heart rate and target heart rate. (Self/Partner) 2. List the activities that are not recommended for clients with cardiovascular issues	10
Total			35

UNIT 3: HEALTH AND SAFETY

Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Demonstrate Knowledge about medical data Collection and medical clearance	1. Pre-data collection of medical history- major risk factors: personal medical history, cardiovascular (CVD) risk profile, current client medication, chronic illness, injury or limitation, contraindications to exercise, has client been advised against exercise 2. Health and fitness history questionnaire format	1. Create questionnaire 2. Create a medical history checklist 3. Make a format of medical clearance certificate for physician	10

	3. Medical clearance from physician		
2. Identify physical fitness components assessed by fitness trainer	1. Physical assessment 2. Balance, static and dynamic postural assessment 3. Cardiovascular assessment 4. Muscular strength and muscular endurance assessment	1. Conduct assessments for the mentioned parameters 2. Perform exercises that develop muscular strength and muscular endurance	8
4. Describe the purpose of physical activity readiness questionnaire	1. Importance of physical activity readiness questionnaire. 2. Content of PAR-Q form- doctor's recommendation or suggestion, doctors prescriptions, physical condition, cardiovascular condition, orthopedic condition	1. Make a physical activity readiness questionnaire [PAR-Q] 2. Conduct a survey at your school to check Physical Activity Readiness (PAR) amongst the students. 3. Get at least 10 PAR-Q forms filled	7
Total			25

UNIT 4: EXERCISES

Learning Outcome	Theory (25 hrs)	Practical (40 hrs)	Duration (65 hrs)
1. Prepare an exercise plan and work out design	1. Warm up (general and specific warm up) 2. Workout Program 3. Cooling down methods 4. Sets and Repetitions methods for exercise (straight set, Giant set, super set, drop set, pyramid sets, etc.)	1. Design general work out plan 2. Use of various exercise equipment (dumbbell, barbell, Kettle bell, Theraband, Stretch cord, etc.) and perform exercises with proper technique.	15
2. Develop strength and endurance	Strength and Endurance - type of strength, type of endurance, difference between strength and endurance, training method of developing strength, training methods of developing endurance	1. Assessment of strength (1 RM test, etc.) 2. Assessment of Cardiovascular endurance (Cooper 6 min run and Walk test, etc.) 3. Assessment of Muscular endurance (1 min sit up test, etc.) 4. Design specific exercise plan for strength and endurance development. 5. Design 6 station Circuit training program (Including Strength and Endurance exercises)	20

3. Describe the mechanics of exercises	Biomechanics - lever and its classes, resistance and its type, importance of proper exercise forms and technique	<ol style="list-style-type: none"> 1. Explanation and demonstration about exercises of different lever class 2. Perform exercises with different resistances (Body weight, Free Weight and Mechanical weight). 3. Demonstrate proper techniques of different exercises (Upper body, Lower body and core) 	10
4. Demonstrate exercises for co-ordination	Exercise and Muscle Coordination - introduction to functional training, flexibility- training overview, type of ROM, Type of stretching (static, dynamic and PNF), effect of exercise on muscle-mechanism of skeletal muscles(Extensor and Flexor), , nervous system(CNS, PNS and ANS)	<ol style="list-style-type: none"> 1. Conduct 10 min workout on functional training 2. Demonstrate different types of stretching exercises 3. List down the effects of exercise on skeletal muscle and nervous system 4. Identify flexor and extensor muscles of different joints 	10
5. Demonstrate training methods and program	Training Method - frequency, intensity, load, volume and rest interval in training, program design overview, effect of training program on fitness components according to client goal and training program layout	<ol style="list-style-type: none"> 1. Draw a training program layout. 2. Make a training program for your friend with specific goal. <ul style="list-style-type: none"> • Fat Loss • Lean mass Gain • Mass gain • Flexibility • Strength (General, etc.) • Postural Correction • Endurance (Marathon, etc.,) 	10
Total			65

6. ORGANISATION OF FIELD VISITS

In a year, at least 03 field visits/educational tours should be organized for the students to expose them to the fitness center culture and installed in activities in the fitness center. Visit the fitness center with latest machines and equipment. During the visit, students should obtain the following information from the owner or the supervisor of the fitness center:

1. Location of fitness center
2. Different zones of fitness center

3. Locker room facilities
4. Number fitness trainers engaged
5. Maintenance of machines and equipment

7. LIST OF EQUIPMENT AND MATERIALS

The tools, equipment and materials required for training are quite expensive, therefore; only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience. A set of weight plates, bars and other weights with one cable machine may be procured for training and regular field visits should be organized to provide opportunities to the students/trainees for observation and hands-on practice.

