

APRIL 2001

[KD 606 A]

M.P.T. DEGREE EXAMINATION.

Paper III — PHYSIOTHERAPY (Elective)

ADVANCED P.T. IN CARDIO RESPIRATORY
DISEASES

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Identify the various biomechanical factors that influence breathing. How can a physiotherapist alter these to improve breathing?
2. Compare the METS method of cardiac rehabilitation to standard techniques. Discuss the usefulness of each programme.
3. Using ventilation perfusion ratio as a baseline compare breathing exercises techniques done in various positions.
4. Discuss the Anatomical and physiological variation seen in children as compared to adults. Describe how these affect your treatment strategies.

5. Write notes on :

(4 × 5 = 20)

- (a) Acid Base Gas Analysis
- (b) Autogenic drainage
- (c) Forced expiratory techniques
- (d) Oxygen therapy.

NOVEMBER 2001

[KE 606 A]

Sub. Code : 8006

M.P.T. DEGREE EXAMINATION.

Paper VI — Physiotherapy (Elective)

**ADVANCED PT IN CARDIO-RESPIRATORY
DISEASES**

Time : Three hours

Maximum : 100 marks

1. Essay on Cardiac Rehabilitation in a 55 years old female with inferior wall myocardial infarction. (20)
2. Discuss the management following left pneumonectomy in a 30 years old female with bronchiectasis. Add a note on broncho-pulmonary fistula. (15 + 5)
3. What are broncho-pulmonary segments? What is modified postural drainage? Explain the contra indications of postural drainage. (6 + 6 + 8)
4. Essay on Breathing Exercises. Add a note on similarities with yogic techniques. (15 + 5)
5. Short notes : (4 × 5 = 20)
 - (a) Clinical methods of exercise tolerance testing.
 - (b) Pleural effusion following pneumonia.
 - (c) Tetralogy of Fallot.
 - (d) Pulmonary defence mechanisms.

MARCH 2002

[KG 606 C]

Sub. Code : 8006

M.P.T. DEGREE EXAMINATION.

(Common to New/Revised Regulations)

**ADVANCED P.T. IN CARDIO RESPIRATORY
DISEASES — (Elective)**

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

All questions carry equal marks.

1. Discuss Phase III of a Cardiac-Rehabilitation program. Explain the basis of the plan and describe in detail the training basis. (20)
2. Compare the mechanism of working of conventional postural drainage versus autogenic drainage. (20)
3. Write an essay on exercise tolerance tests. Describe the validity and reliability of these tests. (20)
4. Describe the mechanics of Breathing. Explain the physiological effects of breathing exercise, giving the effects of inspiratory hold exercises. (20)

5. Write short notes on :

(4 × 5 = 20)

- (a) Humidifiers versus Nebulisers
 - (b) Blood gas analysis need to correlate exercise with this
 - (c) Pulmonary function tests
 - (d) Restrictive lung disease and physiotherapy.
-

SEPTEMBER 2002

[KH 606 C]

Sub. Code : 8006

MASTER OF PHYSIOTHERAPY (MPT) DEGREE
EXAMINATION.

(Common to New/Revised Regulations)

ADVANCED P.T. IN CARDIO RESPIRATORY
DISEASES — (*Elective*)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

All questions carry equal marks.

1. What are the important cardiac and pulmonary factors limiting physical exercise capability? (20)
2. Discuss the relaxation techniques and breathing exercises prescribed for a bronchial asthma patient. (20)
3. Write an essay on routine pulmonary function testing and its importance in physiotherapy. (20)
4. Discuss various modalities of ventilatory management of respiratory failure patient. (20)

5. Write short notes on :

(4 × 5 = 20)

- (a) Ventilation/Perfusion scans
- (b) Restrictive lung diseases
- (c) Nebulizers
- (d) Arterial blood gas estimation.

OCTOBER 2003

[KJ 606 C]

Sub. Code : 8006

**MASTER OF PHYSIOTHERAPY (MPT) DEGREE
EXAMINATION.**

(Common to New/Revised Regulations)

ADVANCED P.T. IN CARDIO RESPIRATORY
DISEASES — (Elective)

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

MCQ : Twenty minutes

MCQ : 20 marks

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

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions :

 $(2 \times 15 = 30)$

1. Principles of an aerobic conditioning program for a patient with coronary disease.
2. Describe the problems and goals for acute post lung transplant rehabilitation.

