

# **RAJASTHAN PUBLIC SERVICE COMMISSION, AJMER**

## **SYLLABUS OF COMPETITIVE EXAMINATION FOR THE POST OF ASSISTANT PROFESSOR (Broad Speciality) RESPIRATORY MEDICINE/T.B. & CHEST MEDICAL EDUCATION DEPARTMENT**

### **Unit-I**

- History of Pulmonary Medicine and Tuberculosis with emphasis on Indian contribution.

### **Unit-II**

- Development (embryology) growth and structure of normal lung.
- Physiological principles of normal lung functions.
- Lungs in different physiological states e.g. exercise, pregnancy, ageing, high altitude, diving etc.
- Congenital anomalies of Lung.

### **Unit-III**

- Immunology, microbiology and various pharmacological aspects pertaining to respiratory diseases, Pharmacovigilance.

### **Unit-IV**

- Approach to a patient with respiratory symptoms and signs diagnostic procedures in respiratory disorders (radiographic imaging, interventional radiology, nuclear imaging, pulmonary function testing, arterial blood gas analysis, bronchoscopy and thoracoscopy, EBUS, Feno test, Bronchoprovocation test, aerosol therapy.

### **Unit-V**

#### **Pulmonary infections**

- Acute/chronic respiratory tract infections, including viral Pneumonia - (swine flu).
- Pneumonia – Community and hospital acquired.
- Pneumonia in immunocompromised patients.
- Non resolving pneumonia.
- Lung abscess.
- Bronchiectasis.

### **Unit-VI**

#### **Obstructive airway disease**

- Chronic obstructive airway disease.
- Bronchial asthma.
- Bronchiolitis.
- Cystic Fibrosis.
- Bullous disease of the lung.

## **Unit-VII**

### **Tumors of the lungs**

- Neoplastic and non-neoplastic diseases of lung.
- Solitary pulmonary nodule
- Pleural Mesothelioma.

## **Unit-VIII**

### **Smoking**

- Practices, Epidemiology, ill effects and cessation.

## **Unit-IX**

### **Diffuse Interstitial Lung Diseases.**

- Idiopathic and non-idiopathic pulmonary fibrosis.

## **Unit-X**

- Occupational Pulmonary Disorders including organic and inorganic dust exposure.
- Air pollution including indoor air pollution.
- Health impacts of global warming.

## **Unit-XI**

- Drug induced pulmonary disorders including radiation induced injury.
- Drug induced respiratory emergencies.

## **Unit-XII**

### **Pulmonary Circulatory Disorders**

- Pulmonary hypertension and cor pulmonale.
- Acute respiratory distress syndrome.
- Pulmonary thromboembolic diseases and infarction.
- Pulmonary arterio – venous malformations.

## **Unit-XIII**

### **Immunological disorders**

- Sarcoidosis.
- Hypersensitivity pneumonitis.
- Eosinophilic lung disorders.
- Pulmonary vasculitic disorders.
- Connective tissue diseases involving the respiratory system.

## **Unit-XIV**

### **Alveolar Diseases**

- Alveolar hemorrhage (Primary and Secondary).
- Pulmonary alveolar proteinosis.
- Alveolar microlithiasis.

## **Unit-XV**

### **Tuberculosis**

- Immunology and etiopathogenesis.
- Diagnostic methods- conventional and newer technique (CBNAAT, LPA, MGIT, BACTEC, MODS.)
- Differential diagnosis.
- Management of pulmonary tuberculosis.
- Complications in tuberculosis and its management.
- Tuberculosis in children and geriatric tuberculosis.
- Miliary and disseminated tuberculosis.
- Mycobacteria other than tuberculosis (MOTT).
- Extra pulmonary tuberculosis- lymph node, pleural, pericardial, genitourinary, intestinal, osteoarticular, CNS and skin.
- HIV and TB.
- Prevention and management of MDR and XDR tuberculosis.
- Diabetes mellitus and TB.
- Pneumoconiosis and TB.
- Treatment of TB in special situations, including MDR.
- Control of tuberculosis including RNTCP, DOTS & DOTS PLUS.
- BCG vaccination and Mantoux testing.
- National tuberculosis Elimination program (NTEP).
- Tuberculosis Notification.

## **Unit-XVI**

### **Diseases of the Mediastinum**

- Developmental disorders.
- Benign and malignant (primary and secondary) neoplasms of lung.

## **Unit-XVII**

### **Disorders of the pleura**

- Pleural dynamics and effusion.
- Non-neoplastic and neoplastic pleural diseases.
- Pneumothorax, Hemothorax and Chylothorax.
- Pyothorax and broncho-pleural fistula.
- Management of pleural diseases.

## **Unit-XVIII**

### **Critical Care in Pulmonary Medicine**

- Principle of critical care medicine.
- Non- invasive ventilation.
- Invasive Mechanical ventilatory support.

## **Unti-XIX**

### **Extra pulmonary manifestations of pulmonary diseases**

## **Unit- XX**

- Surgical aspects in respiratory diseases including VATS and Pleuroscopy, Pre and Post operative evaluation of thoracic surgical patient.

## **Unit-XXI**

- Depositional and infiltrative disorders.
- Histiocytosis X.
- Lymphangiomyomatosis.
- Inborn errors of metabolism pertaining to lungs.

## **Unit-XXII**

### **Sleep-related pulmonary diseases**

- Physiology of sleep.
- Diagnostic Polysomnography.
- Management of obstructive sleep apnoea.
- Other sleep-disordered breathing syndromes.

## **Unit-XXIII**

- Diseases of the diaphragm.

## **Unit-XXIV**

- Disorders of chest wall.

## **Unit-XXV**

- Lung transplantation.

## **Unit-XXVI**

- Preventive Pulmonology-Prevention of air born infection and vaccination in pulmonology Diseases.

## **Unit-XXVII**

- Current trends, Recent advancement in field of tuberculosis, Respiratory medicine including, Laser therapy, Coiling treatment of emphysema, Cryobiopsy, Ronchial, Thermoplasty, Bronchial artery embolisation, Pulmonary Rehabilitation Programme, Palliative care in case of lung malignancy & ILD.

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### **Pattern of Question Papers:**

1. **Objective Type Paper**
2. **Maximum Marks: 150**
3. **Number of Questions: 150**
4. **Duration of Paper: 2.30 Hours**
5. **All Questions carry equal marks**
6. **There will be Negative Marking**

(For every wrong answer one-third of the marks prescribed for that Particular question shall be deducted.)