



## Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)

Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

### Bachelor's Degree Examination – May 2025 VI Semester

Class : III UG  
Major : Physiotherapy

Time: 3 Hours  
Max. Marks: 100

#### 22BPTC32 Physiotherapy in Cardio-Respiratory Conditions

##### Course Outcomes:

On the successful completion of the course, students will be able to

CO1: Understand the Basic anatomy, physiology of heart and lungs

CO2: Knowledge about taking assessment of cardio respiration in physiotherapy

CO3: Knowledge about the Importance of physiotherapy intervention in ICU for cardiac and pulmonary disease.

CO4: Assessment of Cardiopulmonary rehabilitation and pediatric physiotherapy.

CO5: Understand the Pre and post operative care for all surgery

##### Part A

10 x 1 = 10

##### Choose the Correct Answer

- The term for the ridge of cartilage at the bifurcation of the trachea  
a. Epiglottis      b. Carina      c. Laryngeal prominence      d. Hilum      CO1 K2
- During which phase of the cardiac cycle are all four heart valves closed  
a. Atrial systole      b. Ventricular systole  
c. Isovolumetric contraction and relaxation      d. Ventricular ejection      CO1 K2
- Pectus excavatum is characterized by:  
a. Outward protrusion of the sternum      b. Absence of the pectoralis major muscle  
c. Inward depression of the sternum      d. Excessive rib growth      CO2 K1
- The Forced Expiratory Technique (FET) is most effective when combined with:  
a. Oxygen therapy      b. Breathing control and postural drainage  
c. Diaphragmatic paralysis      d. Inhaled corticosteroids      CO2 K3
- The primary function of a mechanical ventilator  
a. To remove carbon dioxide from the blood  
b. To assist or replace spontaneous breathing  
c. To increase blood circulation  
d. To stimulate the diaphragm      CO3 K2
- The nebulizer mask and tubing be cleaned to prevent infections  
a. Once a month      b. Once a week  
c. After every use      d. Only when visibly dirty      CO3 K4
- The normal heart rate range for an infant (0-12 months)  
a. 60-80 beats per minute      b. 80-100 beats per minute  
c. 100-160 beats per minute      d. 160-200 beats per minute      CO4 K4
- In pulmonary rehabilitation, the Borg Scale is used to measure what  
a. Blood glucose levels      b. Perceived breathlessness and exertion  
c. Heart rate      d. Lung volume      CO4 K3
- Imaging technique that is commonly used to diagnose appendicitis  
a. MRI      b. CT scan      c. X-ray      d. PET scan      CO5 K5
- The primary treatment for severe cases of PVD when lifestyle changes and medications are not effective  
a. Angioplasty and stenting      b. Chemotherapy      c. Dialysis      d. Appendectomy      CO5 K2

**Part B**  
**Answer ALL questions**  
**Each answer should not exceed 400 words or two pages**

**5 x 6 = 30**

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|--|--------|
| 11.a. Explain Pulmonary Function Testing.<br>(or)                    | CO1 K2 |
| 11.b. Describe Cough and its stages.                                 | CO1 K1 |
| 12.a. Illustrate relaxation position for breathless patient.<br>(or) | CO2 K3 |
| 12.b. Explain Arterial Blood Gas Analysis & its Interpretations.     | CO2 K4 |
| 13.a. Define Stress testing.<br>(or)                                 | CO3 K1 |
| 13.b. Measurement of Chest expansion at different levels.            | CO3 K4 |
| 14.a. Phases of cardiac rehabilitation.<br>(or)                      | CO4 K2 |
| 14.b. Physiotherapy for ventilator dependent patient.                | CO4 K1 |
| 15.a. Explain Buerger's exercise.<br>(or)                            | CO5 K3 |
| 15.b. Physiology Conditions of PVD.                                  | CO5 K2 |

**Part C**  
**Answer ALL questions**  
**Each answer should not exceed 800 words or four pages**

**5 x 12 = 60**

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|---|--------|
| 16.a. Explain in detail about Mechanics of breathing.<br>(or)   | CO1 K2 |
| 16.b. Describe any two CVS investigations.  | CO1 K1 |
| 17.a. Define Pulmonary Rehabilitation. Explain in detail about the<br>Pulmonary Rehabilitation for an Asthmatic patient.<br>(or)  | CO2 K2 |
| 17.b. Describe the aetiology and clinical features of Heart failure. Discuss the<br>Physiotherapy Management for a 35-year-old male who underwent CABG.                     | CO2 K4 |
| 18.a. Define postural drainage. Write down the indication and contraindication of<br>postural drainage. Describe the drainage position of right upper lobe.<br>(or)         | CO3 K1 |
| 18.b. Discuss the principles of Cardiac Rehabilitation for Myocardial Infarction.   | CO3 K1 |
| 19.a. Discuss the assisted ventilation. Mention the types of ventilators and their indications.<br>Outline the process of weaning the patient from the ventilators.<br>(or) | CO4 K4 |
| 19.b. Explain in detail about Nebulization.   | CO4 K4 |
| 20.a. Describe the role of Physiotherapy in Intensive Care Unit.<br>(or)  | CO5 K3 |
| 20.b. Post-operative management for patient with hysterectomy surgery.  | CO5 K2 |

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