Question Paper

Exam Date & Time: 22-Feb-2021 (02:00 PM - 05:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST BDS DEGREE EXAMINATION - FEBRUARY 2021

SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY

- **Answer Section "A" and Section "B" in two separate answer books.**
- **Draw diagrams and flow charts wherever necessary.**

SECTION – A : HUMAN PHYSIOLOGY: 30 MARKS

Long Essay:

1A. Draw a labelled diagram to show the origin, course and termination of the pain pathway from the face. Add a note on referred pain.

(4+2 = 6 marks)

1B. Name the functional zones of the cerebellar cortex and mention the functions of each. List the features of cerebellar disease.

(3+1 = 4 marks)

2. **Short Essay:**

2A. Illustrate the intrinsic pathway of coagulation. Name any TWO commonly used in vivo anticoagulants and explain their mechanism of action.

2B. Describe how central and peripheral chemoreceptors regulate respiration.

2C. List the functions of saliva. Add a note on conditioned salivary reflex.

2D. Give the location and briefly explain the function of arterial baroreceptors.

2E. Give the cause and mention one important feature of each of the following conditions:

i) Acromegaly

ii) Cushing's syndrome

iii) Myxedema

iv) Central diabetes insipidus.

(4 marks × 5 = 20 marks)

SECTION – B : BIOCHEMISTRY: 30 MARKS

3. **Essay:**

3A. Explain the formation and degradation of ketone bodies

3B. Describe the digestion of proteins in the GIT

(5 marks × 2 = 10 marks)

4. **Write Briefly on:**

4A. Steps of uric acid formation.

4B. Wald's visual cycle.

4C. Rapaport Leubering cycle

4D. Causes and compensatory mechanism of respiratory acidosis

(3 marks × 4 = 12 marks)

5. **Answer the followings:**

5A. Give any TWO examples of phase II reactions of detoxification

5B. Name the complexes of electron transport chain and mention the components of complex II

5C. Write the reaction catalyzed by LDH. Give the clinical significance of this enzyme

5D Define gluconeogenesis. Name the key enzymes of gluconeogenesis

(2 marks × 4 = 8 marks)