

## MANIPAL UNIVERSITY

SECOND SEMESTER B.P.T. (BRIDGE PROGRAM) EXAMINATION – JUNE 2013

SUBJECT: RESEARCH FOR PHYSIOTHERAPISTS  
(NEW REGULATION)

Wednesday, June 19, 2013

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. What do you mean by descriptive epidemiology? Briefly explain case reports, case series and cross sectional study designs with merits and demerits of each one.  
(1+9 = 10 marks)
  
2. Discuss sampling and non-sampling errors. Explain stratified and systematic random sampling methods.  
(4+6 = 10 marks)
  
3. **Write short notes on:**
  - 3A. Normal distribution and its properties
  - 3B. Measurement scales
  - 3C. Health information system and its requirements
  - 3D. Correlation and its properties
  - 3E. Validity of a research tool
  - 3F. Steps in research process
  - 3G. Pie chart with the help of an example
  - 3H. Census  
(5×8 = 40 marks)
  
4. The incubation period of first exposure to HIV infection to AIDS diagnosis among 9 HIV infected individuals is given below (in years):  
13.0, 11.5, 8.4, 9.3, 12.9, 13.5, 9.2, 11.5, 8.6  
For the above data calculate the following:
  - 4A. Mean
  - 4B. Median
  - 4C. Mode
  - 4D. Range
  - 4E. The first quartile value  
(2×5 = 10 marks)

5. Data related to mortality of a town during the year 2010 is as below:

**Data:**

Mid-year population for the year 2010	450,000
Late fetal deaths	49
No. of live births	6550
No. of infant deaths	539
No. of maternal deaths	88
No. of infants deaths within 28 days of life	191
No. of infants deaths within 7 days of life	110

For the above data calculate the following:

- 5A. Peri-natal mortality rate
- 5B. Post Neo-natal mortality rate
- 5C. Infant mortality rate
- 5D. Maternal mortality rate
- 5E. Neonatal mortality rate

(2×5 = 10 marks)



**MANIPAL UNIVERSITY**  
**SECOND SEMESTER B.P.T. (BRIDGE PROGRAM) EXAMINATION – JUNE 2013**

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

Friday, June 21, 2013

Time: 10:00-11:30 Hrs.

Max. Marks: 40

✍ **Answer ALL questions.**

**1. Essay question:**

Explain in detail the acute changes and chronic adaptations to exercise on the cardiovascular system.

(5+5 = 10 marks)

**2. Write short answers:**

- 2A. Explain the mechanisms for fatigue.
- 2B. Describe five changes that occur to the human body with prolonged bed rest.
- 2C. What changes occur to the body placed in a zero gravity environment?
- 2D. Describe in detail any two methods used to evaluate energy expenditure.

(5×4 = 20 marks)

**3. Write briefly:**

- 3A. Define MET and give its value.
- 3B. What is cardiovascular drift?
- 3C. Define agility.
- 3D. Mention any four contraindications to exercise testing.
- 3E. Name any two high energy rich food sources.

(2×5 = 10 marks)



**MANIPAL UNIVERSITY**  
**SECOND SEMESTER B.P.T. (BRIDGE PROGRAM) EXAMINATION – JUNE 2013**  
**SUBJECT: ELECTRODIAGNOSIS**  
**(NEW REGULATION)**

Monday, June 24, 2013

Time: 10:00-11:30 Hrs.

Max. Marks: 40

✍ **Answer ALL questions.**

**1. Essay question:**

Procedure of sensory and motor nerve conduction velocity study of Ulnar nerve.

(10 marks)

**2. Write short answers:**

- 2A. F wave
- 2B. Types of EMG electrodes
- 2C. Indications for EMG biofeedback
- 2D. Classification and physiological properties of nerve

(5×4 = 20 marks)

**3. Write briefly:**

- 3A. Chronaxie
- 3B. Sweep
- 3C. Satellite potential
- 3D. End plate spike
- 3E. Classification of nerve lesions

(2×5 = 10 marks)

