SHORT TERM VOCATIONAL
CERTIFICATE COURSE

COURSE NAME:

(6 months Duration)

Prepared by

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COURSE NAME: RESPIRATORY THERAPY TECHNICIAN

NAME OF THE COURSE: Respiratory Therapy Technician

SECTOR : PARAMEDICAL

COURSE CODE : RTT

ENTRY QUALIFICATION: SSC

PRE-REQUISITES: Basic Knowledge of the Anatomy and physiology of the respiratory system

Terminal competence: After completing this course, the student will be able to work as a Respiratory therapist.

Duration:

6Months - (40 Hours: English + Course content: 200 Hours)

Introduction of the course:

The primary objective of this program is to **train students** in the methodologies and processes related to **analyzing, treating, and conduct of diagnostic checks** for patients with respiratory issues. Pursuing a career in respiratory therapy offers a chance to positively impact patients' lives by helping them manage respiratory conditions effectively. If you're passionate about healthcare and enjoy working with patients, this field could be a rewarding choice.

Objectives:

1. **Evaluating Patients and Performing Chest Exams**: Respiratory therapy technicians assess patients by conducting chest exams to understand their lung function and overall respiratory health.
2. **Creating Treatment Plans**: Based on their evaluation, they develop personalized treatment plans for patients. These plans may include therapies, medications, and other interventions to improve lung function and manage respiratory conditions.
3. **Diagnosing Lung Diseases and Breathing Disorders**: Respiratory therapy technicians diagnose various lung diseases and breathing disorders, such as asthma, chronic bronchitis, emphysema, and sleep apnea care.

4. **Administering Treatment Plans and Caring for Patients**: They administer prescribed treatments, monitor patients' reactions, and adjust treatment protocols as needed. This includes managing ventilators, aerosol generators, and other breathing assisting devices.

Skills:

1. **Understanding of Respiratory Physiology**:
   - Respiratory therapists must have a solid grasp of how **oxygen and carbon dioxide** function in our bodies effectively.
2. **Critical Thinking and Diagnostic Expertise**:
   - The ability to apply critical thinking and expertise is crucial. Respiratory therapists analyse symptoms, interpret test results, and arrive at accurate diagnoses. This skill ensures appropriate treatment planning.
3. **Motor Skills for Procedures**:
   - Good motor skills are essential for performing various procedures.
   - These include:
     i. **Intubation**: Inserting a tube into a patient's airway.
     ii. Operating respiratory equipment such as **mechanical ventilators**.
     iii. Administering treatments like **aerosol therapy**

SCHEME OF INSTRUCTION/MODULE:

1. **Communicative English: 40 hours (per module)**
2. **Course: 200 hours (06 months)**

Duration of Course	Theory		On the Job Training		Total	
	Hours	weightage	Hours	weightage	Hours	weightage
1 Module (06 months)	60	30%	140	70%	200	100%

SYLLABUS

1. Anatomy and Physiology of the Respiratory System (10 hrs)
2. Pulmonary Function Test & Spirometry (10 hrs)
3. Diseases affecting the Respiratory System (10 hrs)
4. Inhalers, Nebulizers and Oxygen (10 hrs)
5. Cardiopulmonary Resuscitation & Assisted Ventilation (10 hrs)
6. Chest Physiotherapy, Bronchoscopy and Maintenance of Bronchoscopes (10 hrs)

ON THE JOB TRAINING

TOPICS	No. of PERIODS
1. Introduction to Respiratory Therapy Technician 1.1. Describe the Role of Respiratory Therapy Technician 1.2. Describe in detail Areas of Employment of a Respiratory Therapy Technician 1.3. Describe hazards faced by the Patients 1.4. Describe Standard Precautions 1.5. Identify special considerations in Respiratory Therapy 1.6. Demonstrate techniques of Performing Respiratory Therapy 1.7. Discuss functions of Respiratory System	12 hours
2. 2. Clinical Assessment of Cardio Pulmonary System 2.1. Describe in detail about Clinical Assessment 2.2. Identify the Respiratory Disorders during Clinical Assessment like: COPD, Asthma	10 hours
3. 3. Infection, Prevention and Precaution 3.1. Explain Chain of Infection 3.2. Discuss Respiratory Infection control measures 3.3. Identify and Demonstrate Personal Protective Equipment (PPE) 3.4. Respiratory Hygiene / Cough Etiquettes 3.5. Demonstrate hand hygiene 3.6. Precautions of Droplet Infection 3.7. Discuss Post Exposure to Respiratory Therapy	12 hours
4. 4. Respiratory Equipment and Services 4.1. Identify Respiratory Therapy Equipment used for performing Respiratory Therapy 4.2. Identify Respiratory Therapy supplies used for perming Respiratory Therapy 4.3. Describe about correct patient related services and processing procedures 4.4. Apply the knowledge learned to fulfil the job responsibilities of an entry level Respiratory Therapy Technician	10 hours
5. 5. Identification and Demonstrate Methods 5.1. Identify Patient Contact Techniques 5.2. Familiarization of different Tables/Tubes in Respiratory Deportment. 5.3. Respiratory Therapy awareness. 5.4. Preparation of patient for Respiratory Therapy	15 hours

