



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**FIRST BDS DEGREE EXAMINATION - JUNE 2019**  
**SUBJECT: GENERAL HUMAN PHYSIOLOGY AND**  
**BIOCHEMISTRY**  
**Wednesday, June 26, 2019 (14:00 - 17:00)**

**SECTION A: GENERAL HUMAN PHYSIOLOGY (30 MARKS)**

**Answer all the questions.**

- 1) Describe the intrinsic and extrinsic pathway of bloodcoagulation. (10)
- 2) **Write short notes on:**
- 2A) With a neat labelled diagram explain the Micturition reflex. (4)
- 2B) Mention the different types of shock and explain any one of them. (4)
- 2C) **Write briefly on:**
- i) Movements of small intestine (4)
- ii) Surfactant
- 2D) Explain with a neat labeled diagram the pain pathway from face. (4)
- 2E) Write briefly the actions of GH. Name two abnormalities of GH. (4)

**SECTION B: BIOCHEMISTRY (30 MARKS)**

**Answer all the questions.**

- 3A) Write one biochemical reaction for the source of ammonia in the body. Describe the steps involved in detoxifying ammonia through urea cycle. (1+4 = 5 marks) (5)
- 3B) Describe the reactions involved in the conversion of glucose to pyruvate in aerobic conditions. (5)

4) **Answer the following:**

- 4A) Discuss allosteric regulation of enzyme activity with an example. (3)
- 4B) What is Gout? Discuss the biochemical mechanism involved in its treatment. (3)
- 4C) Outline the pathway of ketogenesis. Explain the biochemical basis for diabetic ketoacidosis. (3)
- 4D) Give the sources, RDA, functions and deficiency manifestations of fluoride. (3)

5) **Answer the following briefly:**

- 5A) Write a brief note on rickets. (2)
- 5B) What is anion-gap? Mention two conditions where it is elevated. (2)
- 5C) Write the components of ETC in the proper sequence. (2)
- 5D) Enumerate the functions of Vitamin C. (2)

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