

**MANIPAL UNIVERSITY****FIRST YEAR B.Sc. M.L.T./ B.Sc. N.M.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc. C.V.T.  
DEGREE EXAMINATION – JUNE 2011****SUBJECT: ANATOMY**

Monday, June 06, 2011

Time: 10.00-11.30 Hrs.

Max. Marks: 40

**✍ Answer all the questions:**

1. List the parts of the respiratory system. Describe the features, blood supply and nerve supply of the lateral wall of the nose.

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

2. Explain the external features of the heart with the help of a diagram. Add a note on the internal features of right atrium.

(4+4 = 8 marks)

**3. Answer briefly on:**

3A. Classification of synovial joints.

3B. Pleura.

3C. Superior mediastinum.

3D. Azygos vein.

3E. Rectum.

3F. Vas deferens.

3G. Ovary.

3H. Corpus striatum.

(3×8 = 24 marks)



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**FIRST YEAR B.P.T./B.O.T./B.Sc.M.L.T./B.Sc.N.M.T/B.Sc.R.T. /B.Sc.M.R.T.**  
**DEGREE EXAMINATION – JUNE 2011**

**SUBJECT: PHYSIOLOGY**

Wednesday, June 08, 2011

Time: 10.00-13.00 Hours.

Max. Marks: 80

✍ **Answer all questions.**

1. Describe the stages of erythropoiesis. Add a note on regulation of erythropoiesis. (10 marks)
  
2. Mention any six functions of hypothalamus. Explain any two. (10 marks)
  
3. **Write short notes on the following:**
  - 3A. Describe the chemical regulation of respiration.
  - 3B. Draw a neat labelled diagram of the stretch reflex arc.
  - 3C. Describe the process of deglutition.
  - 3D. Enumerate the events of neuromuscular transmission.
  - 3E. Describe erythroblastosis fetalis.
  - 3F. Define glomerular filtration rate (GFR). Give its normal value. Describe the factors affecting GFR.
  - 3G. Mention the hormones of anterior pituitary. Describe the functions of any two.
  - 3H. Describe the functions of middle ear. (5×8 = 40 marks)
  
4. **Write brief answers to each of the following:**
  - 4A. Define the following terms:
    - i) Vital capacity
    - ii) Cyanosis
  - 4B. Mention two clinical features of cerebellar lesion
  - 4C. Name the hormones of ovaries. State one function of each.
  - 4D. What is myopia? How is it corrected?
  - 4E. List two uses of an electrocardiogram (ECG).
  - 4F. Draw a neat labelled diagram of a nephron.
  - 4G. Mention two differences between passive transport and active transport.
  - 4H. Name one permanent contraceptive method in males and females.
  - 4I. What is Cushing's syndrome? Mention two clinical features of this syndrome.
  - 4J. Give the average normal value for the following:
    - i) Hemoglobin concentration in adult males
    - ii) Cardiac output in adults(2×10 = 20 marks)



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Friday, June 10, 2011

Time: 10.00-11.30 Hours

Max. Marks: 40

✍ **Answer ALL the questions.**

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

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

(8 marks)

2. Write the reactions of urea cycle.

(6 marks)

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

3A. Structure of DNA.

3B. Activation of zymogens in the GIT.

3C. Mechanisms of glucose absorption in the small intestine.

3D. Biochemical functions and deficiency manifestations of vitamin D.

(4×4 = 16 marks)

4. **Write briefly on:**

4A. Basal metabolic rate.

4B. Inhibitors of electron transport chain.

4C. Dietary fibers.

4D. Transamination reaction.

4E. Emulsification of fats.

(2×5 = 10 marks)



**MANIPAL UNIVERSITY****FIRST YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2011****SUBJECT: PHARMACOLOGY**

Monday, June 13, 2011

Time: 10.00-13.00 Hrs.

Max. Marks: 80

- 1A. Define general anaesthetic and local anaesthetic.
- 1B. Name two intravenous and two inhalational general anaesthetics.
- 1C. Give four objectives of preanaesthetic medication with a drug used for each of these objectives.
- 1D. Explain the basis for combining adrenaline with lignocaine.
- (2+2+4+2 = 10 marks)
- 2A. List four classes of drugs used in bronchial asthma with two examples for each class. Explain the mechanism of action of any one of them.
- 2B. List four drugs used in cough.
- (8+2 = 10 marks)
- 3A. Define tachyphylaxis with two examples.
- 3B. Mention two advantages and two disadvantages of oral route.
- 3C. Explain four methods adapted to prolong the duration of action of drugs with an example for each.
- (2+2+6 = 10 marks)
- 4A. Define the term diuretic.
- 4B. Mention two classes of diuretics with an example for each class.
- 4C. Name four drugs used in angina.
- (1+2+2 = 5 marks)
5. Calculate the amounts of ingredients required to prepare 2.5L of 5% dextrose solution in half normal saline.
- (4 marks)
- 6A. List four classes of semisynthetic penicillins with an example for each class.
- 6B. Mention one important life threatening adverse effect of penicillin G. Name a drug used to treat the same and explain the basis for the use.
- 6C. Define the following terms:
- i) Bacterial resistances.
  - ii) Suprainfection
  - iii) Bacteriostatic

(4+3+3 = 10 marks)

- 7A. Name two nondepolarising neuromuscular blockers.
- 7B. Mention two uses of skeletal muscle relaxants.
- 7C. Explain succinylcholine apnoea.
- 7D. List three differences between physostigmine and neostigmine

(1+1+2+3 = 7 marks)

8. Write briefly on the following:

- 8A. Uses and adverse effects of H<sub>1</sub> blockers.
- 8B. Pilocarpine
- 8C. Uses and adverse effects of glucocorticoids
- 8D. Enalapril

(4×4 = 16 marks)

9. Explain the pharmacological basis for the following:

- 9A. Tetracyclines are contraindicated in pregnancy.
- 9B. Morphine is contraindicated in head injury patients.
- 9C. Sodium bicarbonate in acidic drug poisoning.
- 9D. Atropine in organophosphorus poisoning.

(2×4 = 8 marks)



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## MANIPAL UNIVERSITY

FIRST YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2011

SUBJECT: PATIENT CONTACT TECHNIQUES

Friday, June 17, 2011

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 steps of endotracheal intubation? Following endotracheal intubation, the patient coughs out thick yellow secretions. You decide to do an endotracheal suctioning. What are the steps you would follow?

(10+6 = 16 marks)

2. You are walking to your hostel and you see someone collapse in front of you. Explain the steps you would follow to save him.

(16 marks)

3. **Write short notes on:**

- 3A. How would you position a patient with right lower lobe consolidation to drain the secretions? In addition to it what are the other methods to drain the secretion?

3B. Normal and abnormal lung sounds.

3C. Stages of patient clinician interaction.

3D. Causes of dyspnoea.

3E. Different sites of measurement of temperature.

3F. Examination of the chest.

(8×6 = 48 marks)

