AU–126

B.Sc. Part—II (Semester—IV) Examination

4S : 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 carries **12** marks each.

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

1. (A) Fill in the blanks :—

(i) Rough endoplasmic reticulum is the site of _____. ½

(ii) The centromeres move towards the poles in _____. ½

(iii) _____ are the molecular scissors in genetic engineering. ½

(iv) Mutations occurring in gamete cells are called as _____ mutation. ½

(B) Choose correct alternative from the following :—

(v) Which of this is hepatotoxic poison ? ½

(a) Alcohol (b) Atropine

(c) Morphine (d) Amphetamine.

(vi) RFLP involves : ½

(a) Used to identify a specific protein (b) DNA

(c) RNA (d) DNA & RNA

(vii) DNA fingerprinting was developed by : ½

(a) Francis Crick (b) Khorana

(c) Alec Jeffrey (d) James Watson

(viii) Foot-prints are most commonly used for : ½

(a) Training the enemies in desert

(b) Non mixing of infants in hospitals

(c) Solving of some crimes

(d) Personal identification

(C) Answer in **one** sentence :—

(ix) How many amino acids are coded by genetic code ? 1

(x) What is Genomic library ? 1

(xi) The function of Thrombocytes in body is ? 1

(xii) Which biological evidences contains DNA ? 1

2. Describe the following :

(a) Prokaryotic cell 4

(b) Functions of WBC 4

(c) Neuromuscular junction 4

OR

3. (p) Functions of Heart 4

(q) Receptor organs 4

(r) Eukaryotic cell (Diagram only) 4

4. Punishments for Bioterrorism Act. 12

OR

5. Explain Biodefence and Biosurveillance. 12

6. Describe Blotting techniques with their applications. 12

OR

7. ABO blood group system. 12

8. Describe the following :—

(a) Sources of DNA evidence 4

(b) Human genome project 4

(c) Child swapping 4

OR

9. Describe :—

(p) Identification of joint wear and deterioration 4

(q) Facial reconstruction 4

(r) Forensic significance of DNA profiling. 4

10. Write in brief :—

(a) Analysis of pollen 4

(b) Algal colonisation 4

(c) Powdered minerals and pollens of forensic importance. 4

OR

11. Give an account of the following :—

(p) Technique for dating specimen using plant material 4

(q) Life cycle of Blow Fly 4

(r) Application of plant ecology. 4

12. Describe the following :—

(a) Genetics of ABO system 4

(b) Conventional and modern methods for identification in forensics 4

(c) Census of wildlife population. 4

OR

13. Write in brief :—

(p) Genetics of Mn system 4

(q) Identification of pugmarks of animals 4

(r) Confiscated bird goods. 4

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