

M.D. DEGREE EXAMINATION, MARCH 1990.

Branch XVII — Tuberculosis and Respiratory Diseases

Part I

APPLIED BASIC SCIENCES

Time : Three hours.

Use separate answer books for each Section.

Draw diagrams where necessary.

SECTION A — ANATOMY

Answer any TWO questions.

1. Describe the anatomy of the diaphragm and enumerate its developmental anomalies.
2. Describe the lymphatic drainage of the lung.
3. Write short notes on :
 - (a) Pulmonary surfactant.
 - (b) Sequestration of the lung.

SECTION B — PHYSIOLOGY

Answer any ONE question.

4. Discuss the method of oxygen transport. Outline the tests used to study perfusion and diffusion in lung.
5. Write short notes on :
 - (a) Control of respiration.
 - (b) Incentive spirometry.

SECTION C — BIOCHEMISTRY

Answer any ONE question.

6. Discuss the biochemical changes in Diabetic Keto acidosis.
7. Write short notes on :
 - (a) Alpha-1-Antitrypsin.
 - (b) Arachidonic acid cascade.

SECTION D — PATHOLOGY

Answer any ONE question.

8. Discuss the pathogenesis and pathology of Bronchiectasis.
9. Write short notes on :
 - (a) Evolution of pulmonary hypertension.
 - (b) Lymphomas.

SECTION E — MICROBIOLOGY

Answer any ONE question.

10. Describe the method of collecting uncontaminated sputum samples and the usefulness of sputum examination.
11. Write short notes on :
 - (a) Gram negative pneumonia.
 - (b) Estimation of Immunoglobulins.

SECTION F — PHARMACOLOGY

Answer any ONE question.

12. Discuss broncho dilators.
13. Write short notes on :
 - (a) Cephalosporins.
 - (b) Expectorants.

M.D. DEGREE EXAMINATION, OCTOBER 1990.

Branch XVII — Tuberculosis and Respiratory Diseases

Part I

Paper I — APPLIED BASIC SCIENCES

Time : Three hours.

Use separate Answer Books for each Section.

Draw diagrams wherever necessary.

SECTION A — (ANATOMY)

Answer any TWO questions.

1. Discuss the ultra-structure of the lung with special reference to the interstitium.
2. Describe development of lung and enumerate the various developmental anomalies.
3. Write short notes on :
 - (a) Mediastinal cysts.
 - (b) Respiratory centre.

SECTION B — (PHYSIOLOGY)

Answer any ONE question.

4. Discuss the Eosinophil with special reference to its role in defence against parasitic infestation.
5. Write short notes on :
 - (a) Oxymetry.
 - (b) Carbondioxide dissociation curve.

SECTION C — (BIOCHEMISTRY)

Answer any ONE question.

6. Discuss pulmonary manifestations in inborn errors of metabolism.
7. Write short notes on :
 - (a) Respiratory regulation of Acid-Base Balance.
 - (b) Calcium channels.

SECTION D — (PATHOLOGY)

Answer any ONE question.

8. Describe the pathological changes in the lung of a chronic heavy smoker.
- Write short notes on :
- (a) Bullous emphysema.
 - (b) Ciliary dyskinesia.

SECTION E — (MICROBIOLOGY)

Answer any ONE question.

10. Classify viruses infecting the respiratory tract. Describe the laboratory diagnosis of a case.
11. Write short notes on :
 - (a) Congenital immune deficiency states.
 - (b) Anaerobic lung infections.

SECTION F — (PHARMACOLOGY)

Answer any ONE question.

12. Discuss drugs used for fungal infections.
13. Write short notes on :
 - (a) Metered Dose inhalers.
 - (b) Ofloxazine.

303 A

M.D. DEGREE EXAMINATION, SEPTEMBER 1991

Branch XVII — Tuberculosis and Respiratory Diseases

Part I — (New Regulations)

Paper I — APPLIED BASIC SCIENCES

Time : One and a half hours

Maximum : 90 marks

SECTION B

Answer ALL questions.

Write short notes on :

ANATOMY

1. Angle of Louis
2. Diagrammatic representation of structures passing through inlet of thorax
3. Anomalous origin of subclavian artery.

PHYSIOLOGY

1. Pulmonary function tests in health and disease
2. Hypoxia
3. Surfactant.

BIOCHEMISTRY

1. Causes of disturbances in acid base balance
2. Zinc metabolism
3. Inborn errors of metabolism and respiratory diseases.