8. VOCATIONAL TEACHER'S/ TRAINER'S QUALIFICATION AND GUIDELINES

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

Qualification	Minimum Competencies	Age Limit
Post-graduation in Physical education from a recognized Institute /University, with at least 1 year work/ teaching experience	Effective communication skills (oral and written) Basic computing skills.	18-37 years (as on Jan. 01 (year). Age relaxation to be provided as per Govt. rules.

Vocational Teachers/Trainers form the backbone of Vocational Education being imparted as an integral part of *Samagra Shiksha*. They are directly involved in teaching of vocational subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement. These guidelines have been prepared with an aim to help and guide the States in engaging quality Vocational Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging the Vocational Teachers/Trainers are mode and procedure of selection of Vocational Teachers/Trainers, Educational Qualifications, Industry Experience, and Certification/Accreditation. The State may engage Vocational Teachers/Trainers in schools approved under the component of Vocationalisation of Secondary and Higher Secondary Education under RMSA in the following ways:

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

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

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

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

- (i) Written test for the technical/domain specific knowledge related to the sector;
- (ii) Interview for assessing the knowledge, interests and aptitude of trainer through a panel of experts from the field and state representatives; and
- (iii) Practical test/mock test in classroom/workshop/laboratory. In case of appointment through VTPs, the selection may be done based on the above procedure by a committee having representatives of both the State Government and the VTP. The State should ensure that the Vocational Teachers/Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools. The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understand the latest trends and policy reforms in vocational education. The Head Master/Principal of the school where the scheme is being implemented should facilitate and ensure that the Vocational Teachers/Trainers:
 - a) Prepare session plans and deliver sessions which have a clear and relevant purpose and which engage the students;
 - b) Deliver education and training activities to students, based on the curriculum to achieve the learning outcomes;
 - c) Make effective use of learning aids and ICT tools during the classroom sessions;
 - d) Engage students in learning activities, which include a mix of different methodologies, such as project based work, team work, practical and simulation based learning experiences;
 - e) Work with the institution's management to organize skill demonstrations, site visits, on-job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;
 - f) Identify the weaknesses of students and assist them in upgradation of competency;
 - g) Cater to different learning styles and level of ability of students;
 - h) Assess the learning needs and abilities, when working with students with different abilities
 - i) Identify any additional support the student may need and help to make special arrangements for that support;
 - j) Provide placement assistance

Assessment and evaluation of Vocational Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the Vocational Teachers/Trainers is appraised annually. Performance based

appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the Vocational Teachers/Trainers. Following parameters may be considered during the appraisal process:

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

9. LIST OF CONTRIBUTORS

1. Prof. Vinay Swarup Mehrotra, Ph.D.
Professor and Head
Department of Agriculture and Animal Husbandry (DAAH) and
Curriculum Development and Evaluation Centre (CDEC)
PSS Central Institute of Vocational Education (PSSCIVE), NCERT,
Shyamla Hills, Bhopal – 462 013
Madhya Pradesh, India
2. Mr. Vikram Singh Bhadauria, M.P.Ed
Consultant-Physical Education (Contractual)
Curriculum Development and Evaluation Centre (CDEC)
PSS Central Institute of Vocational Education (PSSCIVE), NCERT,
Shyamla Hills, Bhopal – 462 013
Madhya Pradesh, India
3. Mr. Avishek Baisya, M.P.Ed
Student Activity and Sports Assistant,
National Institute of Technology Patna
Ashok Rajpath, Patna-800 005
Bihar, India

4. Mr. Rajarshi Gayen, M.P.Ed
Assistant Professor
Belda College,
Belda-721 424, West Bengal, India

5. Ms. Priya Dwivedi
Senior Manager- Sports, Physical Education, Fitness &
Leisure- Sector Skill Council of India
American Council on Exercise- Personal Fitness Trainer
Federation of Indian Chambers of Commerce and Industry (FICCI)
New Delhi-110001

6. Mr. Sambhu Shankar Deep
Consultant (Contract) in Education
PSS Central Institute of Vocational Education (PSSCIVE), NCERT,
Shyamla Hills, Bhopal – 462 013
Madhya Pradesh, India



PSS CENTRAL INSTITUTE OF VOCATIONAL EDUCATION
Shyamla Hills, Bhopal- 462 013, M.P., India