

MANIPAL UNIVERSITY
FOURTH YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2012

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

Monday, May 28, 2012

Time: 10:00 – 13:00 Hrs

Maximum Marks: 80

✍ **Answer ALL questions:**

1A. Enlist with the aid of diagram the various lung capacities and lung volumes measured by spirometry.

1B. Spirometry changes seen in COPD and Bronchial Asthma.

(8+1+1 = 10 marks)

2. **Write Short notes on any SIX of the following:**

2A. General management of poisoning

2B. Vit D Deficiency

2C. Clinical features of filariasis and treatment

2D. Risk factors in IHD

2E. Clinical features of Iron Deficiency Anemia

2F. Clinical features of status asthmaticus

2G. Role of physiotherapy in Bronchiectasis

2H. Hypoglycemia: causes and management

(5×6 = 30 marks)

3A. Enlist the types of pneumothorax.

3B. Describe the clinical features of right sided pneumothorax.

3C. Discuss the investigations and management in the above case.

(3+3+4 = 10 marks)

4. **Write short notes on any SIX of the following:**

4A. Dietary and lifestyle changes in Hypertension

4B. Sources of nosocomial infection in a bedridden hospitalized patient

4C. Enumerate complications of falciparum malaria

4D. Infectious Mononucleosis: Causative organism and clinical features

4E. Constipation – causes, treatment

4F. Drugs used for treatment of Obesity

4G. First Aid in snake bite

4H. Diabetic foot

(5×6 = 30 marks)



MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: SURGERY/GENERAL SURGERY
(NEW REGULATION/OLD REGULATION)

Wednesday, May 30, 2012

Time: 10:00 –13:00 Hrs.

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 and aetiopathogenesis of coronary artery disease. Discuss the management of coronary artery disease. (10 marks)
2. Discuss the clinical features and investigation of peripheral vascular disease. Discuss endoscopic and surgical management options for peripheral vascular disease. (10 marks)
3. **Write short notes on any TWO.**
 - 3A. Discuss various types of Diaphragmatic hernia.
 - 3B. Write a short note on lung abscess.
 - 3C. Describe Fallot’s tetralogy.(10×2 = 20 marks)

SECTION B: GENERAL SURGERY (40 MARKS)

4. What is surgical stress response? Describe pathways of activation of stress response. Enumerate the metabolic sequelae of stress response. What are the features of Systemic Inflammatory Response Syndrome (SIRS)? (10 marks)
5. Enumerate indications for blood transfusion. Describe grouping and cross-matching. Add a note on blood fractions used for transfusion. List a few complications of blood transfusion. (10 marks)
6. **Write short notes on any FOUR.**
 - 6A. Discuss types of Regional anaesthesia.
 - 6B. Discuss water intoxication.
 - 6C. Classify ulcers and discuss treatment of a non-specific ulcer in general.
 - 6D. Discuss sinus and fistula.
 - 6E. Describe types of abdominal incisions.(5×4 = 20 marks)



MANIPAL UNIVERSITY

FOURTH YEAR B.P.T DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: RESEARCH METHODOLOGY AND BIostatISTICS (NEW/OLD REGULATION)

Friday, June 01, 2012

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. What is the significance of research? (5 marks)

2. Describe external validity. (5 marks)

3. Define qualitative variables and its types. Give examples. (5 marks)

4. Classify the following into different scales of measurements (Nominal, Ordinal, Interval and Ratio).
 - a) Address
 - b) Height
 - c) Heart rate
 - d) Ph value
 - e) Pain score(5 marks)

5. When do we use quota sampling? Explain the procedure involved with an example. (5 marks)

- 6A. Table below shows the source of referral of patients recruited to a randomized controlled trial of physiotherapy compared with advice for the treatment of low back pain. Construct a bar chart for the data.

Source of referral:	Frequency
General practitioner	240
Consultant	130
Physiotherapist	80
Sports centre	50

- 6B. Form a frequency table along with relative and cumulative frequencies for the following data, which gives the heights (in inches) of a random sample of 30 patients. (Class intervals: 60 – 64, 64 – 68, 68 – 72, so on).

76 73 69 73 79 66 66 70 72 68
 62 70 73 70 67 68 68 69 74 63
 64 67 72 65 71 71 74 69 66 63

(5+5 = 10 marks)