PHARMACOLOGY

1. Fluoroquinolones
2. Naloxone
3. Tachyphylaxis.

PATHOLOGY

1. Enterogenic cyst
2. Haemosiderosis
3. Collagen disease.

MICROBIOLOGY

1. HIV Infection
 2. Transport medium for tuberculosis
 3. Kaolin agglutination test.
-

303 A

M.D. DEGREE EXAMINATION, SEPTEMBER 1992

Branch XVII — Tuberculosis and Respiratory Diseases

Part I — (New Regulations)

Paper I — APPLIED BASIC SCIENCES

Time : One and a half hours Maximum : 90 marks

SECTION B

Answer ALL questions.

Write short notes on :

ANATOMY

1. Angle of Louis
2. Diagrammatic representation of structures passing through inlet of thorax
3. Anomalous origin of subclavian artery.

PHYSIOLOGY

1. Pulmonary function tests in health and disease
2. Hypoxia
3. Surfactant.

BIOCHEMISTRY

1. Causes of disturbances in acid base balance
2. Zinc metabolism
3. Inborn errors of metabolism and respiratory diseases.

PHARMACOLOGY

1. Fluoroquinolones
2. Naloxone
3. Tachyphylaxis.

PATHOLOGY

1. Enterogenic cyst
2. Haemosiderosis
3. Collagen disease.

MICROBIOLOGY

1. HIV infection
 2. Transport medium for tuberculosis
 3. Kaolin agglutination test.
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SB 213

M.D. DEGREE EXAMINATION
Branch X VII - TUBERCULOSIS AND RESPIRATORY
DISEASES

Old/New Regulations

Part I

Paper I APPLIED BASIS SCIENCES

Time: Three hours

Max. Marks: 180

Answer All Questions.

Answer each subject in a separate answer book.

ANATOMY

1. Describe the subdivisions, boundaries and contents of the mediastinum. (15)
2. Write short notes on:
 - a). Broncho-pulmonary segments
 - b). Histology of trachea
 - c). Superior vena cava (3 X 5 = 15)

PHYSIOLOGY

1. Discuss the mechanics of respiration. (15)
2. Write short notes on:
 - a). Cheyne-Stokes respiration
 - b). Hyperbaric oxygen
 - c). Anoxia (3 X 5 = 15)

BIOCHEMISTRY

1. Discuss the structure and functions of Insulin. Write briefly on the regulation of blood glucose level in the body. (15)

2. Write short notes on:

- a). Immunoglobulins
- b). Vit. K
- c). Structure of haemoglobin (3 X 5 = 15)

PHARMACOLOGY

1. Write briefly on the pharmacology of drugs used in the treatment of Pulmonary Tuberculosis. (15)
2. Write short notes on:
 - a). Halothane
 - b). Cephalosporins
 - c). Salbutamol (3 X 5 = 15)

PATHOLOGY

1. Discuss the pathology and histological features of Bronchogenic carcinoma. (15)
2. Write short notes on:
 - a). Miliary tuberculosis
 - b). Giant cells
 - c). Amoebiasis of the lung (3 X 5 = 15)

MICROBIOLOGY

1. Define sterilization. Discuss the methods of achieving sterilization. (15)
2. Write short notes on:
 - a). Acid-fast staining
 - b). Kleb. pneumoniae
 - c). Lung flukes. (3 X 5 = 15)

[PK 158]

M.D. DEGREE EXAMINATION.
(Old/New/Revised Regulations)

Part I

Branch XVII — Tuberculosis and Respiratory Diseases

Paper I — APPLIED BASIC SCIENCES

Time : Three hours Maximum : 180 marks

Answer each subject in a separate answer book.

Answer ALL questions.

Write short notes :

ANATOMY

- | | | |
|---|---------------------------------|-----|
| | Development of lung. | (8) |
| 2 | Bronchomediastinal lymph nodes. | (8) |
| 3 | Pleural recesses. | (7) |
| 4 | Contents of Intercostal space. | (7) |

PHYSIOLOGY

- | | | |
|---|-------------------------------------|-----|
| 5 | Ventilation-perfusion ratio. | (8) |
| 6 | Decompression sickness. | (8) |
| 7 | Non respiratory functions of lung. | (7) |
| 8 | Physiological role of Nitric oxide. | (7) |

BIOCHEMISTRY

- | | | |
|----|--|-----|
| 9. | Composition and functions of lung surfactant | (8) |
| 10 | Respiratory (Electron transport) chain. | (8) |
| 11 | Detoxication of ammonia. | (7) |
| 12 | Prostacycline. | (7) |

