APRIL 2001

[KD 1540] Sub. Code : 3052

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

(New Regulations)

Part I

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. Describe physiology of pleural fluid formation and causes of recurrent effusion. (25)

2. Describe Broncho pulmonary segments and discuss the role of Fibre optic Bronchoscopy. (25)

3. Write briefly : (5 × 10 = 50)

(a) Spirometry

(b) Allergen testing

(c) Toxic effect of Theophylin

(d) Rapid Bactae method of detection of M.T.B

(e) Agensis of Lung.

NOVEMBER 2001

[KE 1540] **Sub. Code : 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

(New Regulations)

Part I

BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. What are the causes of increased residual volume? Describe the commonly used lung function tests in asthmatic patients.

2. Describe the various toxic manifestations of antitubercular drugs used in short course chemotherapy and their management.

3. Write briefly on :
   (a) Pulmonary sequestration
   (b) Airway resistance
   (c) Tuberculin Test
   (d) Directly Observed Treatment (DOT)
   (e) Magnetic Resonance Imaging (M.R.I).

MARCH 2002

[KG 1540] **Sub. Code : 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

(New Regulations)

Part I

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. Discuss the applied anatomy of Broncho–Pulmonary Segments. (25)

2. Describe the measurement of dynamic lung volumes and their role in Pulmonary Medicine. (25)

3. Write briefly (5 × 10 = 50)

   (a) Respiratory Alkalosis.

   (b) Sputum Smear Gram Staining.

   (c) Sarcoid Granuloma.

   (d) Fluorescent staining for Mycobacteria.

   (e) Azygos Lobe of the lung.

SEPTEMBER 2002

[KH 1540] Sub. Code : 3052

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

(New Regulations)

Part I

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. What are the tests of airway function, respiratory muscle power and pulmonary gas exchange? (25)

2. Describe the lymphatic drainage of lung. (25)

3. Write briefly : (5 × 10 = 50)

(a) Azygos lobe

(b) Control of respiration

(c) Central sleep apnoea

(d) Bronchopulmonary segments

(e) Eventration of diaphragm.

APRIL 2003

[KI 1540] Sub. Code : 3052

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

(New Regulations)

Part I

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. Classify the causes of Alveolar Hypoventilation and describe the pathogenesis and pathophysiology of cor pulmonale in detail. (25)

2. Classify anti-asthmatic drugs and discuss their mechanism of action and modes of administration in patients with bronchial asthma with different stages of severity. (25)

3. Write briefly on : (5 x 10 = 50)

(a) Broncho-pulmonary sequestration

(b) Alpha 1 anti-trypsin deficiency

(c) MAC infection

(d) Collateral ventilation

(e) Cord factor.

OCTOBER 2003

[KJ 1540] **Sub. Code : 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

(New Regulations)

Part I

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

M.C.Q. must be answered **SEPARATELY** on the answer sheet provided as per the instructions given on the first page of the M.C.Q. Booklet.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

Essay Questions : (2 × 15 = 30)

1. What is Community Acquired Pneumonia (CAP)? Describe briefly microbial profile and pathology of CAP?

2. Describe factors affecting gaseous diffusion in lungs. What is DLCO, its significance and methods of its measurement?

3. Write Short notes on : (10 × 5 = 50)

(1) Lymphatics of the lungs.

(2) Oxygen and Carbon dioxide transportation in the blood.

(3) Peak Expiratory Flow Rate (PEFR)

(4) Sleep Apnoea Syndrome.

(5) Hypersensitivity reactions.

(6) Finger clubbing.

(7) Criteria for normal skiagram chest.

(8) Radiological presentation of atypical pleural effusion.

(9) Definition and Differential Diagnosis of military shadows on X-ray chest.

(10) Fibre Optic Bronchoscopy.