II. Write short notes on :

(10 × 5 = 50)

1. Cardiac reflexes.
2. Factors affecting arterial blood gases.
3. Incentive spirometer in sustained maximal inspiration.
4. Artifacts in the Chest films.
5. Forced expiratory techniques.
6. Flow volume loops.
7. Indications of controlled breathing techniques.
8. Laplaces' law.
9. Pacing.
10. Spinning disk humidifier.

APRIL 2004

[KK 606 C]

Sub. Code : 8006

**MASTER OF PHYSIOTHERAPY (MPT) DEGREE
EXAMINATION.**

(Common to New/Revised Regulations)

ADVANCED P.T. IN CARDIO RESPIRATORY
DISEASES — (*Elective*)

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.

A. Essay : (2 × 15 = 30)

- (1) Rationale for Cardiac Rehabilitation
- (2) Describe assisted cough techniques.

B. Write short notes : (10 × 5 = 50)

- (1) Concepts of arterial blood gas
- (2) Babington Nebulizer
- (3) Junctional Rhythm
- (4) Radionuclide Imaging

- (5) Hemodynamic Effects on Exercise
- (6) Active Cycle of Breathing
- (7) Respiratory Muscle Function Assessment
- (8) Graham's law
- (9) Multistage testing
- (10) Restorative rehabilitation.

AUGUST 2004

[KL 606 C]

Sub. Code : 8006

**MASTER OF PHYSIOTHERAPY (MPT)
DEGREE EXAMINATION.**

(Common to New/Revised Regulations)

***Elective* — ADVANCED P.T. IN CARDIO
RESPIRATORY DISEASES**

Time : Three hours

Maximum : 100 marks

Theory : Two hours and

Theory : 80 marks

forty minutes

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Write essays on :

(2 × 15 = 30)

(1) Explain in detail the pulmonary rehabilitation of a 60 year old patient who is diagnosed to have chronic bronchitis and had myocardial infarction 2 years ago.

(2) Describe in detail respiratory muscle training strategies.

II. Short notes :

(10 × 5 = 50)

(a) Dressler's Syndrome.

(b) Acute and chronic responses of heart to exercises.

(c) Valsalva Maneuver.

(d) Lorrain Smith Syndrome.

(e) Sputum examination.

(f) Humidification.

(g) P.T. management for a patient with rib fracture.

(h) Tests for Respiratory muscle endurance.

(i) CPAP.

(j) V_{O2max} .

FEBRUARY 2005

[KM 606 C]

Sub. Code : 8006

**MASTER OF PHYSIOTHERAPY (MPT) DEGREE
EXAMINATION.**

(Common to New/Revised Regulations)

Elective — **ADVANCED P.T. IN CARDIO
RESPIRATORY DISEASES**

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.

I. Essay :

(2 × 15 = 30)

(1) Plan out the rehabilitation programme for a complicated cardiac patient with pronounced left ventricular dysfunction. Enumerate the additional problems the patient faces.

(2) Having evaluated a patient who presents with a classical picture of venous insufficiency, discuss the short term and long term goals and available therapeutic intervention.

II. Short Notes on :

(10 × 5 = 50)

- (a) Hyperbaric oxygen
- (b) Innovative investigations cardiopulmonary diseases
- (c) ECG
- (d) Acute respiratory failure
- (e) Lactic threshold
- (f) Effects of anaerobic exercises
- (g) PFT in exercise induced asthma
- (h) Mechanics of respiration
- (i) Manual hyperinflation
- (j) Role of chest physiotherapy.

AUGUST 2005

[KN 606 C]

Sub. Code : 8006

**MASTER OF PHYSIOTHERAPY (M.P.T.) DEGREE
EXAMINATION.**

(Common to New/Revised Regulations)

**ADVANCED PHYSIOTHERAPY IN CARDIO
RESPIRATORY DISEASES — (Elective)**

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 : (2 × 15 = 30)

(1) Describe respiratory muscle mechanics and briefly explain the evaluation and clinical diagnosis of respiratory muscle fatigue.

(2) Physiotherapy program for post operative CABG patient.

II. Short notes : (10 × 5 = 50)

(a) Oxygen toxicity.

(b) Effects of positioning and mobilisation

(c) Forced expiratory technique

- (d) Modified postural drainage**
 - (e) Cardiac reserve**
 - (f) Effects of ageing on the cardio vascular system**
 - (g) Evaluation of chest radiographs.**
 - (h) Haemodynamic effects on exercise.**
 - (i) Manual hyper inflation.**
 - (j) Cardiac stress test.**
-

MARCH 2006

[KO 606 C]

Sub. Code : 8006

MASTER OF PHYSIOTHERAPY (M.P.T.) DEGREE
EXAMINATION.

