

**PARUL UNIVERSITY**  
**FACULTY OF APPLIED SCIENCE**  
**B.Sc , Winter 2017-18 Examination**

**Semester: 1**  
**Subject Code: 11107102**  
**Subject Name: Basics of Forensic Biology**

**Date: 20/12/2017**  
**Time: 10:30am to 01:00pm**  
**Total Marks: 60**

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**Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Essay type (08)**  
Differentiate between Cell Structure of Prokaryotes and Eukaryotes.
- Q.1. B) Answer the following questions (Any two) (04)**
- (a) Short note (04)
    1. Beer Lambert's law
    2. Origin of Life
  - (b) Describe the components of blood. (04)
  - (c) Describe pure culture technique of a microorganism. (04)
- Q.2. A) Answer the following questions. (04)**
- (a) Define: (2x2) (04)
    1. Chromatography
    2. Electrophoresis
  - (b) Define acid, base and buffer in short? (04)
- Q.2. B) Answer the following questions (Any two) (03)**
- (a) Define: (Each of 01 marks) (03)
    1. Immunity
    2. Taxonomy
    3. Antigen
  - (b) How are gymnosperms classified? (03)
  - (c) Differentiate between colorimetry and spectrophotometry? (03)
- Q.3. A) Essay type. (08)**  
Describe properties, classification and functions of carbohydrates?
- Q.3. B) Answer the following questions (Any two) (04)**
- (a) Brief note (2x2) (04)
    1. Western blot
    2. Southern blot
  - (b) State the applications of Chromatography (04)
  - (c) Short note on ELISA (04)
- Q.4. A) Answer the following questions. (04)**
- (a) Brief note (2x2) (04)
    1. Compound Microscope
    2. Dark field microscopy
  - (b) Enlist the functions of proteins? (04)
- Q.4. B) Answer the following questions (Any two) (03)**
- (a) Short note on sex linkage of genes. (03)
  - (b) Describe structure of DNA. (03)
  - (c) Describe Mendelian laws of inheritance. (03)