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PHARMACOLOGY

- | | | |
|----|---------------------------------|-----|
| 13 | Side effects of Ciprofloxacin. | (8) |
| 14 | Acetyl Cysteine. | (8) |
| 15 | Benzonase. | (7) |
| 16 | Semi synthetic glucocorticoids. | (7) |

PATHOLOGY

- | | | |
|----|--|-----|
| 17 | Pulmonary changes in byssinosis. | (8) |
| 18 | Aetiology and pathology of primary atypical pneumonia. | (8) |
| 19 | Pathogenesis and pathology of bronchiectasis. | (7) |
| 20 | Pathogenesis of lupus vulgaris. | (7) |

MICROBIOLOGY

- | | | |
|----|---|-----|
| 21 | Tuberculin test. | (8) |
| 22 | Blood culture. | (8) |
| 23 | Sputum examination for parasitic infections | (7) |
| 24 | Streptococcus monilae. | (7) |

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M.D. DEGREE EXAMINATION

Branch XVII - Tuberculosis and Respiratory
Diseases

(Revised Regulations)

Part I

Paper I - APPLIED BASIC SCIENCES

Time: Three hours

Max.marks:180

Answer each subject in a separate
answer book.

Answer any FOUR questions in each subject.

Write briefly on each topic.

All questions carry equal marks.

ANATOMY

1. Ossification of the first rib
2. Relations of arch of aorta
3. Pericardial recesses
4. Azygos veins
5. Epithelium of bronchial tree.

PHYSIOLOGY

6. Vital capacity
7. Haldane effect
8. Pneumotaxic centre
9. Cough reflex
10. T lymphocytes.

BIOCHEMISTRY

11. Anion gap
12. α_1 Antitrypsin
13. SRS-A
14. 2,3-DPG
15. Collagen synthesis.

PHARMACOLOGY

16. Bromocriptine
17. Antiemetics
18. Rigampicin
19. PAS
20. Codeine.

PATHOLOGY

21. Pathology of pneumoconiosis
22. Aspergillosis
23. Adenocarcinoma of lung
24. Primary complex
25. CRIB death.

MICROBIOLOGY

26. Nosocomial pneumonia
27. Loeffler's syndrome
28. Bronchopulmonary candidiasis
29. Acute infectious bronchitis
30. Histoplasma.

M.D. DEGREE EXAMINATION

Branch XVII - Tuberculosis and Respiratory Diseases

(Revised Regulations)

Part I

Paper I - APPLIED BASIC SCIENCES

Time: Three hours

Max.marks:180

Answer each subject in a separate
answer book

Answer any FOUR questions in each subject

Write briefly on each topic

All questions carry equal marks.

ANATOMY

1. Classification of thoracic vertebrae
2. Histological features of the lung
3. Bronchopulmonary segments of the right lung
4. Development and congenital anomalies of Trachea
5. Internal structure of right atrium.

PHYSIOLOGY

6. Effect of high altitude on composition of alveolar air
7. Double Bohr effect
8. Role of vagus in respiration
9. Hypoxia sans cyanosis
10. Avtar Singh Paintal.

CHEMISTRY

- . Endothelium derived relaxing factor
- . Antioxidants
- Angiotensin converting enzyme
- Anticardiolipin antibody
- Lactic acidosis.

PHARMACOLOGY

- Salmeterol
- Patient compliance
- Interferons
- Rifabutin
- Dextromethorphan.

PATHOLOGY

1. Pathogenesis of bronchogenic carcinoma
2. Primary complex
- . Causes of Pneumothorax
2. Role of FNA (Fine Needle Aspiration)
3. Neoplastic syndromes.

PARASITOLOGY

26. Hydatidoma
27. Respiratory syncytial virus
28. Mycobacterium avium
3. Pulmonary lung fluke
3. Acalasis.

M.D. DEGREE EXAMINATION

Branch XVII — Tuberculosis and Respiratory Diseases

(Revised Regulations)

Part I

Paper I — APPLIED BASIC SCIENCES

Time : Three hours

Maximum : 180 marks

Answer each subject in a separate answer book.

Answer any FOUR questions in each subject.

Write briefly on each topic.

All questions carry equal marks.

(ANATOMY)

1. Microscopic structure of trachea.
2. Development and congenital anomalies of lung.
3. Blood and nerve supply of lung.
4. Venous drainage of heart.
5. Arch of aorta.

(PHYSIOLOGY)

6. Dead space in lung.
7. Sensory receptors in lung.
8. Respiratory membrane.
9. Nitrogen narcosis.
10. Non-Respiratory functions of lung.

