MANIPAL UNIVERSITY

SECOND SEMESTER B.P.T. (BRIDGE PROGRAM) EXAMINATION – JULY 2012

SUBJECT: FUNCTIONAL DIAGNOSIS (ELECTRODIAGNOSIS AND EXERCISE PHYSIOLOGY)
(OLD REGULATION)

Wednesday, July 04, 2012

Time: 10:00-13:00 Hrs.   Max. Marks: 80

✍ **Answer ALL the questions.**

PART – I

1. **Essay Questions:**

1A. Discuss in detail about the stages of electromyography (EMG) activity. Add a note on indications and disadvantages of EMG.

(6+2+2 = 10 marks)

1B. Explain the acute effects of exercise on various systems.

(10 marks)

PART – II

2. **Short Notes:**

2A. Discuss about classification of nerve lesions based on electro diagnostic studies.
2B. Describe the procedure for motor nerve conduction studies.
2C. Discuss the differences between H reflex and F wave.
2D. Discuss about the mechanism and procedure of EMG biofeedback.
2E. Explain the causes of fatigue.
2F. Explain the complications of prolonged bed rest.
2G. Role of ergogenic aids in sports performance.
2H. Effects of exercise in microgravity.

(5×8 = 40 marks)

PART – III

3. **Briefly answer the questions:**

3A. What is resting membrane potential?
3B. What is gain and sweep speed?
3C. Mention ANY TWO disadvantages of sensory nerve conduction studies.
3D. What is blink reflex?
3E. What is axon reflex?
3F. What is VO2 MAX?
3G. Define power.
3H. What is the energy value for proteins?
3I. What is acclimatization?
3J. What is SCUBA?

(2×10 = 20 marks)

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SECOND SEMESTER B.P.T. (BRIDGE PROGRAM) EXAMINATION – JULY 2012

SUBJECT: COMMUNITY MEDICINE
(NEW REGULATION)

Monday, July 09, 2012

Time: 10:00 – 11:30 Hrs.   Max. Marks: 40

✍   **Answer ALL the questions.**

✍   **Essay question:**

1.   Discuss Hypertension under the following headings:

1A.   JNC classification

1B.   Risk factors

1C.   Prevention strategies and care

(10 marks)

2.   **Short Notes:**

2A.   What are essential amino acids? List the important functions of Proteins.

(2+3 = 5 marks)

2B.   Briefly discuss the epidemiological determinants of Polio.

(5 marks)

2C.   Briefly discuss the strategies to reduce Iron deficiency anaemia.

(5 marks)

2D.   Write a brief note on Hepatitis B Vaccine.

(5 marks)

3.   **Brief Notes:**

3A.   What is the importance of dietary fibre in the diet?

3B.   Name any four nutritional deficiency disorders.

3C.   What is triage?

3D.   Enumerate the preventive services offered to antenatal mothers during antenatal visits.

3E.   Enumerate any six sources of Vitamin A.

(2×5 = 10 marks)

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SECOND SEMESTER B.P.T. (BRIDGE PROGRAM) EXAMINATION – JULY 2012

SUBJECT: RESEARCH FOR PHYSIOTHERAPISTS
(NEW REGULATION)

Wednesday, July 11, 2012

Time: 10:00-13:00 Hrs.   Max. Marks: 80

✍ **Answer ALL questions.**

1. **Define:**

1A. Crude death rate

1B. Infant mortality rate

1C. Neonatal mortality rate

1D. Perinatal mortality rate

1E. Maternal mortality rate

(2×5 = 10 marks)

2A. What do you mean by dispersion? Define quartile deviation and standard deviation.

2B. Following still birth rates per 1000 live births were reported by 15 towns in Karnataka in the year 2007.

27, 28, 40, 32, 30, 36, 25, 29, 30, 29, 26, 30, 20, 35, 32

Calculate mean, median and mode for the above data.

((1+4)+5 = 10 marks)

3A. Briefly explain correlation using scatter diagrams.

3B. Suppose a random sample of 100 twelve year old boys were chosen and their heights were recorded. The observed sample mean height is 64 inches, and the sample standard deviation is 5 inches. Assume heights of 12-year-old boys are normally distributed, what percentage of boys height is

i) Between 54 and 69 inches?

ii) Less than 74 inches?

(5+5 = 10 marks)

4. Define descriptive epidemiology and enumerate its uses. Briefly explain cross sectional study design.

(5+5 = 10 marks)

5A. What do you mean by health information system and what are its components?

5B. With help of an example, explain multiple bar diagram.

(5+5 = 10 marks)

6A. Discuss sampling and non-sampling errors.

6B. Explain systematic random sampling.

(5+5 = 10 marks)

7. **Write short notes on:**

7A. Hypothesis and characteristics of a good hypothesis

7B. Research process

7C. Interval and ratio measurement scales

7D. Quantitative and qualitative variables

(5×4 = 20 marks)

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SECOND SEMESTER B.P.T. (BRIDGE PROGRAM) EXAMINATION – JULY 2012

SUBJECT: EXERCISE PHYSIOLOGY
(NEW REGULATION)

Friday, July 13, 2012

Time: 10:00-11:30 Hrs.   Max. Marks: 40

✍   **Answer ALL questions.**

PART I

1.   **Essay Questions:**

1A.   What are the chronic adaptations of the cardiovascular and respiratory systems to exercise?

(5+5 = 10 marks)

PART II

2.   **Short Notes:**

2A.   Acute response to exercise in deep sea diving

2B.   Effects of prolonged immobilization on the respiratory system

2C.   Methods of energy expenditure measurement

2D.   Explain the mechanism of peripheral fatigue

(5×4 = 20 marks)

PART –III

3.   **Brief Answers:**

3A.   Define anaerobic threshold

3B.   Define VO_2 max

3C.   Name any two side effects of any 2 ergogenic aids

3D.   Name any four hormones which affect exercise performance

3E.   Define Agility

(2×5 = 10 marks)

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SECOND SEMESTER B.P.T. (BRIDGE PROGRAM) EXAMINATION – JULY 2012

SUBJECT: ELECTRODIAGNOSIS
(NEW REGULATION)

Monday, July 16, 2012

Time: 10:00-11:30 Hrs.   Max. Marks: 40

✍ **Answer ALL questions.**

1. **Essay Question:**

1A. Define Biofeedback. Discuss its advantages and disadvantages. Explain the procedure for pain relief using biofeedback.

$(2+4+4 = 10$ marks$)$

2. **Short Answers:**

2A. F –wave and its clinical implications.

2B. Explain the devices used for processing the signals in EMG.

2C. Compare the characteristics of different curves obtained using Strength-Duration curve.

2D. Explain the technical and physiological variables affecting the nerve conduction study.

$(5×4 = 20$ marks$)$

3. **Brief Answers:**

3A. Mention **ANY FOUR** types of needle electrodes.

3B. Draw a neat labeled diagram of a reflex arc.

3C. Define motor unit.

3D. Define H –reflex and give **ANY ONE** indication for the same.

3E. Name **ANY FOUR** clinical conditions in which you observe fasciculations.

$(2×5 = 10$ marks$)$

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