MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: MEDICINE
(NEW REGULATION)

Thursday, June 14, 2007

Time available: 3 Hours   Maximum Marks: 80

✍ **Answer ALL questions.**

1. Discuss the etiopathogensis, clinical features, management, (investigations and treatment) of bronchial asthma.

(2+3+2+3 = 10 marks)

2. Write short notes on any **SIX** of the following:
2A. Causes and clinical features of Cushing's syndrome.
2B. Chronic aortic regurgitation.
2C. Management of peptic ulcer.
2D. Chronic complications of diabetes mellitus.
2E. Clinical features and treatment of Immune thrombocytopenic purpura.
2F. Rubella.
2G. Causes and clinical features of acute renal failure.
2H. Hypokalemia.

(5×6 = 30 marks)

3. Discuss the causes, clinical features, management (investigation and treatment) of Iron deficiency anemia.

(2+3+3+2 = 10 marks)

4. Write short notes on any **SIX** of the following:
4A. Complications of acute myocardial infarction.
4B. Management of Obesity.
4C. Treatment and complications of typhoid fever.
4D. Pellagra.
4E. List the mode of transmission and investigations of HIV.
4F. Clinical features of chronic myeloid leukemia.
4G. Chronic active hepatitis.
4H. Barbiturate poisoning.

(5×6 = 30 marks)

MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: GENERAL SURGERY
(COMMON FOR BOTH OLD & NEW REGULATION)

Friday, June 15, 2007

Time available: 3 Hours   Maximum Marks: 80

✍ **Answer Section "A" and Section "B" in TWO Separate Answer Books.**

SECTION "A" : CARDIOVASCULAR AND THORACIC SURGERY : 40 MARKS

1.   Describe the anatomy of the diaphragm muscle and discuss the management of congenital diaphragmatic hernia.

(10 marks)

2.   Define tension pneumothorax. Discuss the aetiology and management.

(10 marks)

3.   Write short notes on any **TWO**.
3A. Indications for surgery in pulmonary tuberculosis.
3B. Patent ductus arteriosus.
3C. Flail chest.

(10×2 = 20 marks)

SECTION "B" : GENERAL SURGERY : 40 MARKS

4.   What are the different types of shock? Write briefly on management of hypovolaemic shock.

(4+6 = 10 marks)

5.   Classify burns. Describe the late complications of burns, their prevention and management.

(4+6 = 10 marks)

6.   Write short notes on any **FOUR**.
6A. Hyponatraemia.
6B. Transfusion reactions.
6C. Tubercular Sinus.
6D. General anaesthesia.
6E. Lacerated wound over the right wrist region.

(5×4 = 20 marks)

⊅⊄⊅⊄⊅

MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: COMMUNITY MEDICINE AND SOCIOLOGY
(NEW REGULATION)

Saturday, June 16, 2007

Time available: 3 Hours

Maximum Marks: 80

✍ **Answer SECTION 'A' and SECTION 'B' in TWO separate answer books.**

SECTION 'A': COMMUNITY MEDICINE : 40 MARKS

1. Define health as per World Health Organization definition. Explain natural history of disease with a suitable example and a diagram. Discuss the influence of socio economic and cultural factors on health.

$(1+5+4 = 10 \text{ marks})$

2. Write short notes on:

2A. Nutrition during pregnancy.

2B. Physical disabilities in children.

2C. Juvenile delinquency.

2D. Health problems of the aged.

2E. Community based rehabilitation.

2F. Spacing method of family planning.

$(5 \times 6 = 30 \text{ marks})$

SECTION 'B': SOCIOLOGY : 40 MARKS

3A. Explain how life-style, culture and social support network influence health, illness and recovery.

3B. Describe the role of socialization as a determinant of health and illness behavior.

3C. Describe the impact of changes in functions of family on human health.

$(10 \times 3 = 30 \text{ marks})$

Write short notes on the following:

4. List the consequences and remedies for the following:

4A. Juvenile delinquency.

4B. Poverty.