(Common to New/Revised Regulations)

ADVANCED PHYSIOTHERAPY IN CARDIO
RESPIRATORY DISEASES — (*Effective*)

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 : (2 × 15 = 30)

(1) Discuss chronic obstructive pulmonary disorders and briefly explain physiotherapy evaluation and pulmonary rehabilitation.

(2) Role of physiotherapist in intensive cardiac care unit.

II. Write Short notes : (10 × 5 = 50)

(a) Effects of training program on pulmonary function

(b) Arterial blood gas analysis

(c) Glossopharyngeal breathing

(d) Effects of aerobic exercise for patients with coronary artery disease

(e) Exercise tolerance tests

(f) Evaluation of chest radiographs

(g) Cardiac reserve

(h) Effects of ageing on the respiratory system

(i) Respiratory muscle training

(j) Conduction system of Heart.

SEPTEMBER 2006

[KP 606 C]

Sub. Code : 8006

**MASTER OF PHYSIOTHERAPY (M.P.T.) DEGREE
EXAMINATION.**

(Common to New/Revised Regulations)

**ADVANCED PHYSIOTHERAPY IN CARDIO
RESPIRATORY DISEASES – (Elective)**

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 :

(1) Discuss Patho-physiology of COPD. Explain in detail about Exercise testing and principles of physiotherapeutic management for a 55 year old farmer with COPD. (20)

(2) Describe control of breathing. (15)

(3) Describe the role of lymphatic system and its physiological importance. (15)

II. Short notes :

(6 × 5 = 30)

(a) Abnormal Respiratory Patterns.

(b) Funnel Chest.

(c) Physiological control of respiration.

(d) Cough reflex.

(e) Principles of cardiovascular stress testing.

(f) Aortic stenosis.

FEBRUARY 2007

[KQ 606 C]

Sub. Code : 8006

**MASTER OF PHYSIOTHERAPY (M.P.T.) DEGREE
EXAMINATION.**

(Common to New/Revised Regulations)

**ADVANCED PHYSIOTHERAPY IN CARDIO
RESPIRATORY DISEASES — (*Elective*)**

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 :

(1) Discuss advanced airway clearance techniques with illustration. (20)

(2) Explain the effects of mobilization on enhancing the efficiency of oxygen transport. (15)

(3) Describe the possible impact of exercise training on the aging pulmonary system. (15)

II. Short notes :

(6 × 5 = 30)

(a) Distinguish between prescriptive and routine body positioning.

(b) The patient with deconditioning.

(c) PT for integumentary disorders of ventilatory pump

(d) Traditional exercise testing

(e) Explain pulmonary function tests and PT

(f) Rib mobilization and Respiratory system.

MARCH 2008

[KS 606(C)]

Sub. Code : 8106

**MASTER OF PHYSIOTHERAPY (M.P.T) DEGREE
EXAMINATION.**

(Common to New/Revised Regulations)

***Elective* — ADVANCED PHYSIOTHERAPY IN
CARDIO RESPIRATORY DISEASES**

Q.P. Code : 278106

Time : Three hours

Maximum : 100 marks

I. Essay question: (2 × 20 = 40)

1. Classify peripheral vascular disorders and explain in detail about the role of physiotherapy in peripheral vascular disorders.

2. Discuss the pulmonary rehabilitation programme in chronic bronchitis.

II. Short notes : (10 × 6 = 60)

1. Coughing.

2. Incentive spirometry.

3. Pulmonary circulation.

- 4. Cardiac tumours.**
 - 5. Tetralogy of fallot.**
 - 6. Management for asphyxia.**
 - 7. Non-invasive cardiac diagnostic tests.**
 - 8. Right ventricular failure.**
 - 9. Arterial blood gas analysis.**
 - 10. Respiratory muscle training.**
-

September 2008

[KT 606 (C)]

Sub. Code : 8106

**MASTER OF PHYSIOTHERAPY (M.P.T) DEGREE
EXAMINATION.**

(Common to New/Revised Regulations)

***Elective* — ADVANCED PHYSIOTHERAPY IN
CARDIO PULMONARY DISEASES**

Q.P. Code : 278106

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay questions : (2 × 20 = 40)

1. Write an essay on the physiotherapy program planning for Phase I and Phase II cardiac rehabilitation.

2. (a) Physical treatments administered to enhance cough.

(b) Various mechanisms of control of breathing.

