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B—148—2019

FACULTY OF SCIENCE

B.Sc. (Fourth Semester) EXAMINATION

MARCH/APRIL, 2019

(CBCS/CGPA Pattern)

ZOOLOGY

Paper VIII

(Genetic Engineering and Evolution)

(MCQ+Theory)

(Wednesday, 3-4-2019)

Time: 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—40

N.B. :- (i) Attempt All questions.

(ii) One mark to each correct answered MCQ.

(iii) All questions carry equal marks.

(iv) Draw neat and well labelled diagrams wherever necessary.

(MCQ)

1. Multiple Choice Questions :

(i) The enzyme used in the polynomerase chain reaction is

(A) Restriction enzyme (B) Reverse transcriptase

(C) DNA polymerase (D) RNA polymerase

(ii) The cell where the recombinant DNA is allowed to multiply and produce thousands of its copies is called as

(A) Competent host (B) Competent vector

(C) Competent carrier (D) Competent vehicle

(iii) Protein is separated by one of the following technique :

(A) Western blotting (B) Northern blotting

(C) Southern blotting (D) Eastern blotting

P.T.O.

- (iv) was the world's first mammalian clone.
- (A) Molly (B) Dolly
(C) Polly (D) Jolly
- (v) Which of the following techniques is used for forensic purpose ?
- (A) Gene cloning (B) Tissue culture
(C) DNA fingerprinting (D) Organ culture
- (vi) Origin of species was written by :
- (A) Oparin (B) Weismann
(C) Lamarck (D) Darwin
- (vii) Connecting link between reptiles and birds is
- (A) Seymouria (B) Archaeopteryx
(C) Duckbill platypus (D) Ichthyostega
- (viii) Which of the following is a vestigial organ in man ?
- (A) Plica semilunaris (B) Bones of middle ear
(C) Premolar teeth (D) Thumb
- (ix) are regard as the written documents of evolution.
- (A) Embryo (B) Fossil
(C) Vestigial organ (D) Atavism
- (x) The frequency of heterozygotes and homozygotes in a population can be calculated by formula.
- (A) $(p + q) = p^2 + 2pq + q^2$
(B) $(p + q)^2 = p^2 + pq + q^2$
(C) $(p + q)^2 = p^2 + 2pq + q^2$
(D) $(p + q) = p^2 + 2pq + q$

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(3)

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(Theory)

2. Describe Southern and Northern blotting techniques. 10
Or

Write notes on :

- (a) SV40
(b) Similarity of embryos.

3. What is c-DNA library ? Explain the creation of c-DNA library. 10
Or

Write notes on :

- (a) Transgenic animal
(b) Aquatic adaptation.

4. Describe Lamar k's theory of organic evolution. 10
Or

Write notes on

- (a) Over production
(b) Analogous organs.

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