$(5 \times 2 = 10 \text{ marks})$

MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: PHYSIOTHERAPY IN CARDIOPULMONARY AND GENERAL CONDITIONS
(NEW REGULATION)

Monday, June 18, 2007

Time available: 3 Hours   Maximum Marks: 80

✍ **Answer ALL questions.**

1. Discuss cardiac rehabilitation for 8 year old child who has undergone surgery for correction of Tetralogy of Fallot (TOF).

(10 marks)

2. Discuss the acute and long-term Physiotherapy management for patient with head injury.

(4+6 = 10 marks)

3. Short notes:
3A. Discuss kinematics of thorax during respiration.
3B. Discuss the postoperative physiotherapy management for reconstruction of buccal carcinoma using pectoralis major myocutaneous flap.
3C. Discuss physiotherapy management for below knee amputation.
3D. Discuss respiratory home care.
3E. Define bronchial asthma. Write on clinical features and medical management for the same.
3F. Discuss the postoperative physiotherapy protocol for a patient with split skin grafting for partial thickness burns over the posterior aspect of knee.
3G. Discuss indication, contraindication for postural drainage and write on postural drainage positions for right upper lobe segments.
3H. Discuss treadmill exercise testing.

(5×8 = 40 marks)

4. Brief notes:
4A. Define hypoxia and hypercapnea.
4B. Define functional residual capacity and residual volume.
4C. Modes of mechanical ventilation.
4D. Metabolic acidosis.
4E. Clinical features in pulmonary tuberculosis.
4F. Describe pain in peripheral arterial disease.
4G. ECG changes in right ventricular myocardial infarction.
4H. Radiological changes in pleural effusion.
4I. Auscultatory finding in bronchial asthma.
4J. Physiotherapy options for hyperhidrosis.

(2×10 = 20 marks)

ॐᏯᏗᏋᏗᏋᏗᏋ

MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: COMMUNITY BASED REHABILITATION
(NEW REGULATION)

Tuesday, June 19, 2007

Time available: 3 Hours   Maximum Marks: 80

1.   Answer ALL questions:

1A. Plan out home based rehabilitation program for a wheel chair bound D6 level complete paraplegic living on the second floor of a multistoried building.

1B. Describe in detail the various agencies and institution involved in community based rehabilitation for physically disabled persons.

(10×2 = 20 marks)

2.   Short notes:

2A. Principles for fitness training.

2B. Management for diastasis recti.

2C. Preventive measures in chemical factory for occupational hazards.

2D. Musculoskeletal changes with aging.

2E. Aerobic training for Type II Diabetes Mellitus.

2F. Disability evaluation for lower limb amputations.

2G. Role of multipurpose health worker.

2H. Describe the architectural specification for railway station in a village in concern with transport for the wheel chair bound patients.

(5×8 = 40 marks)

3.   Brief answers:

3A. Energy yield during oxidation of carbohydrates, fat and proteins.

3B. Two laws governing benefits for physically disabled persons.

3C. Architectural specifications for ramps.

3D. Any two ergonomic advices for neck care in computer professionals.

3E. Define OBLA.

3F. Mention the muscles of the pelvic floor.

3G. Mention any four roles of physiotherapist in CBR.

3H. Any four changes in the cardiovascular system with aging.

3I. Define early intervention.

3J. WHO definition of Disability.

(2×10 = 20 marks)

MANIPAL UNIVERSITY

FOURTH YEAR B.P.T DEGREE EXAMINATION – JUNE 2007

SUBJECT: RESEARCH METHODOLOGY AND BIOSTATISTICS
(NEW REGULATION)

Wednesday, June 20, 2007

Time: 3 Hrs.   Max. Marks: 80

✎   **Answer ALL the questions.**

1A. Mention the various scales of measurement. What are their properties? Give examples for each.

1B. What is the importance of graphical presentation of data? List the various methods of graphical presentation of data.

$$((2+2+1)+(2+3) = 10 \text{ marks})$$

2A. Define dispersion. What are the requisites of a good measure of dispersion?

