

MANIPAL UNIVERSITY**FIRST YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2017****SUBJECT: ANATOMY
(NR/2015 SCHEME)**

Thursday, June 15, 2017

Time: 10.00-13.00 Hours.

Max. Marks: 80

- ✍ Answer the following questions.
✍ Draw diagrams wherever necessary.

1. Describe the obturator nerve under the following headings:

- 1A. Origin
- 1B. Course
- 1C. Branches and distribution
- 1D. Clinical anatomy

(2+5+10+3 = 20 marks)

2. Describe the shoulder joint under following headings:

- 2A. Articulating parts
- 2B. Type and subtype
- 2C. Capsule and ligaments
- 2D. Movements and muscles producing them
- 2E. Rotator cuff

(2+2+7+7+2 = 20 marks)

3. Write briefly on:

- 3A. Medulla oblongata
- 3B. Circulation of CSF
- 3C. Motor decussation
- 3D. Lateral ventricle
- 3E. Internal capsule

(5 marks × 5 = 25 marks)

4. Write short notes on:

- 4A. Vas deferens
- 4B. Stratified epithelia
- 4C. Right atrium of heart
- 4D. Tongue
- 4E. Ovary

(3 marks × 5 = 15 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.P.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: PHYSIOLOGY (NEW REGULATION)

Saturday, June 17, 2017

Time: 10.00-13.00 Hrs.

Max. Marks: 80

✍ **Answer ALL questions.**

1. Draw a neat labeled diagram of the nerve action potential. Describe the different phases of it with ionic basis.

(6+4 = 10 marks)

2. Describe the origin, course, termination of pyramidal tract. What are the differences between upper motor neuron lesion and lower motor neuron lesion?

(2+3+1+4 = 10 marks)

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

- 3A. Explain oxygen dissociation curve with a neat labeled diagram. What are the factors that shift the curve to right?

- 3B. Explain the movements of small intestine.

- 3C. Draw a diagram to show the components of Juxtaglomerular apparatus. Enumerate the functions of JG apparatus.

- 3D. Write the cause and any four features of myxedema.

- 3E. Define menstrual cycle. Describe proliferative phase of endometrial cycle and its hormonal basis.

- 3F. Explain the stages of erythropoiesis with the help of a diagram.

- 3G. Explain accommodation reflex.

- 3H. Draw a labeled diagram of lead II ECG. Mention any two uses of ECG.

(5 marks × 8 = 40 marks)

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

- 4A. List any four GI hormones.

- 4B. Name the muscles of inspiration.

- 4C. List any four differences between skeletal and smooth muscle.

- 4D. Define hypoxia. List four types of hypoxia.

- 4E. Differences between first and second heart sound.

- 4F. List any two functions of sertoli cells.

- 4G. Define anemia. List any two causes for anemia.

- 4H. Write any four sensations carried by dorsal column tracts.

- 4I. Write two differences between Diabetes mellitus and diabetes insipidus.

- 4J. Mention any two hazards of blood transfusion.

(2 marks × 10 = 20 marks)



MANIPAL UNIVERSITY**FIRST YEAR BPT/BOT/B.Sc. RT/B.Sc. CVT/ B.Sc. RRT & DT
DEGREE EXAMINATION – JUNE 2017****SUBJECT: BIOCHEMISTRY**

(NR/2015 & 2011 SCHEME/2015 & 2010 SCHEME/2015 SCHEME/BDT 103)

Tuesday, June 20, 2017

Time: 10.00-11.30 Hours

Max. Marks: 40

✍ **Answer ALL the questions.**

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

1. Explain anaerobic glycolysis under the following headings:

1A. Site and subcellular site

1B. Reactions

(1+7 = 8 marks)

2. Write the steps of urea cycle in detail.

(6 marks)

3. **Write short notes on:**

3A. Homopolysaccharides

3B. Classification of compound lipids with one example each

3C. Structure of DNA

3D. Basal metabolic rate

(4 marks × 4 = 16 marks)

4. **Answer the following:**

4A. Define the term 'buffer'. Write the Henderson-Hasselbalch equation.

4B. Write the normal serum calcium level. Name the hormones regulating it.

4C. Mention four biologically important compounds derived from glycine.

4D. Write the coenzyme form of thiamine and one reaction where it is involved.

4E. Give the clinical importance of creatine kinase and alkaline phosphatase.

(2 marks × 5 = 10 marks)