(BIOCHEMISTRY)

11. Biochemical parameters in pleural effusion.
12. Blood gas pattern in obstructive airway diseases.
13. Immunoglobulins in allergic disorders.
14. Leukotrienes.
15. Streptokinase.

(PATHOLOGY)

16. Asbestose induced lung lesions.
17. Cause of hyper sensitivity in tuberculosis.
18. Morphological patterns of bronchiectasis.
19. Etiology of Bronchogenic Carcinoma.
20. Pneumocystis carinii pneumonia.

(PHARMACOLOGY)

21. Rifampin.
22. Centrally active anti-tussives.
23. Aztreonam.
24. Cromolyn sodium.
25. Ribavarin.

(MICROBIOLOGY)

26. Viral causes of acute respiratory illness.
27. Pulmonary aspergillosis.
28. Septicaemia.
29. Interferons.
30. Occult filariasis.

April-1999

[SG 187]

Sub. Code : 90...

M.D. DEGREE EXAMINATION.

Branch XVII — Tuberculosis and Respiratory Diseases

(Revised Regulations)

Part I

Paper I — APPLIED BASIC SCIENCES

Time : Three hours

Maximum : 180 marks

Answer each subject in a separate answer book.

Answer any FOUR questions in each subject.

All questions carry equal marks.

1. Anatomy

- (a) Tracheostomy
- (b) Respiratory membrane
- (c) Broncho pulmonary segments
- (d) Artificial respiration and Cardio pulmonary resuscitation
- (e) Relations of Thoracic part of TRACHEA.

2. Physiology

- (a) Surfactant
- (b) Forced vital capacity
- (c) Lung compliance
- (d) Ventilation perfusion imbalance
- (e) Nonchemical factors influencing respiration.

3. Biochemistry
 - (a) Glucose Tolerance Test
 - (b) pH of blood
 - (c) Functions of oxygen
 - (d) Respiratory Alkalosis
 - (e) Adenosine Deaminase.
4. Pharmacology
 - (a) Cetirizine
 - (b) Acetylation status of INH
 - (c) What is gene therapy? Mention its application in pulmonology.
 - (d) Newer drugs in the treatment of Tuberculosis
 - (e) Mucolytic agents
5. Pathology
 - (a) Pan-Acinar Emphysema
 - (b) Tumours of pleura
 - (c) Silicotic Nodules in lung
 - (d) Bronchial carcinoid
 - (e) Types of spread of primary pulmonary tuberculosis
6. Microbiology
 - (a) Tuberculosis and HIV "A deadly Duo"
 - (b) Hay Fever
 - (c) Influenza virus
 - (d) Drug resistance in Malaria and prospectus of vaccine.
 - (e) Respiratory syncytial virus.

April-2000

[KB 187]

Sub. Code : 9000

M.D. DEGREE EXAMINATION.

(Revised Regulations)

**Branch XVII — TUBERCULOSIS AND
RESPIRATORY DISEASES**

Part I

Paper I — APPLIED BASIC SCIENCES

Time : Three hours

Maximum : 180 marks

Answer each subject in a separate answer book.

Answer any FOUR questions in each subject.

All questions carry equal marks.

1. Anatomy :

- (a) Histological features of TRACHEA**
- (b) Innervation of Pleura**
- (c) Epithelium of Bronchial tree**
- (d) Respiratory distress syndrome**
- (e) Classification of RIBS.**

2. Physiology :
 - (a) Physiological dead space
 - (b) Oxygen dissociation curve
 - (c) J.reflex
 - (d) Peripheral chemoreceptors
 - (e) Muscles of inspiration in quiet breathing and during exercise.
3. Biochemistry :
 - (a) Anion Gap
 - (b) Antitrypsin
 - (c) Angiotensin converting enzyme (ACE)
 - (d) Base excess
 - (e) Anti cardiolipin Antibody.
4. Pharmacology :
 - (a) Terbutaline
 - (b) Drugs useful in small cell cancer of lung
 - (c) Ciprofloxacin
 - (d) Expectorants
 - (e) Drug treatment of acute severe asthma.
5. Pathology :
 - (a) Pulmonary function tests
 - (b) Diagnostic importance of sputum examination

- (c) Berylliosis
 - (d) Oat cell Carcinoma of Lung
 - (e) Tuberculous pleural effusion.
6. Microbiology :
 - (a) Legionella pneumophila
 - (b) Atypical Mycobacteria
 - (c) Hydatid cyst
 - (d) Wool Sorter's Disease
 - (e) Loeffler's syndrome.
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