MANIPAL UNIVERSITY

FIRST TERM B.P.T. (BRIDGE PROGRAM) EXAMINATION – JANUARY 2012

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

Monday, January 09, 2012

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

- ✍ **Answer ALL questions:**
- ✍ **Draw diagrams and flow charts wherever appropriate.**

1. Write the reactions of synthesis of glucose from lactate.

(8 marks)

2. Discuss Vitamin D under following headings:

2A. Sources and RDA

2B. Functions

2C. Disorders

(1+3+2 = 6 marks)

3. **Answer the following:**

3A. Explain the concept of nitrogen balance.

3B. Write in detail on ketogenesis.

3C. Classify lipids with examples.

3D. Write the reactions of β-oxidation of fatty acids.

(4×4 = 16 marks)

4. **Answer the following:**

4A. Give normal serum levels of cholesterol and urea. Mention one condition each in which their levels are altered.

4B. Name two important compounds each derived from phenylalanine and tryptophan.

4C. Define 'proenzymes' with two examples.

4D. Write two differences between glycogen and starch.

4E. Define saturated and unsaturated fatty acid with one example each.

(2×5 = 10 marks)

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FIRST TERM B.P.T. (BRIDGE PROGRAM) EXAMINATION – JANUARY 2012

SUBJECT: SOCIAL SCIENCE AND PREVENTIVE MEDICINE
(OLD REGULATION)

Wednesday, January 11, 2012

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

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

SECTION 'A': PREVENTIVE MEDICINE : 40 MARKS

1. **Essay Question:**

    Identify the various risk factors for the development of Type II Diabetes Mellitus. Explain the prevention and control measures for this disease.

    (5+5 = 10 marks)

2. **Short Notes:**

2A. What is balanced diet? Enumerate the dietary goals recommended by the World Health Organization.

    (2+3 = 5 marks)

2B. Enumerate the universal precautions. Why should they be followed?

    (5 marks)

2C. ESI Act Benefits.

    (5 marks)

2D. Briefly discuss the measures to reduce blindness in the society.

    (5 marks)

3. **Brief Notes:**

3A. What is GOBI Campaign that is promoted by UNICEF?
3B. What are the different modes of transmission of Hepatitis B?
3C. Enumerate any four principles of Health Education.
3D. Enumerate the risk factors of hypertension.
3E. Principles of Balanced diet.

    (2×5 = 10 marks)

SECTION 'B': SOCIAL SCIENCE : 40 MARKS

4. Define Sociology. Explain the uses of the knowledge of sociology to the physiotherapists.

    (2+8 = 10 marks)

5. What is family? How does family influence human personality?

    (2+8 = 10 marks)

6. Explain the problems of women in employment. Suggest remedies .

    (6+4 = 10 marks)

7. **Write Short notes on the following:**

7A. The effect of population growth on sickness and disability. Suggest remedies .
7B. Social change and social stress

    (5×2 = 10 marks)

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MANIPAL UNIVERSITY
FIRST TERM B.P.T. (BRIDGE PROGRAM) EXAMINATION – JANUARY 2012
SUBJECT: RESEARCH FOR PHYSIOTHERAPISTS
(OLD REGULATION)

Friday, January 13, 2012

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

1.   **Define the following:**

1A.   Epidemiology
1B.   Descriptive epidemiology
1C.   Incidence rate
1D.   Point prevalence rate
1E.   Period prevalence rate

                                                        ($2\times5 = 10$ marks)

2A.   Enumerate the various steps in research process.
2B.   What do you mean by reliability and define the different types of reliability?

                                                        ($5+5 = 10$ marks)

3A.   Discuss quantitative and qualitative variables with examples.
3B.   Define health information system and what are the components of health information system?

                                                        ($5+5 = 10$ marks)

4A.   What do you mean by sampling? Explain lottery method in simple random sampling.
4B.   Explain Pie chart with the help of an example.

                                                        ($5+5 = 10$ marks)

5A.   Define the various measures of central tendency and write the situation in which each of these measures is appropriate.
5B.   A general medical camp was conducted in the year 2003 in a rural area in India and 1026 individuals participated in the camp. The maximum and minimum ages of subjects visited the camp was 73 and 36 years respectively. It was also observed that 25% of subject's age was below 43 years and 75% of the subject's age was below 69 years. Calculate the range and inter quartile range of age based on the given information.

                                                        ($5+5 = 10$ marks)

6A.   Explain correlation with the help of scatter diagrams.
6B.   Suppose a random sample of 325 twelve year old boys were chosen and the heights of these boys recorded. The sample mean height is 66 inches, and the sample standard deviation is 4 inches. Assume heights of 12-year-old boys are normally distributed, what percentage of boys height is
   i)   Below 62 inches
   ii)   Above 78 inches

                                                        ($5+5 = 10$ marks)

7. **From the following data of a town during the year 2001, Calculate:**

7A. Neo-natal mortality rate
7B. Post neo-natal mortality rate
7C. Infant mortality rate
7D. Crude birth rate
7E. Crude death rate

Data:

Mid-year population for the year 2001	250,000
Late fetal deaths	37
No. of deaths	2860
No. of live births	4250
No. of infant deaths	326
No. of infants deaths in the 1st month of life	108
No. of infants deaths within 7 days of age	75

(10 marks)

8. **Write short notes on:**

8A. Stratified random sampling
8B. Measurement scales

(5×2 = 10 marks)

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FIRST TERM B.P.T. (BRIDGE PROGRAM) EXAMINATION – JANUARY 2012

SUBJECT: PHARMACOLOGY
(NEW REGULATION)

Friday, January 13, 2012

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

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1.   Define the following terms:

1A.   Affinity
1B.   Bioavailability
1C.   Synergism
1D.   Pharmacokinetics
1E.   Therapeutic index

(1×5 = 5 marks)

2.   Mention two examples for the following groups of drugs:

2A.   General anaesthetics
2B.   Opioids
2C.   Antianginal drugs
2D.   Diuretics
2E.   Antidiabetic drugs

(1×5 = 5 marks)

3A.   List three non-steroidal anti-inflammatory drugs and mention three therapeutic uses of any one of them.
3B.   Mention two adverse effects of glucocorticoids.
3C.   List two advantages and two disadvantages of intravenous route of drug administration.

(3+1+2 = 6 marks)

4.   List two drugs each used in the following conditions and mention two specific adverse effects of any one of them:

4A.   Tuberculosis
4B.   Peptic ulcer
4C.   Epilepsy
4D.   Insomnia

(2×4 = 8 marks)

5A.   List two sources of drug information.
5B.   Describe first-pass metabolism.
5C.   List two therapeutic uses of adrenaline.

(1+2+1 = 4 marks)

6. Mention two examples and two uses of the following groups of drugs:

6A. Antihistaminics
6B. Cholinergic drugs
6C. Beta lactam antibiotics
6D. Macrolides

(2×4 = 8 marks)

7. Define the following terms with an example:

7A. Drug antagonism
7B. Generic name

(2×2 = 4 marks)