Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. R.T./B.Sc. M.R.T./B.Sc. C.V.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: ANATOMY

(2015 SCHEME/2011 SCHEME/2015 SCHEME

Thursday, June 15, 2017

Time: 10.00-11.30 Hrs. Max. Marks: 40

1. Name the parts of gastrointestinal tract. List the difference between small intestine and large intestine.

(5+5 = 10 marks)

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

2A. Neuron

2B. Larynx

2C. Gall bladder

2D. Uterus

2E. Eyeball

2F. Fourth ventricle

(5 marks × 6 = 30 marks)

Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR BOT/B.Sc. MRT/B.Sc. CVT/B.Sc. RT DEGREE EXAMINATION – JUNE 2017

SUBJECT: PHYSIOLOGY

(2015 SCHEME (BOT 106)/2011 SCHEME/2015 SCHEME (PAPER II)/2015 & 2010 SCHEME)

Saturday, June 17, 2017

Time: 10.00-11.30 Hours. Max. Marks: 40

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

1. **Essay Questions:**

1A. Mention any three actions of growth hormone. Describe the regulation of secretion of growth hormone in the form of a flow chart.

1B. Draw a labeled diagram of the visual pathway and explain the effect of lesion of left optic nerve.

1C. Classify white blood cells. Mention one function of each.

1D. Describe the chemical regulation of respiration.

(5 marks × 4 = 20 marks)

2. **Short answer questions:**

2A. List two differences between active transport and passive transport mechanisms.

2B. Draw a labeled diagram of a nerve action potential.

2C. Mention any two functions of cerebrospinal fluid.

2D. List any four properties of cardiac muscle.

2E. Define cardiac output and mention its normal value in adults at rest.

2F. Name the different types of hypoxia.

2G. Mention any two functions of gall bladder.

2H. Mention any two actions of estrogen.

2I. Define GFR and give its normal value.

2J. List two functions of basal ganglia.

(2 marks × 10 = 20 marks)

Reg. No.										

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)

Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: PHARMACOLOGY

(2010 SCHEME)

Thursday, June 22, 2017

Time: 10.00 – 13.00 Hrs. Max. Marks: 80

1. **Define the following terms:**

1A. Bioavailability
1B. Plasma Half life
1C. Teratogenicity
1D. Therapeutic index

(3 marks × 4 = 12 marks)

2. Management of Organophosphorous poisoning.

(6 marks)

3. Give the classification and one indication for the following drugs:
3A. Dopamine
3B. Salbutamol
3C. Atropine
3D. Metaprolol

(4 marks × 4 = 16 marks)

4. Classify Bronchodilators and explain the mechanism of action of adrenergic bronchodilators.

(6+6 = 12 marks)

5. Write briefly on High Ceiling diuretics.

(5 marks)

6. Describe the management of Congestive Heart Disease.

(5 marks)

7. Indications and side effects of Aminoglycosides.

(10 marks)

8. Classify Opioids and write five uses.

(10 marks)

9. Name the drugs used in
9A. Anxiety
9B. Convulsion

(4 marks)

Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: PATIENT CONTACT TECHNIQUES

(2015 BATCH)

Thursday, June 22, 2017

Time: 10.00-13.00 Hrs. Max. Marks: 80

✍ **Draw diagrams wherever necessary.**

1. Explain in detail about the zones of interaction with patient. Explain in detail about the non verbal communication.

(8+8 = 16 marks)

2. Explain in detail Bronchial Hygiene Therapy. Describe in detail the Bronchial Hygiene Therapy for a right upper lobe collapse.

(8+8 = 16 marks)

3. **Write short notes on:**

3A. Define universal precautions. Write all the steps you will take while handling a patient with active tuberculosis.

3B. Define:

a) Clubbing b) Barrel chest
c) Cyanosis d) Hypertension
e) Tachypnea f) Hyperthermia
g) Cardiac Murmurs h) Wheeze

3C. Indications of breathing exercises. Write in detail about inspiratory breathing exercises.

3D. Normal and abnormal lung sounds.

3E. Write a note on assessment of Cardiac system.

3F. Pediatric Basic life support.

(8 marks × 6 = 48 marks)

Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: RESPIRATORY THERAPY SCIENCE – I

(2015 BATCH)

Saturday, June 24, 2017

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

✍ **Draw diagrams wherever necessary.**

1. List down the equipments required for intubation. Explain the steps involved for intubating an adult patient. How will you assess a patient after intubation?

(4+8+4 = 16 marks)

2. Define aerosols therapy. Explain the characteristic of therapeutic aerosols. Add a note on ultrasonic nebulizer.

(1+9+6 = 16 marks)

3. **Short notes:**

3A. Heat moisture exchanger
3B. Explain single and multiple stage Pressure reducing valves
3C. Central Piping system
3D. Describe the parts and function of a self-inflating bag
3E. Hazards of oxygen therapy
3F. Working principle of capnometer

(8 marks × 6 = 48 marks)