

B.Sc. Semester - 3 (CBCS) Examination
Oct/Nov. -2019 (Old Course)
FORENSIC SCIENCE (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Q – 1 Give the answer of following questions. (14)

(A) Answer the following question very shortly (04)

- (1) $n \rightarrow 6^*$ transition required more energy than $\pi \rightarrow \pi^*$ transition. True or False?
- (2) Define Chromophore
- (3) Which part is replaced by an interferometer in FTIR?
- (4) Define stock lines

(B) Shortly answer any one question (03)

- (1) Write a note on molecular absorption spectral and types of molecular energy.
- (2) Instrumentation of FTIR.

(C) Answer any one question in detail (07)

- (1) Theory of Infrared spectroscopy.
- (2) Write a note on of Raman spectroscopy.

Q – 2 Give the answer of following questions. (14)

(A) Answer the following question very shortly (04)

- (1) Which plant was chosen by Mendel for his experimental work?
- (2) What is plasmid?
- (3) What is DNA replication?
- (4) The process of translation in protein synthesis subdivided in to which step?

(B) Shortly answer any one question (03)

- (1) Describe the terms :
A. Back cross
B. Test cross

- (2) Describe Histone.

(C) Answer any one question in detail (07)

- (1) Explain the Mendel law of heredity.
- (2) Write a note on protein synthesis.

Q – 3 Give the answer of following questions. (14)

(A) Answer the following question very shortly (04)

- (1) Give the name of cells of immune system.
- (2) Define epitop.
- (3) Define auto immunity.
- (4) Which component mainly responsible for allergy?

(B) Shortly answer any one question (03)

- (1) Give the characteristic of Ig M.
- (2) Define antibody and give its example.

- (C) **Answer any one question in detail** (07)
- (1) Explain types of immunoglobulin.
 - (2) Write a note on barriers related to innate immunity.

Q – 4 Give the answer of following questions. (14)

(A) **Answer the following question very shortly** (04)

- (1) Who introduced the chromatography technique?
- (2) Give the example of 2-D chromatography.
- (3) Usefulness of flow controller in GC.
- (4) Give the full name of SDS-PAGE.

(B) **Shortly answer any one question** (03)

- (1) Write a note on types of paper chromatography.
- (2) Write about the detectors of HPLC.

(C) **Answer any one question in detail** (07)

- (1) Describe the instrumentation of GC with labeled diagram.
- (2) Write a note on Gel electrophoresis

Q – 5 Give the answer of following questions. (14)

(A) **Answer the following question very shortly** (04)

- (1) Define medulla.
- (2) Give types of fiber on the basis of origin.
- (3) The cell wall of diatoms made up of_____.
- (4) How many percentages of people are ABO Secretors?

(B) **Shortly answer any one question** (03)

- (1) Forensic examination of fiber
- (2) Define saliva, give its characteristics and name the glands secreting saliva.

(C) **Answer any one question in detail** (07)

- (1) Morphology and forensic examination of diatoms.
- (2) Give the characteristics causing change in color of urine, functions of Urine and test for urine?
