

VPG (4)-Bot (13)
Plant Biotech.

(2)

2016-18

Full Marks : 70

Time : 3 hours

Answer any five questions in which
Q.No.1 is compulsory.

The questions are of equal value.

*Candidates are required to give their answers in
their own words as far as practicable.*

1. Select the correct answer from the multiple
choice given below :

(a) A, B, Z- these in case of DNA represent

(i) Number

(ii) Conformations

(iii) Copies

(iv) Enzymes

(b) Chemical bonds between atoms are

(i) Always single

(ii) Always double

(iii) Only single and double

(iv) Single, double or triple

(c) Restriction endonucleases cut DNA at

(i) Specific sites

(ii) Any random site

(iii) At time specific otherwise random

(iv) None of these

(d) Molecular _____ is the term used for restric-
tion endonucleases

(i) Cutters

(ii) Erasers

(iii) Pins

(iv) Scissors

(e) DNA replication by nature is

(i) Conservative

(ii) Random

(Turn Over)

VPG(4)-Bot(13)-Plant Biotech.

(Continued)

(3)

(iii) Semi-conservative

(iv) Rapid <http://www.vbuonline.com>

(f) Okazaki fragments are formed in

(i) DNA breakdown

(ii) DNA replication

(iii) DNA maturation

(iv) RNA degradation

(g) Suppression of transgene expression in transgenic plants is called

(i) Gene amelioration

(ii) Gene shuffling

(iii) Gene elimination

(iv) Gene silencing

2. Discuss different types of stabilizing interactions in chemical compounds with an example for each.

3. Discuss importance of nucleic acids in a living system in term of structure and properties.

(4)

4. Describe protocol for isolation of genomic DNA and plasmid DNA.

5. Discuss the importance of Biological Databases and their classification.

6. Define Molecular Phylogeny, its various methods and significance in biology.

7. Write short notes on any *two* of the following :

(a) NCBI

(b) PAM

(c) Gene silencing

(d) Structure and function of t-RNA

8. Write an account of DNA replication in detail alongwith role of different enzymes.

9. Write short notes on any *two* of the following :

(a) BLAST

(b) 2-D electrophoresis also called two-dimensional gel electrophoresis

(c) Significance of chromatin

(d) Function of proteins.