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MANIPAL UNIVERSITY

FIRST YEAR B.Sc. N.M.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc. C.V.T. DEGREE EXAMINATION – AUGUST 2010

SUBJECT: ANATOMY

Monday, August 23, 2010

Time: 10.00-11.30 Hrs.

Max. Marks: 40

1. Explain the parts, relations, blood supply and nerve supply of stomach.

(2+3+2+1 = 8 marks)

2. Describe the blood supply of heart.

(8 marks)

3. Answer briefly on:

3A. Intrinsic muscles of larynx

3B. Parts and external features of uterus

3C. Nerve supply of tongue

3D. Functional lobes of cerebellum

3E. Circulation of CSF

3F. Middle mediastinum

3G. Functions of hypothalamus

3H. Relations of left kidney

(3×8 = 24 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.P.T./B.O.T./B.Sc.N.M.T/B.Sc.R.T. DEGREE EXAMINATION – AUGUST 2010****SUBJECT: PHYSIOLOGY**

Tuesday, August 24, 2010

Time: 10:00-13:00 Hours.

Max. Marks: 80

✍ Answer all questions.

1. Define blood pressure and give the normal values in an adult. Explain the short term regulation of blood pressure.

(10 marks)

2. Classify white blood cells. Give their percentage distribution in an adult. Draw neat labeled diagrams of any two of them and explain their functions.

(10 marks)

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

3A. Oxygen transport

3B. Diabetes mellitus

3C. Milk ejection reflex

3D. Blood groups

3E. Excitation-Contraction coupling in skeletal muscle

3F. Functions of placenta.

3G. Mechanism of hydrochloric acid secretion in the stomach

3H. Functions of middle ear

(5×8 = 40 marks)

4. **Write brief answers to the following questions:**

4A. Mention two factors affecting cardiac output.

4B. Name the photoreceptors in the eye. Mention their functions.

4C. Mention any two hormones secreted by the anterior pituitary and mention one action of each.

4D. Mention the functions of platelets.

4E. Define 'erythropoiesis'. Mention two factors regulating it.

4F. Draw a labelled diagram of a nephron.

4G. List four factors increasing heart rate.

4H. Define 'Hypoxia'. Mention any two types of hypoxia.

4I. Enumerate two functions of hypothalamus.

4J. List two differences between upper motor neuron lesion and lower motor neuron lesion.

(2×10 = 20 marks)



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FIRST YEAR B.P.T/ B.O.T/ B.Sc. N.M.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc.C.V.T
DEGREE EXAMINATION – AUGUST 2010SUBJECT: BIOCHEMISTRY
(NEW REGULATIONS)

Wednesday, August 25, 2010

Time: 10.00-11.30 Hours

Max. Marks: 40

✍ Answer ALL questions.

✍ Draw diagrams and flow charts wherever appropriate.

1. Discuss urea cycle under the following headings:

1A. Site and subcellular site.

1B. Reactions.

1C. Mention **TWO** disorders of urea cycle and their defective/deficient enzyme.

(1+5+2 = 8 marks)

2. Classify enzymes giving **ONE** example for each class.

(6 marks)

3. Write briefly on:

3A. Reactions of ketolysis.

3B. **FOUR** differences between marasmus and kwashiorkor.

3C. Causes and biochemical findings of metabolic acidosis.

3D. Dietary sources and functions of vitamin C.

(4×4 = 16 marks)

4. Explain the following with an example

4A. Essential fatty acids.

4B. Specific dynamic action.

4C. Positive nitrogen balance.

4D. Proenzymes.

4E. Mutual supplementation of proteins.

(2×5 = 10 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.Sc. R.T. DEGREE EXAMINATION – AUGUST 2010****SUBJECT: PHARMACOLOGY**

Thursday, August 26, 2010

Time: 10.00-13.00 Hrs.

Max. Marks: 80

1A. Name two preparations and two uses of benzodiazepines. Give two advantages of them over barbiturates.

