

To be filled by the candidate)

Booklet S. No. _____

Roll No. (In figures) _____

Roll No. (In words) _____

Name of the Candidate : _____

Father's Name : _____

Center of Examination : _____

Total No. of Questions : 50

Paper Code-2620

**Name of Examination- Senior Resident/Specialist Tutor Entrance 2026
Specialty-Tuberculosis & Respiratory**

Time Allowed : 90 Minutes

Maximum Marks : 200

IMPORTANT NOTE:

- (i) OMR Answer Sheet will be supplied by the Examination Centre Superintendent for answering the questions.
- (ii) Use **Blue/Black Ink/ Ball Pen only**, to darken the appropriate circle in the OMR Answer Sheet.
- (iii) Darken one circle deeply for each question in the OMR Answer Sheet, as faintly darkened circle might be rejected by the Optical Scanner.
- (iv) Darkening of more than one circle shall be rejected by the scanner. **Over-writing, cutting, erasing or use of White Fluid is not allowed.**
- (v) Before dealing with the question paper, fill-up the required information with Blue/Black Ball Pen correctly both in the Question Booklet and in the OMR Answer Sheet.
- (vi) Do not fold the OMR Answer Sheet nor put any mark here and there to avoid rejection by the Optical Scanner.
- (vii) Write Roll. No. carefully on the OMR Answer Sheet and darken the appropriate circle properly.
- (viii) **Each question carries Four Marks while 1 mark shall be deducted for each incorrect response.**
- (ix) **Use of Calculator is not allowed.**
- (x) **No over-writing, cutting, erasing or use of white fluid is allowed.**
- (xi) Rough work be done on the sheet(s) at the end.
- (xii) **MOBILE TELEPHONES (EVEN ON SWITCH-OFF MODE) AND SUCH OTHER ELECTRONIC DEVICES ARE NOT ALLOWED INSIDE THE EXAMINATION HALL.**
- (xiii) The question paper-booklet will be retained by the candidate after the entrance test is over.

Q1. The primary determinant of airflow in the respiratory system is:

- A. Lung compliance
- B. Airway resistance
- C. Alveolar surface area
- D. Pulmonary blood flow

Correct answer: B

Reference: Murray & Nadel, Textbook of Respiratory Medicine, Respiratory mechanics.

Q2. The normal PaO₂ at sea level in a healthy adult is approximately:

- A. 60 mmHg
- B. 70 mmHg
- C. 90–100 mmHg
- D. 120 mmHg

Correct answer: C

Reference: West, Respiratory Physiology – The Essentials.

Q3. The most sensitive test for detecting early airway obstruction is:

- A. FEV₁
- B. FVC
- C. FEV₁/FVC ratio
- D. Peak expiratory flow rate

Correct answer: C

Reference: Murray & Nadel, Pulmonary function testing.

Q4. Diffusion capacity of lung (DLCO) is reduced in:

- A. Asthma
- B. Pulmonary fibrosis
- C. Polycythemia
- D. Pulmonary hemorrhage

Correct answer: B

Reference: Murray & Nadel, Gas transfer in lungs.

Q5. The imaging modality of choice for pulmonary embolism is:

- A. Chest X-ray
- B. V/Q scan
- C. CT pulmonary angiography
- D. MRI chest

Correct answer: C

Reference: Harrison's Principles of Internal Medicine, Pulmonary embolism.

Q6. Restrictive lung disease is characterized by:

- A. Increased TLC
- B. Decreased TLC
- C. Increased RV
- D. Normal lung volumes

Correct answer: B

Reference: Murray & Nadel, Restrictive lung diseases.

Q7. The most common cause of widened

A—a gradient is:

- A. Hypoventilation
- B. Diffusion defect
- C. Shunt
- D. High altitude

Correct answer: C

Reference: West, Ventilation–perfusion relationships.

Q8. The classic radiological sign of pulmonary oedema is:

- A. Honeycombing
- B. Bat-wing appearance
- C. Air bronchogram
- D. Hyperinflation

Correct answer: B

Reference: Felson's Principles of Chest Roentgenology.

Q9. Which lung volume cannot be measured by spirometry?

- A. Tidal volume
- B. Vital capacity
- C. Residual volume
- D. Inspiratory reserve volume

Correct answer: C

Reference: Murray & Nadel, Lung volumes.

Q10. The normal FEV₁/FVC ratio in adults is:

- A. <60%
- B. 60–70%
- C. 75–80%
- D. >90%

Correct answer: C

Reference: Murray & Nadel, Pulmonary function tests.

Q11. The most common cause of upper airway obstruction during sleep is:

- A. Central apnea
- B. Obstructive sleep apnea
- C. Cheyne–Stokes breathing
- D. Obesity hypoventilation syndrome

Correct answer: B

Reference: Harrison's, Sleep-related breathing disorders.