7. The duration of time for the first exposure to HIV infection to AIDS diagnosis is called the incubation period. The incubation periods of a random sample of 8 HIV infected individuals is given below (in yrs):
12.0 10.5 9.5 6.3 13.5 12.5 7.2 8.5
- Calculate mean, median and standard deviation of incubation period.
 - If the number 6.3 above were changed to 1.5, what would happen to the mean and median? State whether each would increase, decrease or remain the same.
- (10 marks)
8. Age at time of onset of a disease is approximately normally distributed with mean 12 years and standard deviation of 3 years. In a sample of 500 individuals with the disease, how many will be
- Less than 9 years
 - Between 9 and 12 years
- (5 marks)
9. List the properties of correlation coefficient. What is the formula of correlation coefficient given by Karl Pearson?
- (5 marks)
10. Write a note on health information system and its requirements.
- (5 marks)
11. From the following data of a city during the year 2008, calculate.
- Peri-natal mortality rate
 - Neonatal mortality rate
 - Crude birth rate
 - Maternal mortality rate
 - Infant mortality rate
- Data:**
- | | |
|--|--------|
| Mid-year population for the year 2010 | 575000 |
| Late fetal deaths | 80 |
| Number of live births | 4995 |
| Number of infant deaths | 396 |
| Number of maternal deaths | 67 |
| Number of infant deaths in the first month of life | 143 |
| Number of infant deaths within 7 days of age | 92 |
- (10 marks)
12. Explain cross sectional study design with its merits and demerits. What are the uses of epidemiology?
- (10 marks)



MANIPAL UNIVERSITY**FOURTH YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2012****SUBJECT: PHYSIOTHERAPY IN GENERAL CONDITIONS
(OLD REGULATION)**

Monday, June 04, 2012

Time: 10:00-13:00 Hrs

Maximum Marks: 80

✍ Answer ALL questions.**1. Essay Questions:**

- 1A. Write in detail the cardiac rehabilitation following myocardial infraction for the 60 year old man with diabetes mellitus.
- 1B. Write in detail the physiotherapy management for ARDS patient on mechanical ventilator.
- (10×2 = 20 marks)

2. Short Notes:

- 2A. Write in brief the normal physiology of respiration.
- 2B. Complications following radiation therapy.
- 2C. Physiotherapy management following laprotomy.
- 2D. Incentive spirometer.
- 2E. Mention the difference in adult and pediatric anatomy and physiology of respiratory system.
- (8×5 = 40 marks)

3. Brief Answers:

- 3A. Write the postural drainage for lingula.
- 3B. Define COPD.
- 3C. Name TWO sub maximal exercise testing protocol.
- 3D. Define bronchial breath sound.
- 3E. Write the Cardinal features of lung collapse in X ray.
- 3F. What is low flow oxygen therapy? Mention two delivery system for the same.
- 3G. What is vitiligo?
- 3H. Define respiratory failure.
- 3I. Mention TWO complication following tracheostomy.
- 3J. Name two neurophysiological facilitation of breathing.
- (2×10 = 20 marks)



MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2012

**SUBJECT: PHYSIOTHERAPY IN COMMUNITY
(OLD REGULATION)**

Wednesday, June 06, 2012

Time: 10:00-13:00 Hrs

Maximum Marks: 80

✍ **Answer ALL questions.**

1. Essay Questions:

- 1A. Define ageing. Explain various theories of aging with appropriate examples. (2+8 = 10 marks)
- 1B. Define barrier and mention its types. Design a barrier free environment for 50 years old patient diagnosed with post polio residual paralysis. (1+2+7 = 10 marks)

2. Short Notes:

- 2A. Add a note on institutionalization in elderly.
- 2B. Discuss PWD act and limitations for the same.
- 2C. What are the principles of sports rehabilitation?
- 2D. Explain the principles of industrial therapy.
- 2E. Add a note on any FIVE national agencies in CBR for physically disabled along with its role.
- 2F. Explain any TWO complications of diabetes mellitus and physiotherapy management for the same.
- 2G. Discuss the indication and principles of functional capacity evaluation.
- 2H. Explain the physiotherapy management following caesarian section. (5×8 = 40 marks)

3. Brief Answers:

- 3A. What is kegel's exercise?
- 3B. Mention any FOUR principles of community based rehabilitation.
- 3C. Mention any FOUR indication for early intervention in high risk babies.
- 3D. Classify hypertension.
- 3E. What is ICF classification.
- 3F. Mention any FOUR risk factors for work related musculoskeletal disorder.
- 3G. What is work hardening?
- 3H. Classify occupational hazards.
- 3I. Mention any TWO needs for evaluation in CBR.
- 3J. Mention any FOUR role of multipurpose health worker. (2×10 = 20 marks)



MANIPAL UNIVERSITY
FOURTH YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2012
SUBJECT: COMMUNITY BASED REHABILITATION
(NEW REGULATION)

Wednesday, June 06, 2012

Time: 10:00-13:00 Hrs

Maximum Marks: 80

✍ **Answer ALL questions.**

1. Essay Questions:

- 1A. Define ageing. Explain various theories of aging with appropriate examples. (2+8 = 10 marks)
- 1B. Define barrier and mention its types. Design a barrier free environment for 50 years old patient diagnosed with post polio residual paralysis. (1+2+7 = 10 marks)

