

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 _____ . ½
(ii) The membrane around the vacuole is called _____ . ½
(iii) Viruses that attack bacteria is commonly called as _____ . ½
(iv) A mutation which occurs due to addition of extranucleotide is called _____ . ½

(B) Choose correct alternative from the following :—

- (i) A reliable evidence of sex identification is _____ . ½
(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 _____ . ½
(a) Mercury (b) Lead
(c) Cadmium (d) Arsenic
(iii) The best bones for determining sex are : ½
(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 — ½
(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 Asphatia ? 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. 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