

MANIPAL UNIVERSITY**FIRST YEAR B.P.T./B.O.T. DEGREE EXAMINATION – MAY/JUNE 2013****SUBJECT: ANATOMY
(COMMON FOR BOTH OLD & NEW REGULATIONS)**

Tuesday, May 28, 2013

Time: 10.00-13.00 Hours.

Max. Marks: 80

1. Describe the hip joint under the following headings:
 - 1A. Type and subtype
 - 1B. Bones taking part
 - 1C. Ligaments
 - 1D. Movements and muscles producing each of those movements

(2+2+8+8 = 20 marks)

2. Describe the radial nerve under the following headings:
 - 2A. Origin and course
 - 2B. Branches and distribution
 - 2C. Applied anatomy

(8+10+2 = 20 marks)

3. Write short notes on:
 - 3A. Spinothalamic tracts
 - 3B. Cerebellum
 - 3C. Internal capsule
 - 3D. Anterior cerebral artery
 - 3E. Internal structure of medulla oblongata

(5×5 = 25 marks)

4. Write short notes on:
 - 4A. Thyroid gland
 - 4B. Ovary
 - 4C. Spermatic cord
 - 4D. Stomach
 - 4E. Nasal septum

(3×5 = 15 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2013

**SUBJECT: PHYSIOLOGY
(NEW REGULATION)**

Thursday, May 30, 2013

Time: 10.00-13.00 Hrs.

Max. Marks: 80

✍ **Answer all questions.**

✍ **Draw diagrams and flow charts wherever appropriate.**

1. Draw a labeled diagram of a synapse. Describe the sequence of events of synaptic transmission in the form of a flow chart.

(10 marks)

2. Define hemostasis. Describe intrinsic and extrinsic mechanisms of blood coagulation.

(10 marks)

3. **Write short notes on the following:**

3A. Describe the composition and functions of saliva.

3B. Draw a neat labeled diagram of normal ECG recorded from limb lead II and give the cause for each wave.

3C. Describe accommodation to near vision.

3D. List the hormones of posterior pituitary and describe the functions of any one.

3E. Mention the different types of hypoxia and explain any one.

3F. Describe the micturition reflex.

3G. Mention the cause and features of Parkinson's disease.

3H. Enumerate the functions of placenta.

(5×8 = 40 marks)

4. **Write brief answers to each of the following:**

4A. Write briefly on saltatory conduction.

4B. Mention any two differences between first and second heart sounds.

4C. **Define the following:**

i) Tidal volume

ii) Residual volume

4D. List any two ascending tracts in the spinal cord.

4E. Mention the effect of sympathetic stimulation on heart rate and gastric motility.

4F. Describe primary active transport with an example.

4G. Name any two contraceptive methods used in females.

4H. Name the receptors for taste and smell.

4I. List any two functions of gall bladder.

4J. Mention the types of smooth muscles and give an example for each.

(2×10 = 20 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2013****SUBJECT: BIOCHEMISTRY****(NEW REGULATION)**

Saturday, June 01, 2013

Time: 10.00-11.30 Hours

Max. Marks: 40

1. Write in detail the reactions of urea cycle. Add a note on two disorders of urea cycle.
(8 marks)
2. Explain the metabolism of ketone bodies.
(6 marks)
3. **Write short notes on the following:**
 - 3A. Structure of DNA
 - 3B. Secondary structure of proteins
 - 3C. Digestion of starch
 - 3D. Reactions of β - oxidation of palmitic acid in mitochondria
(4×4 = 16 marks)
4. **Answer the following:**
 - 4A. Give two functions of dietary fibers.
 - 4B. Name two important products each derived from tyrosine and glycine.
 - 4C. List four functions of calcium.
 - 4D. Write the normal serum levels of total protein, uric acid, creatinine and total cholesterol.
 - 4E. What are proenzymes? Give two examples.
(2×5 = 10 marks)



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FIRST YEAR B.P.T. DEGREE EXAMINATION – MAY/JUNE 2013

**SUBJECT: EXERCISE THERAPY – I
(NEW REGULATION)**

Monday, June 03, 2013

Time: 10.00 – 13.00 Hours

Max. Marks: 80

✍ **Answer ALL questions.**

1. Essay questions:

1A. Define Goniometry. Mention the different types of goniometers and the principles of clinical assessment of joint range of motion.

(2+3+5 = 10 marks)

1B. Define passive movements. Classify and explain in detail the principles of passive movements.

(2+3+5 = 10 marks)

2. Write short notes on:

2A. Explain the procedure of measuring blood pressure using palpatory method.

2B. Describe the fundamental position of standing with its muscle work.

2C. Mention the types of suspension and its advantages.

2D. Describe the steps involved in implementing group exercises in an old age home.

2E. Explain the principles of general relaxation.

2F. Explain the types of reflexes and the importance of reflex testing.

2G. Describe the advantages and disadvantages of hydrotherapy.

2H. Explain the principles of breathing exercises.

(5×8 = 40 marks)

3. Brief answers:

3A. Give an example of second order lever in human body with explanation.

3B. Define Archimedes principle.

3C. Mention the ranges of muscle work.

3D. Define power.

3E. Mention any four devices used to give resisted exercises.

3F. Write any two merits of home program.

3G. Mention any two effects of vibration technique in massage.

3H. Write any four derived positions of sitting.

3I. Write any two indications for limb length measurements.

3J. Mention different types of pulleys.

(2×10 = 20 marks)