II. Short notes : (10 × 6 = 60)

1. Evaluation of diaphragmatic movement.

2. Post-operative pain management.

3. Vibration technique in chest physiotherapy.

4. Comparing twelve-minute walk and treadmill tests.

5. Pursed lip breathing exercise.

6. Mucociliary escalator.

7. Aortic stenosis.

8. Funnel chest.

9. Rib springing.

10. Positional rotation.

March 2009

[KU 606 C]

Sub. Code: 8106

**MASTER OF PHYSIOTHERAPY (MPT)
DEGREE EXAMINATION**

(Common to New/Revised Regulation)

**Elective – ADVANCED PHYSIOTHERAPY IN CARDIO
RESPIRATORY DISEASES**

Q.P. Code : 278106

Time : Three hours

Maximum : 100 marks

Answer All questions

Draw suitable diagrams where ever necessary

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

1. Discuss and compare atleast 3 different rehabilitation protocols for 45year old house wife after myocardial infarction. Add a note on the importance of stress testing in selecting each protocol.
2. Determinants of ventilation and perfusion matching.

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

1. Pickwickian syndrome.
2. Bagging.
3. Chylothorax.
4. Exercise prescription.
5. Pulmonary atresia.
6. Flutter.
7. Cardiac reflex.
8. Compliance.
9. Diaphragm.
10. Mucolytic agents.

September 2009

[KV 606 C]

Sub. Code: 8106

**MASTER OF PHYSIOTHERAPY (MPT)
DEGREE EXAMINATION**

(Common to New/Revised Regulation)

**Elective – ADVANCED PHYSIOTHERAPY IN CARDIO
RESPIRATORY DISEASES**

Q.P. Code : 278106

Time : Three hours

Maximum : 100 marks

Answer All questions

Draw suitable diagrams where ever necessary

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

1. What is a flow volume loop? List the advantages of the flow – volume loop.
2. Discuss on respiratory muscle weakness and training.

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

1. Airway suctioning.
2. Collateral circulation.
3. Nijmegen questionnaire.
4. Significance of paradoxical respiration.
5. Atherosclerosis.
6. Exercise induced asthma.
7. Heart Lung Machine.
8. Adult respiratory distress syndrome.
9. Oxygen toxicity.
10. Contraindication to exercise testing.

March 2010

[KW 706]

Sub. Code: 8106

**MASTER OF PHYSIOTHERAPY (MPT)
DEGREE EXAMINATION**

(Common to New/Revised Regulation)

**Elective – ADVANCED PHYSIOTHERAPY IN CARDIO
RESPIRATORY DISEASES**

Q.P. Code : 278106

Time : Three hours

Maximum : 100 marks

Answer All questions

Draw suitable diagrams where ever necessary

I. Essay questions :

(2 x 20 = 40)

1. Write down the pre-operative and post-operative assessment and physiotherapy management for a patient posted for surgery who had been diagnosed with VSD.
2. Discuss on cardiac de-conditioning and conditioning.

II. Write short notes on :

(10 x 6 = 60)

1. Oxygen debt.
2. Phases of systole and diastole.
3. Anatomical arrangements of broncho-pulmonary segments.
4. Air embolism.
5. Shuttle walk test.
6. Rocking bed.
7. Costo phrenic assist.
8. Bicycle ergometry.
9. State the age related decline in pulmonary system.
10. Coughing and huffing.

September 2010

[KX 706]

Sub. Code: 8106

**MASTER OF PHYSIOTHERAPY (MPT)
DEGREE EXAMINATION**

SECOND YEAR

(Revised Regulation)

For candidates admitted from 2000-2001 onwards & 2005-2006 onwards

Paper – II Physiotherapy (Elective Subject)

ADVANCED PHYSIOTHERAPY IN CARDIO

RESPIRATORY DISEASES – (Elective)

Q.P. Code : 278106

Time : Three hours

Maximum : 100 marks

Answer All questions

Draw suitable diagrams where ever necessary

I. Essay questions :

(2 x 20 = 40)

1. Write an essay on advanced physiotherapy management for bronchial Asthma.
2. Explain the physiotherapy management following Double Lung Transplantation.

II. Write short notes on :

(10 x 6 = 60)

1. Scoop technique.
2. Electro mechanical coupling in the heart.
3. PNF on chest.
4. Middle lobe syndrome.
5. Car pulmonale.
6. Step test.
7. Mobilizing the thorax.
8. Physiological effects of supine position.
9. Perfusion.
10. FICK's principle.