AUGUST 2004

[KL 1540] **Sub. Code : 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

(New Regulations)

Part I

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions : (2 × 15 = 30)

(1) Describe the anatomy of the mediastinum. Discuss the posterior mediastinal disorders. (15)

(2) Discuss pulmonary and browchial circulation. Describe interstitial oedema and pulmonary oedema. (15)

II. Write briefly : (10 × 5 = 50)

(a) Peak Expiratory Flow Rate

(b) HRCT of thorax

(c) Cough

(d) Pathogenesis of clinical barotrauma

(e) Respiratory acidosis

(f) Flow volume loops

(g) Restriction fragment length polymorphism

(h) Long acting Bronchodilators

(i) Sleep Apnoea

(j) Congenital Bronchiectasis.

MARCH 2006

[KO 1540] **Sub. Code : 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions : (2 × 15 = 30)

(1) Describe the mucociliary transport and its role in lung defences.

(2) Describe the flow-volume loop ; describe how to make the loop correctly ; discuss its role in respiratory medicine.

II. Write briefly on : (10 × 5 = 50)

(a) Respiratory acidosis

(b) Ziehl-Neelsen staining

(c) Tuberculous granuloma

(d) Rapid methods of mycobacterial culture

(e) Tracheo-oesophageal fistula

(f) Azygo's lobe

(g) Forced expiratory volume in one second (FEVI)

(h) Immunity in tuberculosis

(i) Mass Miniature Radiography (MMR)

(j) Pyrazinamide.

SEPTEMBER 2006

[KP 1540] **Sub. Code : 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions :

(1) Describe the immunopathogenesis of Tuberculosis and discuss the merits and demerits of immunological tests in the diagnosis of Tuberculosis.(20)

(2) Describe the anatomical structure of a bronchopulmonary segment and describe its blood circulation. (15)

(3) Mention the different types of tubercle bacilli which are pathogenic to human beings and describe their characteristics. (15)

II. Short notes : (6 × 5 = 30)

(a) Congenital Bronchiectasis

(b) Restriction Fragment length polymorphism

(c) Tuberculoma brain

(d) Transport medium

(e) Rifabutin

(f) PCR in Tuberculosis.

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MARCH 2007

[KQ 1540] **Sub. Code : 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES (D.T.C.D.) EXAMINATION.

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Common to

Candidates admitted from 1993-94 onwards

and

Candidates admitted from 2004-05 onwards

Time : Three hours — Maximum : 100 marks

Theory : Two hours and forty minutes — Theory : 80 marks

M.C.Q. : Twenty minutes — M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions :

(1) Describe congenital conditions associated with bronchiectasis. (20)

(2) Describe mechanism of atelectasis and discuss the diagnostic studies and management of obstructive atelectasis. (15)

(3) Describe development of diaphragm and its developmental anomalies. (15)

II. Short notes : (6 × 5 = 30)

(a) Staining techniques for acid fast bacilli

(b) Respiratory acid base disorders

(c) Glycopyrrolate

(d) Soft tubercles

(e) Luciferase reporter assay

(f) Dynamic Hyperinflation.

MARCH 2008

[KS 1540] **Sub. Code : 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES (D.T.C.D.) EXAMINATION.

Paper I — BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Common to all Regulations

Q.P. Code : 343052

Time : Three hours Maximum : 100 marks

Answer ALL questions.

Draw diagrams wherever necessary.

I. Essay questions : ($2 \times 20 = 40$)

(1) Describe in detail the anatomy of bronchopulmonary segments and its clinical importance. (20)

(2) Write in detail about the control of Breathing. (20)

II. Short notes on : ($10 \times 6 = 60$)

(1) Pulmonary Arteriovenous malformations.

(2) Respiratory alkalosis.

(3) Case Control Study.

(4) Development of the diaphragm.

(5) Gene therapy in Respiratory medicine.

(6) Cyclophosphamide.

(7) T Lymphocytes.

(8) Anatomical and physiological dead space.

(9) Cough reflex.

(10) Tumor necrosis factor-α.

