

MANIPAL UNIVERSITY

SECOND YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2010

**SUBJECT: PATHOLOGY AND MICROBIOLOGY
(COMMON FOR BOTH OLD & NEW REGULATION)**

Monday, June 07, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

- ✍ **Answer section A and section B in TWO separate answer books.**
 ✍ **Draw labelled diagrams wherever appropriate.**

SECTION 'A': PATHOLOGY: 40 MARKS

1. Define inflammation. Mention the cardinal features of acute inflammation. Write briefly on the cellular events of inflammation including phagocytosis.
(1+2+5 = 8 marks)
2. Define oedema. Mention the types of oedema. Write briefly on the pathogenesis of renal oedema.
(1+3+3 = 7 marks)
3. **Write short notes on:**
 - 3A. Differences between lepromatous and tuberculoid leprosy.
 - 3B. Clinical features and blood smear findings of iron deficiency anemia.
 - 3C. Morphology of bronchiectasis and clinical presentation of a patient with bronchiectasis.
 - 3D. Causes and clinical features of goitre.
 - 3E. Types of renal stones and complications caused by them.

(5×5 = 25 marks)

SECTION 'B': MICROBIOLOGY: 40 MARKS

4. What are the differences between prokaryotic and eukaryotic cell? Draw a neat labeled diagram of bacterial cell. Add a note on various shapes and arrangement of bacteria.
(3+2+3 = 8 marks)
5. Enumerate agents causing meningitis. Discuss the laboratory diagnosis of Acute bacterial meningitis.
(3+4 = 7marks)
6. Write short notes on any **FIVE**.
 - 6A. Bacillary dysentery.
 - 6B. Type IV hypersensitivity.
 - 6C. Dermatophytes.
 - 6D. Opportunistic infections in AIDS.
 - 6E. DPT vaccine.
 - 6F. Serological tests for syphilis.

(5×5 = 25 marks)



MANIPAL UNIVERSITY
SECOND YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: PHARMACOLOGY
(COMMON FOR BOTH OLD & NEW REGULATIONS)

Wednesday, June 09, 2010

Time: 14:00-15:30 Hrs.

Max. Marks: 40

1. Define the following terms with an example:
 - 1A. Glycoside
 - 1B. First pass metabolism
 - 1C. Agonist
 - 1D. Haematinic
 - 1E. Astringent

(1×5 = 5 marks)

2. Explain the pharmacological basis for the following:
 - 2A. Levodopa in parkinsonism.
 - 2B. Bromhexine in productive cough.
 - 2C. Nitrates in angina pectoris.
 - 2D. Neostigmine in myasthenia gravis.
 - 2E. Furosemide in congestive heart failure.

(2×5 = 10 marks)

- 3A. Name four drugs used in the treatment of tuberculosis. Write one important adverse effects for each drug.

(2+2 = 4 marks)
- 3B. Name two glucocorticoids preparations and mention two uses for them.

(1+1 = 2 marks)
- 3C. Name two β -lactam antibiotics and write two uses for any one.

(1+1 = 2 marks)
- 3D. Name two anticoagulants and write two adverse effects for any one.

(2 marks)

- 4A. Classify opioid analgesics with examples. Mention two indications and two adverse effects for any one.
- 4B. Write two indications and two adverse effects for d-tubocurarine.

((2+1+1)+(1+1) = 6 marks)

- 5A. Enumerate three groups of drugs used in bronchial asthma with one example for each.
- 5B. Enlist three advantages and three disadvantages of intravenous route of drug administration.
- 5C. Write three uses and three adverse effects of diazepam.

(3+3+3 = 9 marks)



MANIPAL UNIVERSITY
SECOND YEAR B.P.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: ELECTROTHERAPY
(COMMON FOR BOTH OLD AND NEW REGULATION)

Friday, June 11, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

1. Essay Questions:

- 1A. Describe the construction and working of UVR apparatus. List the Contraindications to UVR.
(7+3 = 10 marks)
- 1B. Discuss the physiological effects of Faradic type currents. Enumerate the indications for Faradic type of current.
(8+2 = 10 marks)

2. Short Notes:

- 2A. Contrast bath.
2B. Earth shock and its prevention.
2C. Non luminous Infrared radiation generators.
2D. Types of nerve injuries.
2E. Types of transformers and uses of transformers.
2F. Methods of application of cryotherapy.
2G. Production of therapeutic ultrasound.
2H. Contraindications to Short wave diathermy.
(5×8 = 40 marks)

3. Brief answers:

- 3A. List the uses of choke-coil.
3B. Enumerate the properties of Laser.
3C. List the nonthermal effects of Ultrasound on body tissues.
3D. Enumerate any two advantages and disadvantages each of Wax therapy.
3E. Define Rheobase and Chronaxie.
3F. Define capacitive reactance.
3G. What is Cosine law?
3H. Define Ionotophoresis. Mention any one ion and its use.
3I. Mention the factors affecting the capacity of a conductor.
3J. Define Faraday's law of electromagnetic induction.
(2×10 = 20 marks)



MANIPAL UNIVERSITY
SECOND YEAR B.P.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: EXERCISE THERAPY – II
(OLD REGULATION)

Monday, June 14, 2010

Time: 14:00-17:00 hrs.