1B. Enumerate three opioid analgesics and one opioid antagonist.

1C. Mention two uses and two adverse effects of aspirin.

(3+2+2 = 7 marks)

2A. Mention three classes of drugs used in bronchial asthma with examples and explain their mechanism of action.

2B. Enumerate two mucolytics and two anti-tussives.

2C. Classify glucocorticoids with examples. Give two uses and two adverse effects of any one of them.

(6+2+5 = 13 marks)

3A. Classify anti-cholinesterases with examples. Give two uses of any one drug.

3B. List two uses of adrenaline and explain the basis for any one.

3C. Name a commonly used anti-cholinergic and give three indications for it.

(3+3+2 = 8 marks)

4. Write briefly on:

4A. Drug antagonism.

4B. Nasal decongestants.

4C. Nifedipine

4D. Heparin

(4×4 = 16 marks)

5A. Classify penicillins with examples. Give two uses of any one preparation.

5B. List two uses and two adverse effects of aminoglycosides.

(5+2 = 7 marks)

6A. Calculate the amount of ingredients required to prepare 250ml of 5% dextrose in double strength saline.

6B. Explain two factors modifying drug action with suitable examples.

(4+4 = 8 marks)

7. Explain the pharmacological basis for the following indications.

7A. Prazosin in benign prostatic hypertrophy.

7B. ACE inhibitors in hypertension.

7C. Ranitidine in peptic ulcer.

(2×3 = 6 marks)

8. Answer the following:

8A. List two advantages and two disadvantages of intravenous route.

8B. Name two first generation antihistamines and mention two adverse effects of them.

8C. Mention two uses and two adverse effects of loop diuretics.

8D. Explain the term 'Iatrogenic disease' with an examples.

8E. Mention two adverse effects of inhalational steroids and two precautions to prevent them.

(2×5 = 10 marks)

9. Classify anti-anginal drugs with examples. Mention two adverse effects of any one of them.

(4+1 = 5 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.Sc. R.T. DEGREE EXAMINATION – AUGUST 2010****SUBJECT: PATIENT CONTACT TECHNIQUES**

Friday, August 27, 2010

Time: 10.00-13.00 Hrs.

Max. Marks: 80

- ✍ **Draw diagrams wherever necessary.**
- ✍ **Answer to the question and avoid padding of answers.**

1. Define patient interview. What are the steps of taking interview? Explain in detail each step. Write the common cardiopulmonary symptoms in detail.
(2+4+6+4 = 16 marks)
2. A group of students went to highway restaurant for having dinner. During dinner time, one student complained of dyspnoea, was not able to speak and was clutching the neck. As a respiratory therapist, explain in detail what active intervention would you do for emergency situation.
(16 marks)
3. **Write short notes on:**
- 3A. Nonverbal communication.
- 3B. Postural drainage for the right lower lobe.
- 3C. Expiratory breathing exercise.
- 3D. Percussion.
- 3E. Cardiac murmurs.
- 3F. Complications of endotracheal suction

(8×6 = 48 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.Sc. R.T. DEGREE EXAMINATION – AUGUST 2010****SUBJECT: RESPIRATORY THERAPY SCIENCE – I**

Saturday, August 28, 2010

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Draw diagrams wherever necessary.**

✍ **Answer to the question and avoid padding of answers.**

1. What are the equipments required for endotracheal intubation? Explain the orotracheal intubation procedure in detail. What are the methods of confirming successful intubation?

(6+6+4 = 16 marks)

2. Describe the various types of compressed gas cylinders and the gases stored in them? Draw and label the diagram of a medical gas cylinder? What precautions will you take while handling compressed gas cylinders?

(6+4+6 = 16 marks)

3. **Write short notes on:**

- 3A. Capnography
3B. Oxygen analyser
3C. Metered dose analyser
3D. Boyle's law and its two applications
3E. Types of gas flows
3F. Oropharyngeal airway

(8×6 = 48 marks)