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September 2008

[KT 1540] **Sub. Code: 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

Paper I – BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

(Common to all Candidates)

Q.P. Code : 343052

Time : Three hours **Maximum : 100 marks**

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : **(2 X 20 = 40)**

1. Describe the currents concept of the pathologenesis and medical treatment of chronic obstructive pulmonary disease.

2. Describe the scientific basis of short course chemotherapy and intermittent chemotherapy.

II. Write short notes on : **(10 X 6 = 60)**

1. Tuberculoma.
2. Respiratory acidosis.
3. Anti-Leucotrienes.
4. Acid-fast staining techniques.
5. Sequestration of lung.
6. Positive end expiratory pressure.
7. Caprography.
8. Lady windermere's syndrome.
9. Macleod syndrome.
10. Methotrexate.

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MARCH -2009

[KU 1540] **Sub. Code: 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

Paper I – BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

(Common to all Candidates)

Q.P. Code : 343052

Time : Three hours **Maximum : 100 marks**

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : (2 X 20 = 40)

1. Discuss the non respiratory functions of the Lungs.

2. Describe the anatomy of mediastinum. Discuss various mediastinal lesions.

II. Write short notes on : (10 X 6 = 60)

1. Small airway function.
2. Adenyl cyclase.
3. Pulmonary surfactant.
4. Oxygen dissociation curve.
5. Radiology of pulmonary hydatid.
6. Aminorex tragedy.
7. HAART.
8. Berrylliosis.
9. Flail chest.
10. Delayed type hypersensitivity.

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September - 2009

[KV 1540] **Sub. Code: 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

Paper I – BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

(Common to all Candidates)

Q.P. Code : 343052

Time : Three hours **Maximum : 100 marks**

Draw suitable diagram wherever necessary.
Answer ALL questions.

I. Essay questions : (2 X 20 = 40)

1. Define drug resistance in mycobacteria. Describe the various mechanisms of drug resistance in mycobacteria. Discuss the DOTS PLUS programme.

2. Describe acinus. Discuss the microanatomy of emphysema.

II. Write short notes on : (10 X 6 = 60)

1. Azygos lobe.
2. Peak flow variability.
3. Apnoea-Hypopnoea Index.
4. Alfa – 1 Antitrypsin.
5. Aerosol therapy.
6. Dumb-bell tumours.
7. BCG.
8. Sail sign.
9. Ghons focus.
10. Silofillers disease.

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March 2010

[KW 1540] Sub. Code: 3052

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION

BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

(Common to all Candidates)

Q.P. Code : 343052

Time : Three hours **Maximum : 100 marks**

Draw suitable diagram wherever necessary

Answer ALL questions

I. Essay questions : **(2 x 20 = 40)**

1. Describe pulmonary metabolism.
2. Describe the contents of normal mediastinum and techniques for obtaining mediastinal tissue.

II. Write short notes on : **(10 x 6 = 60)**

1. Hypogenetic lung syndrome.
2. Collateral ventilation.
3. Dumb-bell tumours.
4. Anion gap.
5. Unilateral pulmonary edema.
6. Pulmonary ligament.
7. Complications of pneumonia.
8. BODE index.
9. Accessory fissures of lung.
10. Vincristine.

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September 2010

[KX 1540] **Sub. Code: 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES EXAMINATION.

Part I / Paper I - BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

(Common to all Candidates)

Q.P. Code : 343052

Time : Three hours **Maximum : 100 marks**

Draw suitable diagram wherever necessary.
Answer ALL questions.

I. Essay questions : **(2 X 20 = 40)**

1. Describe the ultra structure of Cilia in respiratory tract. What are the common developmental defects associated with it? Describe Ciliary kinetic diseases.

2. Discuss regulation of Respiration.

II. Write short notes on : **(10 X 6 = 60)**

1. Tests for small airway function.
2. Alveolar Macrophages.
3. Pulmonary surfactant.
4. Oncogenes and Lung Cancer.
5. Respiratory alkalosis.
6. Congenital abnormalities of diaphragm.
7. Anterior Mediastinal mass.
8. Lung compliance.
9. Accessory fissures of lung.
10. Lung Sequestration.