MAY 2011

[KY 706]

Sub. Code: 8106

**MASTER OF PHYSIOTHERAPY (MPT)
DEGREE EXAMINATION
SECOND YEAR**

Revised Regulation :

For candidates admitted from 2000-2001 onwards & 2005-2006 onwards

PAPER – II PHYSIOTHERAPY (Elective Subject)

ADVANCED PHYSIOTHERAPY IN CARDIO-PULMONARY DISEASES – (Elective)

Q.P. Code : 278106

Time : Three hours

Maximum : 100 marks

Answer All questions

Draw suitable diagrams where ever necessary

I. Essay Questions :

(2 x 20 = 40)

1. Write about the Physical Rehabilitation of a Patient with Guillian barre syndrome dependent on long term ventilator.
2. What are all the age related changes in cardio vascular system and exercise prescription considerations for elderly?

II. Write Short Notes :

(10 x 6 = 60)

1. Risk factor modifications in Ischemic heart disease.
2. Clinical evaluation of respiratory muscle fatigue.
3. Dyspnoea.
4. Metabolic Equivalents (MET's) .
5. Cardiac Index.
6. Altered respiratory biomechanics in Emphysema.
7. Flow volume loop in pulmonary function test.
8. Burger Allan exercise.
9. Active Cycle of Breathing.
10. Adult respiratory Distress Syndrome.

October 2011

[KZ 706]

Sub. Code: 8106

MASTER OF PHYSIOTHERAPY (MPT) DEGREE EXAMINATION

SECOND YEAR

PAPER – II PHYSIOTHERAPY (ELECTIVE SUBJECT)

ADVANCED PHYSIOTHERAPY IN CARDIO-PULMONARY DISEASES – (Elective)

Q.P. Code : 278106

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

Pages (Max.)	Time (Max.)	Marks (Max.)
-------------------------	------------------------	-------------------------

- | | | | |
|--|----|----|----|
| 1. What are all the general principles of exercise training and prescription? How will you prescribe exercise for COPD patients? | 17 | 40 | 20 |
| 2. Give a detailed account on pulmonary rehabilitation of the patient with spinal cord injury. | 17 | 40 | 20 |

II. Write notes on :

- | | | | |
|--|---|----|---|
| 1. Valsalva maneuver. | 4 | 10 | 6 |
| 2. ABG analysis. | 4 | 10 | 6 |
| 3. Antihistamines. | 4 | 10 | 6 |
| 4. Intermittent claudication. | 4 | 10 | 6 |
| 5. Modes of ventilators. | 4 | 10 | 6 |
| 6. Meconium aspiration syndrome. | 4 | 10 | 6 |
| 7. Subcutaneous emphysema. | 4 | 10 | 6 |
| 8. Glassopharyngeal Breathing technique. | 4 | 10 | 6 |
| 9. Mediate percussion. | 4 | 10 | 6 |
| 10. Autogenic drainage. | 4 | 10 | 6 |

[LA 706]

April 2012

Sub. Code: 8106

MASTER OF PHYSIOTHERAPY (MPT) DEGREE EXAMINATION

SECOND YEAR

PAPER – II PHYSIOTHERAPY (Elective Subject)

ADVANCED PHYSIOTHERAPY IN CARDIO-PULMONARY DISEASES – (Elective)

Q.P. Code : 278106

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

**Pages Time Marks
(Max.) (Max.) (Max.)**

- | | | | |
|--|----|----|----|
| 1. Write about the Physiotherapy management of a patient with bilateral lower lobe Bronchiectasis. | 17 | 40 | 20 |
| 2. Write about the principles and phases of Cardiac rehabilitation programme. | 17 | 40 | 20 |

II. Write notes on :

- | | | | |
|--|---|----|---|
| 1. Winsor Hyman Scale. | 4 | 10 | 6 |
| 2. Autogenic Drainage. | 4 | 10 | 6 |
| 3. Maximal symptom limited exercise test protocol. | 4 | 10 | 6 |
| 4. Mikity Wilson syndrome. | 4 | 10 | 6 |
| 5. Chest Manipulations in airway clearance. | 4 | 10 | 6 |
| 6. Normal ECG. | 4 | 10 | 6 |
| 7. Aerosol Therapy. | 4 | 10 | 6 |
| 8. Effects of Positioning on respiratory system. | 4 | 10 | 6 |
| 9. Six Minute Walk Test. | 4 | 10 | 6 |
| 10. Non Invasive Ventilation. | 4 | 10 | 6 |