Q12. Pulse oximetry measures:

- A. PaO₂
- B. Oxygen content
- C. Oxygen saturation
- D. Hemoglobin concentration

Correct answer: C

Reference: Murray & Nadel, Oxygen transport.

Q13. The most sensitive sign of early interstitial lung disease on HRCT is:

- A. Consolidation
- B. Ground-glass opacity
- C. Cavitation
- D. Pleural effusion

Correct answer: B

Reference: Webb et al., High-Resolution CT of the Lung.

Q14. The most common cause of COPD worldwide is:

- A. Biomass exposure
- B. Smoking
- C. Occupational dust
- D. Air pollution

Correct answer: B

Reference: GOLD Report, COPD epidemiology.

Q15. Blue bloater phenotype is associated with:

- A. Emphysema
- B. Chronic bronchitis
- C. Bronchial asthma

D. Bronchiectasis

Correct answer: B

Reference: Murray & Nadel, COPD phenotypes.

Q16. The most effective drug for long-term control of asthma is:

- A. Short-acting beta-agonists
- B. Inhaled corticosteroids
- C. Theophylline
- D. Antihistamines

Correct answer: B

Reference: GINA Guidelines, Asthma management.

Q17. Reversibility in spirometry is defined as improvement in FEV₁ by:

- A. $\geq 10\%$
- B. $\geq 12\%$ and ≥ 200 ml
- C. $\geq 15\%$
- D. $\geq 20\%$

Correct answer: B

Reference: ATS/ERS Spirometry Standards.

Q18. The hallmark of bronchiectasis is:

- A. Reversible airway obstruction
- B. Permanent dilatation of bronchi
- C. Alveolar destruction

D. Interstitial fibrosis

Correct answer: B

Reference: Murray & Nadel, Bronchiectasis.

Q19. The most common cause of secondary spontaneous pneumothorax is:

A. Asthma

B. Tuberculosis

C. COPD

D. Lung cancer

Correct answer: C

Reference: Harrison's, Pneumothorax.

Q20. Idiopathic pulmonary fibrosis typically shows which HRCT pattern?

A. Ground glass only

B. UIP pattern

C. NSIP pattern

D. Consolidation

Correct answer: B

Reference: ATS/ERS Guidelines on IPF.

Q21. The drug proven to slow IPF progression is:

A. Prednisolone

B. Azathioprine

C. Pirfenidone

D. Methotrexate

Correct answer: C

Reference: Harrison's, Interstitial lung diseases.

Q22. Clubbing is most commonly associated with:

A. Asthma

B. COPD

C. Bronchiectasis

D. Acute pneumonia

Correct answer: C

Reference: Murray & Nadel, Clinical signs.

Q23. The most common cause of hemoptysis in adults in India is:

A. Lung cancer

B. Bronchiectasis

C. Tuberculosis

D. Pulmonary embolism

Correct answer: C

Reference: Harrison's, Hemoptysis.

Q24. Crackles heard in pulmonary fibrosis are typically:

A. Coarse

B. Early inspiratory

C. Late inspiratory

D. Expiratory

Correct answer: C

Reference: Murray & Nadel, Lung auscultation.

Q25. The most common cause of restrictive lung disease is:

- A. Sarcoidosis
- B. IPF
- C. Obesity
- D. Pneumoconiosis

Correct answer: C

Reference: Murray & Nadel, Restrictive lung disorders.

Q26. The best initial treatment for acute severe asthma is:

- A. Oral steroids alone
- B. Inhaled SABA
- C. IV magnesium sulfate only
- D. Antibiotics

Correct answer: B

Reference: GINA Guidelines.

Q27. The most common site of primary tuberculosis is:

- A. Upper lobe
- B. Lower lobe
- C. Middle lobe
- D. Pleura

Correct answer: B

Reference: Harrison's, Tuberculosis.

Q28. The investigation of choice for diagnosing pleural effusion is:

- A. Chest X-ray
- B. Ultrasound thorax
- C. Diagnostic thoracentesis
- D. CT chest

Correct answer: C

Reference: Light's Pleural Diseases.

Q29. Light's criteria are used to differentiate:

- A. TB vs malignancy
- B. Exudate vs transudate
- C. Empyema vs effusion
- D. Acute vs chronic effusion

Correct answer: B

Reference: Light, Pleural effusion

Q30. The most common cause of transudative pleural effusion is:

- A. Tuberculosis
- B. Malignancy
- C. Congestive heart failure
- D. Pneumonia

Correct answer: C

Reference: Light, Pleural diseases.