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APRIL 2011

[KY 1540] **Sub. Code: 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES (DTCD)

EXAMINATION

BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Q.P. Code : 343052

Time : 3 hours **Maximum : 100 marks**

(180 Min)

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Describe Defence mechanisms of Respiratory tract and role of Alveolar Macrophages.	11	35	15
2. Describe segmental anatomy of lung and their clinico surgical importance.	11	35	15
II. Write notes on :			
1. Anterior mediastinal mass.	4	10	7
2. Development of lung.	4	10	7
3. Phospholipids.	4	10	7
4. IgE.	4	10	7
5. Deflazocort.	4	10	7
6. Primary complex.	4	10	7
7. Formoterol.	4	10	7
8. Lung compliance.	4	10	7
9. Oncogenes and lung cancer.	4	10	7
10. Respiratory alkalosis.	4	10	7

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October 2011

[KZ 1540] **Sub. Code: 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES (DTCD)

EXAMINATION

BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Q.P. Code : 343052

Time : 3 hours **Maximum : 100 marks**
(180 Min)

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Describe the morphology of Acid Fast Bacilli, the staining methods and types of stains.	11	35 min.	15
2. Describe in detail the embryology of lung and its development. Discuss the various congenital anomalies of the lung during development.	11	35 min.	15
II. Write notes on :			
1. Ultra-structure of cilia.	4	10 min.	7
2. Slow Vital Capacity.	4	10 min.	7
3. Capnography.	4	10 min.	7
4. Formeterol.	4	10 min.	7
5. Rifabutin.	4	10 min.	7
6. Hydatid Cyst.	4	10 min.	7
7. Surfactant.	4	10 min.	7
8. Oncogenes.	4	10 min.	7
9. Alpha-1-Anti Trypsin Deficiency.	4	10 min.	7
10. Bio-equivalence.	4	10 min.	7

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April 2012

[LA 1540] **Sub. Code: 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES (DTCD) EXAMINATION

BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Q.P. Code : 343052

Time : 3 hours **Maximum : 100 marks**
(180 Min)

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. How will you evaluate a patient with chronic dyspnoea?	16	35	15
2. Describe oxygen and carbon dioxide exchange and transport.	16	35	15

II. Write notes on :

1. Describe various cough receptors.	4	10	7
2. Describe the method of measurement and clinical significance of diffusing capacity.	4	10	7
3. Describe the drug omalizumab.	4	10	7
4. What is the role of aerosol therapy in various respiratory diseases?	4	10	7
5. Describe the pathogenesis of asthma.	4	10	7
6. What is the role of central respiratory centres?	4	10	7
7. Describe the segmental anatomy of lungs.	4	10	7
8. What is the role of alveolar macrophages in health and disease?	4	10	7
9. Describe the functional anatomy of diaphragm.	4	10	7
10. Describe the pulmonary compliance.	4	10	7

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(LC 1540) **APRIL 2013** **Sub. Code: 3052**

DIPLOMA IN TUBERCULOSIS AND CHEST DISEASES (DTCD) EXAMINATION

BASIC SCIENCES AS APPLIED TO PULMONARY MEDICINE

Q.P. Code: 343052

Time: Three Hours **Maximum: 100 marks**

I. Elaborate on: **(2X15=30)**

1. Describe in detail about the development of lung and add a note on lung sequestration.

2. Describe in detail about the control of breathing and add a note on Pneumotaxic center.

II. Write notes on: **(10X7=70)**

1. Root of lung
2. Forced expiratory volume in one second (FEV1)
3. Role of influenza vaccine
4. Nocardia infection of lung.
5. Oxygen dissociation curve
6. α1 antitrypsins
7. Airway remodeling
8. Thoracic duct
9. D-Dimer
10. Oncogenes

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