

**MASTER OF PHYSIOTHERAPY
THIRD SEMESTER
PHYSIOTHERAPY MANAGEMENT IN
CARDIOPULMONARY DISORDERS II
MPT – 303**

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(PART-A: Objective)

Marks: 20

Choose the correct answer from the following:

1×20=20

1. What is the main difference between adult and pediatric respiratory physiology?
 - a. Children have higher tidal volumes
 - b. Children have a lower metabolic rate
 - c. Children have a higher respiratory rate
 - d. Children's lungs have higher compliance
2. Which of the following signs is most characteristic of coarctation of the aorta?
 - a. Cyanosis of the lower limbs
 - b. Weak femoral pulses
 - c. Hypertension in the lower limbs
 - d. Bounding peripheral pulses
3. What type of anesthesia is most commonly used for thoracoscopic surgery?
 - a. General anesthesia
 - b. Local anesthesia
 - c. Regional anesthesia
 - d. None of the above
4. What is the primary goal of pre-operative pulmonary rehabilitation?
 - a. To reduce the length of hospital stay
 - b. To improve surgical outcomes and functional capacity
 - c. To provide nutritional support
 - d. To minimize pain post-surgery
5. Which assessment tool is commonly used to measure functional capacity in cardiac rehabilitation?
 - a. Borg Rating of Perceived Exertion
 - b. Mini-Mental State Examination
 - c. Berg Balance Scale
 - d. 6-Minutes walk test
6. What is a possible long-term effect of thoracoplasty?
 - a. Improvement in pulmonary function
 - b. Increased chest wall flexibility
 - c. Permanent reduction in thoracic volume
 - d. Increase in lung compliance
7. Which test is commonly used to match donor hearts with transplant recipients?
 - a. Echocardiogram
 - b. Electrocardiogram (ECG)
 - c. Human leukocyte antigen (HLA) typing
 - d. Angiogram

8. Which of the following is an essential component of cardiovascular conditioning during the rehabilitation of a patient following valvular surgery?
 - a. High-intensity interval training (HIIT) starting at 2 weeks post-op
 - b. Progressive, low-impact aerobic exercises such as walking
 - c. Strength training with high weights
 - d. Avoiding all forms of aerobic exercise for the first month
9. In pediatric cardiology, the "blue baby" syndrome is most often associated with which type of condition?
 - a. Acyanotic heart defects
 - b. Cyanotic heart defects
 - c. Arrhythmias
 - d. Hypertension
10. Which type of catheterization is primarily used to open blocked coronary arteries?
 - a. Right heart catheterization
 - b. Left heart catheterization
 - c. Coronary angioplasty
 - d. Electrophysiological study
11. Which phase of cardiac rehabilitation focuses on patient education and lifestyle modification? III
 - a. Phase I
 - b. Phase II
 - c. Phase III
 - d. Phase 4
12. How does a bleb differ from a bulla in lung terminology?
 - a. Bleb is larger than a bulla
 - b. Bleb is located in the pleural space
 - c. Bulla is a large air-filled space, while a bleb is smaller
 - d. They are the same
13. In a three-chamber chest drainage system, which chamber is responsible for controlling suction pressure?
 - a. Collection chamber.
 - b. Water seal chamber.
 - c. Suction control chamber.
 - d. Overflow chamber
14. What is the benefit of video-assisted thoracoscopic surgery (VATS) for lung resections compared to traditional open surgery?
 - a. Better visualization of the lung tissue
 - b. Increased risk of infection
 - c. Smaller incisions and reduced postoperative pain
 - d. Allows resection of larger lung tumors
15. In pediatric patients with a ventricular septal defect (VSD) located close to the apex, which incision provides the best access?
 - a. Anterior thoracotomy
 - b. Midline sternotomy
 - c. Right thoracotomy
 - d. Subxiphoid incision
16. Which intercostal space is typically used for a chest tube placement in a standard thoracostomy procedure?
 - a. 1st intercostal space
 - b. 3rd intercostal space
 - c. 5th intercostal space
 - d. 8th intercostal space

17. In lung resection surgery, a "wedge resection" is primarily used for:
 - a. Removing the entire lung
 - b. Taking out a whole lobe of the lung
 - c. Removing a small, localized portion of lung tissue
 - d. Excising a segment of the bronchial tree
18. During an aneurysmectomy, which imaging technique is frequently used to assess the aneurysm before surgery?
 - a. X-ray
 - b. MRI
 - c. Doppler ultrasound
 - d. CT angiography
19. In which patients is a blebectomy typically considered?
 - a. Patients with lung cancer
 - b. Patients with recurrent spontaneous pneumothorax
 - c. Patients with asthma
 - d. Patients with tuberculosis
20. What is a common psychological consideration for patients undergoing pulmonary surgery?
 - a. Increased risk of anxiety and depression
 - b. Improved self-esteem
 - c. Decreased social interaction
 - d. Total elimination of stress

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(Descriptive)

Time: 2 hrs 30 min

Marks: 50

[Answer question no.1 & any four (4) from the rest]

1. A 65-year-old male with a history of chronic obstructive pulmonary disease (COPD) and recurrent pleural effusions has been recommended for pleurodesis to prevent future fluid accumulation. Post-pleurodesis, is experiencing reduced lung capacity and pain during deep breathing, affecting his ability to perform daily activities. Write down the key components of post pleurodesis physiotherapy assessment. Identify the long term and short term goals and prepare an individualized rehabilitation program. 10

2. A 70-year-old female with congestive heart failure has a pleural effusion requiring chest drainage. She has limited mobility and complains of weakness. What role does chest drainage play in managing this condition? How would you adapt your treatment plan if the patient shows signs of fluid overload? 10
3. Write down some post operative pulmonary complications in CABG. If a patient develops pulmonary complications post-CABG. What physiotherapy interventions would be appropriate to address these complications? What strategies can be implemented to support psychological factors patients facing ? 10
4. Describe two paediatric cardiac surgeries .Write down in detail about the incisions, physiotherapy assessment and operative procedures for the both surgeries you're going to describe. 10
5. What preoperative physiotherapy interventions are important for patients awaiting heart transplant? How can these interventions impact postoperative recovery? What are the potential complications during the surgery that can affect postoperative rehabilitation? 10
6. A 5-year-old child post-Tetralogy of Fallot repair presents with decreased exercise tolerance. What assessment tools would you use to evaluate the child's cardiovascular fitness and physical function? When designing a the rehabilitation program . 10
7. What is lobectomy ? What are the indications and contraindications. Write down the post operative rehabilitation program in detail. 10
8. Define vascular surgery. What are the indications of vascular surgery? Write down the key components of pre and post operative physiotherapy assessment. Explain the post operative rehabilitation program in detail. 10

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