

**PARUL UNIVERSITY**  
**PARUL INSTITUTE OF APPLIED SCIENCES**  
**MID SEMESTER INTERNAL EXAMINATION, APRIL 2017**  
**B. Sc. Semester IV**  
**Biotechnology**  
**Animal Physiology**

Paper Code: 11103203

Date: 18/04/2017

Time: 12.30 p.m. to 02.00 p.m.

Maximum Marks: 40

Instructions:

1. All questions are compulsory and options are given in first and second question only.
  2. Numbers to the right of question indicate the marks of respective question.
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- Q. 1** Attempt any one question of the following. **(08)**
- i. The heart functions as a pump. Explain with diagrams.
  - ii. Describe the digestion and absorption of proteins and lipids.
- Q. 2** Attempt any three questions of the following. **(12)**
- i. Discuss the mechanism for active transport through the cell membrane.
  - ii. What is saliva and why is it needed? Explain the enzymatic regulation for saliva.
  - iii. Using diagrams state the structure and functions of the various formed elements in the blood.
  - iv. Write a short note on fibrinolytic pathway.
  - v. How is carbohydrate digested?
- Q. 3** Do as directed. Attempt all five questions. **(05)**
- i. Define: coronary circulation
  - ii. Give an example of one way digestion and two way digestion.
  - iii. Draw a neuron.
  - iv. Draw an animal cell.
  - v. Define: Hygroscoy. Give an example.
- Q. 4** Write correct option in your answer sheet for following 15 multiple choice questions. **(15)**
- MCQ 1 Cell is the
- |   |                                 |
|---|---------------------------------|
| (A) functional unit of life             | (B) site of biological activity |
| (C) basic building block of an organism | (D) all of the above            |
- MCQ 2 The 2 ribosomal subunits in prokaryotes are
- |                 |                 |
|-----------------|-----------------|
| (A) 50s and 40s | (B) 50s and 60s |
| (C) 50s and 30s | (D) 50s and 70s |
- MCQ 3 Acidic chyme in the lumen of the duodenum stimulates endocrine cells to release
- |              |           |
|--------------|-----------|
| (A) acid     | (B) base  |
| (C) secretin | (D) mucus |
- MCQ 4 Function of AV valve is \_\_\_\_\_
- |   |                                      |
|---|--------------------------------------|
| (A) it gives structure to the heart                             | (B) it creates blockage in the heart |
| (C) to prevent backflow into the atria when ventricles contract | (D) it has no function               |

- MCQ 5 Hematocrit is the percentage \_\_\_\_\_ in whole \_\_\_\_\_  
 (A) RBC; blood (B) RBC; plasma  
 (C) WBC; blood (D) WBC; serum
- MCQ 6 Function of the Pericardium  
 (A) Protects and anchors the heart (B) Prevents overfilling of the heart with blood  
 (C) Allows for the heart to work in a relatively friction-free environment (D) all of the above
- MCQ 7 Cardiac muscle is \_\_\_\_\_  
 (A) striated (B) interconnected  
 (C) branched (D) all of the above
- MCQ 8 pH of gall bladder bile is  
 (A) 8.5 to 9 (B) 6.80 to 7.65  
 (C) 7.50 to 8.05 (D) 5.5 to 6
- MCQ 9 Blood group AB +ve can donate blood to  
 (A) AB +/- ve (B) AB+ve  
 (C) AB-ve (D) O +/- ve
- MCQ 10 Enzymatic degradation of complex food matter to simple, diffusible form is called  
 (A) eating (B) digestion  
 (C) lysis (D) absorption
- MCQ 11 Pinocytosis is an example of \_\_\_\_\_  
 (A) diffusion (B) passive transport  
 (C) osmosis (D) active transport
- MCQ 12 What happens in intracellular digestion?  
 (A) Simple form of food is absorbed through the small intestine and then sent to cells (B) Digestion occurs in digestive tract  
 (C) Lysosome + food vacuole= digestion (D) Complex food eaten by higher organisms
- MCQ 13 Thrombin is inhibited by \_\_\_\_\_  
 (A) prothrombin (B) antithrombin  
 (C) fibrin (D) plasmin
- MCQ 14 Trypsinogen is activated by  
 (A) pepsin (B) CCK  
 (C) enterokinase (D) renin
- MCQ 15 The term cell was given by  
 (A) Roberta Hooke (B) Robert Hooke  
 (C) Leeuwenhoek (D) Darwin

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