Q31. The most sensitive test for TB diagnosis currently is:

- A. Sputum smear
- B. Culture
- C. CBNAAT
- D. Mantoux test

Correct answer: C

Reference: RNTCP / NTEP Guidelines.

Q32. The most common organism causing community-acquired pneumonia is:

- A. Staphylococcus aureus
- B. Klebsiella pneumoniae
- C. Streptococcus pneumoniae
- D. Mycoplasma pneumoniae

Correct answer: C

Reference: Harrison's, Pneumonia.

Q33. Empyema thoracis is defined as:

- A. Air in pleural cavity
- B. Blood in pleural cavity
- C. Pus in pleural cavity
- D. Serous effusion

Correct answer: C

Reference: Light, Pleural infections.

Q34. The most common cause of lung abscess is:

- A. Hematogenous spread
- B. Aspiration
- C. TB
- D. Bronchial obstruction

Correct answer: B

Reference: Murray & Nadel, Lung abscess.

Q35. The hallmark radiological sign of lung abscess is:

- A. Homogeneous opacity
- B. Air-fluid level
- C. Ground glass opacity
- D. Nodular shadow

Correct answer: B

Reference: Felson's Chest Radiology.

Q36. The commonest complication of untreated pleural effusion is:

- A. Pneumothorax
- B. Fibrothorax
- C. Hemothorax
- D. Lung collapse

Correct answer: B

Reference: Light, Pleural diseases.

Q37. The most common cause of massive hemoptysis is:

- A. Bronchiectasis
- B. Lung cancer
- C. Tuberculosis
- D. Pulmonary embolism

Correct answer: A

Reference: Harrison's, Hemoptysis.

Q38. Which of the following drug is used in treatment of MDR-TB:

- A. Isoniazid
- B. Rifampicin
- C. Bedaquiline
- D. Ethambutol

Correct answer: C

Reference: WHO MDR-TB Guidelines.

Q39. The most common cause of type II respiratory failure is:

- A. Pulmonary fibrosis
- B. Pulmonary embolism
- C. COPD exacerbation
- D. Pneumonia

Correct answer: C

Reference: Murray & Nadel, Respiratory failure.

Q40. ARDS is characterized by PaO₂/FiO₂ ratio of:

- A. >300
- B. <300
- C. <200
- D. <100

Correct answer: B

Reference: Berlin Definition of ARDS.

Q41. The ventilation strategy recommended in ARDS is:

- A. High tidal volume
- B. Low tidal volume
- C. No PEEP
- D. CPAP only

Correct answer: B

Reference: ARDSNet Trials.

Q42. The most common lung cancer worldwide is:

- A. Squamous cell carcinoma
- B. Small cell carcinoma
- C. Adenocarcinoma
- D. Large cell carcinoma

Correct answer: C

Reference: Harrison's, Lung cancer.

Q43. SIADH is commonly associated with:

- A. Adenocarcinoma lung
- B. Squamous cell carcinoma
- C. Small cell lung carcinoma
- D. Mesothelioma

Correct answer: C

Reference: Harrison's, Paraneoplastic syndromes.

Q44. The most common symptom of lung cancer is:

- A. Chest pain
- B. Hemoptysis
- C. Cough
- D. Dyspnea

Correct answer: C

Reference: Murray & Nadel, Lung malignancy.

Q45. The gold standard for diagnosis of obstructive sleep apnea is:

- A. Overnight oximetry
- B. Polysomnography
- C. Spirometry
- D. ABG

Correct answer: B

Reference: Harrison's, Sleep disorders.

Q46. The most effective treatment for moderate-to-severe OSA is:

- A. Weight loss alone
- B. CPAP
- C. Surgery
- D. Oral appliances

Correct answer: B

Reference: AASM Guidelines.

Q47. The most common occupational lung disease worldwide is:

- A. Silicosis
- B. Asbestosis
- C. Coal workers' pneumoconiosis
- D. Hypersensitivity pneumonitis

Correct answer: C

Reference: Murray & Nadel, Occupational lung diseases.

Q48. A hallmark feature of mesothelioma is:

- A. Central mass
- B. Pleural thickening
- C. Cavitation
- D. Miliary nodules

Correct answer: B

Reference: Harrison's, Pleural malignancies.

Q49. The drug class used as targeted therapy in EGFR-mutated lung cancer is:

- A. Alkylating agents
- B. Tyrosine kinase inhibitors
- C. Antimetabolites
- D. Taxanes

Correct answer: B

Reference: Harrison's, Targeted therapy
in lung cancer.

Q50. The most important prognostic
factor in COPD is:

- A. Smoking index
- B. BMI
- C. FEV₁
- D. DLCO

Correct answer: C

Reference: GOLD Guidelines.

Rough Page