2. Short Notes:

- 2A. Add a note on institutionalization in elderly.
- 2B. Discuss PWD act and limitations for the same.
- 2C. What are the principles of sports rehabilitation?
- 2D. Explain the principles of industrial therapy.
- 2E. Add a note on any FIVE national agencies in CBR for physically disabled along with its role.
- 2F. Explain any TWO complications of diabetes mellitus and physiotherapy management for the same.
- 2G. Discuss the indication and principles of functional capacity evaluation.
- 2H. Explain the physiotherapy management following caesarian section. (5×8 = 40 marks)

3. Brief Answers:

- 3A. What is kegel's exercise?
- 3B. Mention any FOUR principles of community based rehabilitation.
- 3C. Mention any FOUR indication for early intervention in high risk babies.
- 3D. Classify hypertension.
- 3E. What is ICF classification.
- 3F. Mention any FOUR risk factors for work related musculoskeletal disorder.
- 3G. What is work hardening?
- 3H. Classify occupational hazards.
- 3I. Mention any TWO needs for evaluation in CBR.
- 3J. Mention any FOUR role of multipurpose health worker. (2×10 = 20 marks)



MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2012

**SUBJECT: EXERCISE PHYSIOLOGY AND ELECTRODIAGNOSIS
(NEW REGULATION)**

Friday, June 08, 2012

Time: 10:00-13.00 Hrs

Maximum Marks: 80

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

SECTION A: EXERCISE PHYSIOLOGY

✍ **Essay**

1. Explain in detail the neuro-musculoskeletal and metabolic adaptations to aerobic exercise.
(10 marks)

2. Short Notes:

- 2A. Methods of heat gain and heat loss during rest and exercise.
2B. Renal responses to aerobic exercise.
2C. Principles of strength training.
2D. Physiological changes to high altitude exposure.

(5×4 = 20 marks)

3. Brief Answers:

- 3A. Define Strength.
3B. What is Vo₂ max?
3C. What is the principle of specificity?
3D. Name the non steroidal hormones.
3E. What is cardiovascular drift?

(2×5 = 10 marks)

SECTION – B : ELECTRODIAGNOSIS

✍ **Essay:**

4. Discuss in detail about the stages of electromyography (EMG) activity. Add a note on advantages and disadvantages of EMG.

(6+2+2 = 10 marks)

5. Short Notes:

- 5A. Discuss about classification of nerve lesions based on electro diagnostic studies.
5B. Describe the procedure for motor nerve conduction studies.
5C. Discuss the differences between H reflex and F wave.
5D. Discuss about the EMG biofeedback.

(5×4 = 20 marks)

6. Brief Answers:

- 6A. What is resting membrane potential?
6B. What is gain?
6C. Mention any TWO disadvantages of sensory nerve conduction studies.
6D. What is blink reflex?
6E. What is axon reflex?

(2×5 = 10 marks)



MANIPAL UNIVERSITY**FOURTH YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2012****SUBJECT: ETHICS/ADMINISTRATION AND TEACHING SKILLS
(OLD REGULATION)**

Monday, June 11, 2012

Time: 10:00-11.30 Hrs

Maximum Marks: 40

✍ **Answer all the questions.**

✍ **Long Answer:**

1. Write in detail the ethical principles declared by WCPT.

(10 marks)

2. Brief Answers:

2A. Consumer protection act.

2B. Write the affiliation requirements for teaching institution in Indian Association of physiotherapists.

2C. Explain about time management.

2D. Write about the ethical consideration in clinical research.

(5×4 = 20 marks)

3. Short answer:

3A. What is deficiency?

3B. What is Negligence?

3C. Define Liability.

3D. What is the ideal staff:patient ratio for physiotherapy department?

3E. Write any four ways of document storage.

(2×5 = 10 marks)



MANIPAL UNIVERSITY

FOURTH YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: COMMUNITY MEDICINE AND SOCIOLOGY

(OLD REGULATION)

Wednesday, June 13, 2012

Time 10:00-13:00 Hours

Maximum Marks: 80

- ✍ Answer ALL questions.
- ✍ Answer SECTION 'A' and SECTION 'B' in TWO separate answer books.

SECTION 'A': COMMUNITY MEDICINE : 40 MARKS

- 1A. Define and classify disease carrier in infectious disease epidemiology.
- 1B. Classify the immunizing agents with examples.

(5+5 = 10 marks)

2. Write short notes on:

- 2A. Epidemiology of Filariasis.
- 2B. Prevention of HIV transmission.
- 2C. Prevention of hospital acquired infection.
- 2D. Pneumoconiosis.
- 2E. Measures taken to prevent road traffic accidents.
- 2F. Dimensions of health.

(5×6 = 30 marks)

SECTION 'B': SOCIOLOGY : 40 MARKS

3. Describe the changing trends in modern family and its impact on health. (10 marks)
4. What is social planning? What is its need in the improvement of health and rehabilitation? (2+8 = 10 marks)
5. Explain the meaning and causes of deviance. How to prevent it? (10 marks)

6. Short Answers:

- 6A. Meaning and role of customs as a means of social control.
- 6B. Meaning and types of disability.

(5×2 = 10 marks)

