

Total No. of Printed Pages—3

6 SEM TDC BOT M 3

2 0 1 8

(May)

BOTANY

(Major)

Course : 603

(Molecular Biology and Immunology)

Full Marks : 48

Pass Marks : 19/14

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

1. (a) Express in one word : 1×3=3

(i) Mobile fragments of DNA that move from one part of genome to another part

(ii) Fragments of DNA that synthesized on lagging strand during replication

(iii) A gene that codes for any RNA or protein products other than a regulator gene

8P/815

(Turn Over)

(2)

(b) Fill in the blanks : $1 \times 2 = 2$

(i) Hybridoma cell is a hybrid of _____ and myeloma cells.

(ii) A molecule capable of inducing an immune response in the host organism is called _____.

(c) Write short accounts on the following : $3 \times 3 = 9$

(i) Properties of genetic code

(ii) Types of DNA

(iii) Operon concept

2. What is transcription? Describe the molecular mechanism of transcription in prokaryotes. $2 + 9 = 11$

Or

What do you mean by gene expression? Describe the mechanism of gene expression in prokaryotes. $2 + 9 = 11$

3. What is B-cell? Describe the role of IgG, IgM and IgA. $2 + 3 + 3 + 3 = 11$

Or

What is plant health management? Write briefly the interaction of plant health with bacteria, virus and fungi. $2 + 3 + 3 + 3 = 11$

8P/815

(Continued)

(3)

4. Write explanatory notes on any *three* of the following : $4 \times 3 = 12$

(a) Antigen and antibody

(b) Breeding for disease resistance

(c) Plasmids

(d) Bacterial transduction

(e) Acquired immunity

8P—3200/815

6 SEM TDC BOT M 3