



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 4th Semester Examination, 2023

CC9-PHYSIOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

GROUP-A

1. Answer any **five** of the following: 1×5 = 5
- (a) What is Vasoactive Intestinal Polypeptide (VIP)?
 - (b) What are mixing movements? Give examples.
 - (c) Write down the functions of glucose dependent insulinotropic peptide (GIP).
 - (d) What do you mean by the term gastrocolic reflex?
 - (e) What is white bile?
 - (f) Write down the functions of maltase in digestion of carbohydrates.
 - (g) What are Paneth cells?
 - (h) What are intrinsic factors?
 - (i) What is Ferroportin? Write down its two important functions.
 - (j) What are Haustral contractions?

GROUP-B

Answer any three questions from the following

5×3 = 15

- 2. Discuss the fate of dietary nucleoproteins. 5
- 3. Discuss the site, mechanism and regulation of calcium absorption. What is calbindin? 4+1
- 4. Discuss the role of Phospholipase A₂ in fat digestion. What are Chylomicrons? 3+2
- 5. Write short notes on the reflexes of defecation. What is paralytic ileus? 3+2
- 6. Elaborate the hepatic circulation. Write down the steps of iron absorption. 2+3
- 7. Write short notes on the histology of the digestive tract. What are the general principles of gastrointestinal motility? 2 $\frac{1}{2}$ × 2 = 5

GROUP-C

Answer any *two* questions from the following

10×2 = 20

8. Describe the neural and chemical control of regulation of gastric secretion. Discuss the process of secretion of mucus. 6+4
9. Discuss the mucosal block theory of absorption. What is Haemochromatosis? Write short notes on malabsorption syndrome. What is Sprue? 3+2+4+1
10. Discuss the process of inhibition of gastric secretion. Discuss the physiological role of dietary fibre in prevention of diseases. What is blind loop syndrome? 5+3+2
11. Discuss the sequence of mechanical events during vomiting. Write short notes on the following 6+2+2
- (i) Pentagastrin test (ii) Barium meal study

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