5.5. Identify and Demonstrate Radio Therapy Treatment Techniques 5.6. Discuss the Chest Medicine, Physical Medicine	
6. Respiratory Therapy Procedure and Data Preparation 6.1. Discuss and Demonstrate Respiratory Therapy Procedure 6.2. Discuss and Demonstrate Safety Data Sheets 6.3. Demonstrate proper Documentation Skills	20 hours

Qualifications of Teaching Faculty:

1. Graduation from any recognized university with an aggregate of 55% marks (MBBS, MD-Pulmonology/Respiratory Therapist)
2. 3+ Years of Experience in academics, hospitals, Clinics

Reference books/ Internet links:

Respiratory Medicine for Nurses and Paramedics - T. Balasubramanian

Division of Marks:

Theory: 100 Max. Marks

1. Communicative English : 20 marks
2. Short Questions : 6 x5m = 30 marks
3. Long Questions : 4x10 = 40 marks
4. Multiple Choice Questions : 10x1=10 marks

Practical: 100 Max. Marks

1. External : 40 marks
2. Record/ Mini Project & Viva : 10 marks
3. Internship / OJT : 50 marks

INSTITUTE OF VOCATIONAL EDUCATION
O/o DIRECTOR OF INTERMEDIATE EDUCATION,
TELANGANA, HYDERABAD
SHORT-TERM VOCATIONAL CERTIFICATE COURSE

REGD. NO: | | **TIME: 3 HRS**
MAX MARKS: 100

RESPIRATORY THERAPY ASSISTANT
MODEL QUESTION PAPER (THEORY)

SECTION- A

COMMUNICATIVE ENGLISH 20 MARKS

SECTION- B

Note: a) Answer ALL questions.

b) Each question carries **5 Marks**. **6X5M=30 MARKS**

1) What are the primary organs of the respiratory system, and what functions do they serve?
2) What is Spirometry?
3) What are the common respiratory diseases?
4) Explain Oxygen Therapy.
5) Explain Cardio Pulmonary Resuscitation (CPR).
6) What are the main techniques used in chest physiotherapy, and how do they help in the management of respiratory conditions?

SECTION- C

Note: a) Answer any **Four** questions.

b) Each question carries **10 Marks**. **4X10M=40 MARKS**

1) Explain the Pathophysiology of Cystic Fibrosis (CF).
2) Distinguish and describe the disadvantages and advantages of Metered-Dose Inhalers (MDIs) and Dry Powder Inhalers (DPIs).
3) What is Mechanical Ventilation and when is it necessary?
4) What are the recommended steps for the cleaning, disinfection, and sterilization of bronchoscopes to prevent infection transmission and ensure patient safety?

5) Explain the concept and purpose of Positive Pressure Ventilation (PPV).

SECTION-D **10X1=10 Marks**

01. What is the genetic basis of Cystic Fibrosis (CF)?
A) Chromosomal abnormalities
B) Mutations in the CFTR gene
C) Mitochondrial DNA mutations
D) Epigenetic modifications

02. How does smoking impact respiratory health?
A) Enhances lung function
B) Decreases risk of lung cancer
C) Causes chronic inflammation and airway narrowing
D) Improves cardiovascular health

03. What are the potential health risks associated with smoking?
A) Reduced risk of heart disease
B) Increased risk of stroke and lung cancer
C) Improved lung function
D) Lower healthcare costs

04. Which device delivers medicine to the lungs using a propellant?
A) Nebulizer
B) Dry Powder Inhaler (DPI)
C) Oxygen Concentrator
D) Metered-Dose Inhaler (MDI)

05. What distinguishes Dry Powder Inhalers (DPIs) from Metered-Dose Inhalers (MDIs)?
A) DPIs require coordinated use, while MDIs do not.
B) DPIs use a propellant, while MDIs do not.
C) DPIs are breath-actuated, while MDIs are not.
D) DPIs have a low risk of bacterial contamination, unlike MDIs.

06. How does Cardiopulmonary Resuscitation (CPR) help individuals in emergency situations?
A) Restores normal heart rhythm
B) Provides immediate pain relief
C) supports breathing difficulties

D) Maintains blood circulation when breathing or heartbeat stops

07. In Positive Pressure Ventilation (PPV), what is pressurized to assist breathing in patients who can't breathe on their own?

A) The room where the patient is located
B) The patient's lungs
C) The patient's chest cavity
D) The patient's throat

08. How do techniques like chest percussion and vibration help patients undergoing chest physiotherapy?

A) Improve blood circulation
B) Loosen and mobilize secretions
C) Strengthen lung tissues
D) Increase heart rate

09. What is the primary goal of postural drainage in chest physiotherapy?

A) Enhance muscle strength
B) Drain mucus from specific lung segments
C) Improve lung capacity
D) Increase oxygen intake

10. Which of the following is NOT an indication for bronchoscopy?

A) Persistent cough
B) Hemoptysis
C) Skin rash evaluation
D) Suspected lung infections

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RESPIRATORY THERAPY ASSISTNAT
MODEL QUESTION PAPER (PRACTICAL)

Note: a) Answer ALL questions.

b) Each question carries **10 Marks**. **4X10=40MARKS**

1) Identify Respiratory Therapy Equipment used for performing Respiratory Therapy.
2) Discuss Respiratory Infection control measures.
3) Describe in detail about Clinical Assessment.
4) Demonstrate techniques of Performing Respiratory Therapy.

Record/Mini Project & Viva **10 Marks**

Internship/OJT **50 Marks**