

B.Sc. (Part—II) Semester—IV Examination**FORENSIC SCIENCE****(Forensic Biology)**

Time : Three Hours]

[Maximum Marks : 80

Note :— (1) All questions are compulsory.

(2) Q. No. 1 carries 8 marks and remaining question carry 12 marks each.

(3) Illustrate your answers with well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :—

- (i) The term cell was coined by _____ . $\frac{1}{2}$
- (ii) The membrane around the vacuole is called _____ . $\frac{1}{2}$
- (iii) Viruses that attack bacteria is commonly called as _____ . $\frac{1}{2}$
- (iv) A mutation which occurs due to addition of extranucleotide is called _____ . $\frac{1}{2}$

(B) Choose correct alternative from the following :—

- (i) A reliable evidence of sex identification is _____ . $\frac{1}{2}$
 - (a) External sexual character
 - (b) Sex Hormone level
 - (c) Presence of ovary & testis
 - (d) Sexual behaviour
- (ii) Blue line on the gums indicates poisoning with _____ . $\frac{1}{2}$
 - (a) Mercury
 - (b) Lead
 - (c) Cadmium
 - (d) Arsenic
- (iii) The best bones for determining sex are : $\frac{1}{2}$
 - (a) Skull and long bones
 - (b) Skull and Pelvis
 - (c) Pelvis and long bones
 - (d) Sternum and long bone
- (iv) Sign of general violence in raped female victim is — $\frac{1}{2}$
 - (a) Hair disarrangement
 - (b) Tears in clothes
 - (c) Nail abrasions around mouth
 - (d) Abrasion in inner side of thigh

(C) Answer in **ONE** sentence :

- (i) Vectors are ? 1
- (ii) Carbon dating technique is developed by ? 1
- (iii) Sodomy means ? 1
- (iv) What is Asphatias ? 1

2. Describe the following :—

- (a) Prokaryotic cell. 4
- (b) Liquid component of blood. 4
- (c) E.M. Structure of Neuron (diagram only) 4

OR

3. (p) Receptor organs. www.FirstRanker.com www.FirstRanker.com 4
(q) Cardiac mechanism. 4
(r) Cell theory. 4
4. Explain recognition of Biological evidences encountered in various cases 12

OR

5. Explain Biodefence and Bioterrorism. 12
6. Explain in brief :—
(a) R-DNA technology by bacterial transformation method. 4
(b) Southern blotting. 4
(c) Vaginal fluid and urine as a source of investigation. 4

OR

7. (p) Western blotting. 4
(q) Blood group. 4
(r) Human hair morphology. 4
8. Describe the following :—
(a) Estimation of Age and Sex. 4
(b) Facial reconstruction. 4
(c) VNTR. 4

OR

9. (p) Estimation of time since death. 4
(q) Asphyxia. 4
(r) RAPD. 4
10. Explain in detail estimation of time of death with forensic entomology. 12

OR

- Techniques for dating specimens using plant material and dendrochronology. 12
11. Describe the following :—
(a) Write the differences between hair of human and other animal. 4
(b) Pugmarks of various animals. 4
(c) Anthropological artefacts. 4

OR

12. Describe in brief :—
(p) Bone of human and other animal. 4
(q) Modern method for identification of teeth. 4
(r) Genetics of ABO. 4