2B. In a study conducted to see if there was a possible type of brain dysfunction associated with infantile autism, each child in the study was given a behavioural test and graded on a scale from 0 to 116, where 0 = absence of symptoms and 116 = maximum severity of symptoms. The scores on 10 children in the study were as follows:

27, 35, 67, 47, 63, 44, 51, 17, 41, 18

Calculate mean, median and standard deviation of the following set of data.

$$((1+2)+(2+2+3) = 10 \text{ marks})$$

3A. Define the following:
   i)   Null hypothesis.
   ii)   Type I error.
   iii)   Type II error.
   iv)   Independence of events.

3B. If IQ scores on a particular test are normally distributed with a mean and standard deviation of 100 and 15 respectively, find the probability of a randomly selected person having a score
   i)   above 130
   ii)   between 85 and 115
   iii)   below 145.

$$(4+6 = 10 \text{ marks})$$

4A. Give definition, significance and application of random sample.

4B. With the help of scatter diagram explain the properties of correlation coefficient.

$$((1+2+2)+5 = 10 \text{ marks})$$

5.   Write short essays on the following:
5A. Measures of central tendency.
5B. Types of variable in research.
5C. Reliability and Validity.
5D. Importance of biostatistics in health care delivery.
5E. Case series analysis.
5F. Mortality statistics.
5G. Normal distribution.
5H. Descriptive epidemiology.

$$(5 \times 8 = 40 \text{ marks})$$

MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: ETHICS/ADMINISTRATION AND TEACHING SKILLS
(NEW REGULATION)

Thursday, June 21, 2007

Time available: 1½ Hours

Maximum Marks: 40

✍ **Answer ALL questions.**

✍ Essay:

1. A new 250 bedded multispeciality hospital recruits you and assigns the responsibility of setting up the Physiotherapy department. Plan the requirements in terms of equipment procurement space and staffing.

(10 marks)

2. Short notes:

2A. Position statement of WCPT for community based rehabilitation.

2B. What are the prerequisites need to be met to get affiliation from IAP?

2C. Explain the ethical and unethical issues in private practice.

2D. What are the components of an informed consent form used in research?

(5×4 = 20 marks)

3. Brief answer:

3A. What is non–maleficence?

3B. What is vicarious liability?

3C. What is the Good Samaritan rule?

3D. Expand SOAP.

3E. Name two NGOs that help in funding poor patients.

(2×5 = 10 marks)

✻✿✻✿✻

MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: EXERCISE PHYSIOLOGY AND ELECTRODIAGNOSIS
(NEW REGULATION)

Friday, June 22, 2007

Time available: 3 Hours   Maximum Marks: 80

- ✍ Answer both section – A and section – B in same answer book.
- ✍ Answer all questions.

SECTION – A : ELECTROPHYSIOLOGY : 40 Marks

✍ Essay:

1. Explain the procedure for motor nerve conduction study in detail.

(10 marks)

2. Short notes:
2A. Physiological properties of muscle.
2B. Principles of EMG Biofeedback.
2C. Repetitive nerve stimulation.
2D. Blink reflex.

(5×4 = 20 marks)

3. Brief Answers:
3A. Conduction block.
3B. Wallerian degeneration.
3C. HM ratio.
3D. EMG findings in polymyositis.
3E. Interference pattern.

(2×5 = 10 marks)

SECTION – B : EXERCISE PHYSIOLOGY : 40 Marks

✍ Essay:

4. Write briefly about the methods of heat gain and heat loss and explain in detail the physiological changes and adaptations to exercise in a hot environment.

(10 marks)

5. Short Notes:
5A. Immune responses to aerobic exercise.
5B. Potential mechanisms contributing to muscular fatigue.
5C. Principles of endurance training.
5D. Physiological basis of oxygen deficit and debt.

(5×4 = 20 marks)

6. Brief Answers:
6A. Define endurance.
6B. What is periodization?
6C. What is ventilatory breakpoint?
6D. What is cross training?
6E. What is decompression sickness?

(2×5 = 10 marks)