Max. Marks: 80

✍ **Answer all the questions:**

1. Essay Questions:

- 1A. Describe the kinematics of knee joint. Add a note on anterior-posterior stability of knee joint.
(8+2 = 10 marks)
- 1B. Define stretching. What are the types of stretching? Explain the procedure for stretching.
(2+2+6 = 10 marks)

2. Short Notes:

- 2A. The intervertebral disc.
 2B. Active and passive insufficiency.
 2C. Advantage and disadvantage of eccentric exercise.
 2D. Any five principles of PNF.
 2E. Contraindications and precautions for joint mobilization technique.
 2F. Frenkel's exercise.
 2G. Explain any two types of breathing exercise.
 2H. Describe any two abnormal posture.
- (5×8 = 40 marks)

3. Brief Answers:

- 3A. Q angle.
 3B. Stride length and step length.
 3C. Two advantages and disadvantages of isometric exercise.
 3D. What is plastic range in stress-strain curve?
 3E. Write D1 extension pattern of lower limb.
 3F. Measurement method for tripod prescription.
 3G. Ronchi.
 3H. List the normal breath sound.
 3I. List the precautions to be followed during traction technique.
 3J. Convex-concave rules.
- (2×10 = 20 marks)



MANIPAL UNIVERSITY

SECOND YEAR B.P.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: BIOMECHANICS AND EXERCISE THERAPY – II

(NEW REGULATION)

Monday, June 14, 2010

Time: 14:00-17:00 hrs.

Max. Marks: 80

✍ **Answer ALL questions.**

SECTION A: BIOMECHANICS (40 Marks)

1. Essay Questions:

Explain the factors affecting the stability of hip joint. Discuss the different methods to reduce the joint reaction force during the single limb stance.

(6+4 = 10 marks)

2. Short Notes:

- 2A. Write short notes on any two faulty postures.
- 2B. Explain scapulohumeral rhythm.
- 2C. Discuss the determinants of gait.
- 2D. Discuss the types of power grips with suitable examples.

(5×4 = 20 marks)

3. Brief Answers:

- 3A. Name the rotator cuff muscles.
- 3B. Define Q angle.
- 3C. Define stance phase and enumerate the subphases of stance phase.
- 3D. What is bucket handle movement?
- 3E. Define lumbosacral angle.

(2×5 = 10 marks)

SECTION B: EXERCISE THERAPY – II (40 Marks)

4. Essay Questions:

Explain the principles of Proprioceptive neuromuscular facilitation. Add a note on any two specific techniques in Proprioceptive neuromuscular facilitation.

(6+2+2 = 10 marks)

5. Short Notes:

- 5A. Frenkel's exercises.
- 5B. Write briefly about the contraindications for postural drainage.
- 5C. Types of inspiratory breathing exercises.
- 5D. Discuss the different types of crutches and their measurements.

(5×4 = 20 marks)

6. Brief Answers:

- 6A. Enumerate the factors causing restriction of joint mobility.
- 6B. Define 1 RM and 10 RM.
- 6C. List the uses of manual muscle testing.
- 6D. Enumerate the types of stretching.
- 6E. Mention the indications for lumbar traction.

(2×5 = 10 marks)



MANIPAL UNIVERSITY
SECOND YEAR B.P.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: PSYCHOLOGY
(COMMON FOR BOTH OLD AND NEW REGULATION)

Wednesday, June 16, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

✍ Answer any **FOUR** questions from **SECTION 'A'** and any **FOUR** questions from **SECTION 'B'**.

✍ All questions carry equal marks.

SECTION – A

1. Define motivation and discuss any two theories of motivation.
2. Outline any four important branches of psychology.
3. What is forgetting? Delineate any three theories of forgetting.
4. How does physical development progress in adolescence and adulthood?
5. Write briefly on any **TWO** of the following:
 - 5A. Personality influences on adjustment.
 - 5B. Group Processes.
 - 5C. Theories of attitude formation.

SECTION – B

6. Delineate the clinical features of depression and obsessive compulsive disorder.
7. Discuss how stress is related to illness.
8. Describe any one approach to cognitive therapy.
9. Outline any four factors that contribute to human growth and adjustment.
10. Write briefly on any **TWO** of the following:
 - 10A. Stages of crisis reaction.
 - 10B. Group therapy.
 - 10C. Biological interventions.

