6 SEM TDC BOT M 3

2016

(May)

BOTANY

(Major)

Course : 603

(Molecular Biology and Immunology)

Full Marks : 48
Pass Marks : 19

Time : 2 hours

The figures in the margin indicate full marks for the questions

1. *(a)* Fill in the gaps : 1×3=3

(i) RNA polymerase is known as holoenzyme when it contains _____ protein subunit.

(ii) The three stages of translation process include initiation, _____ and termination.

(iii) _____ are the main cells in the immune system of human body.

(b) Express in one word : 1×2=

(i) Sites of protein synthesis.

(ii) The mechanism proposed by Jacob and Monod to explain the technique of gene action.

(c) Write short accounts on the following : 3×3=

(i) Central dogma

(ii) Types of RNA

(iii) Transduction in prokaryotes

2. What are the basic differences between DNA and RNA? Describe with diagrams the molecular mechanism of DNA replication in prokaryotes. 3+8=1

Or

Give an account of wobble hypothesis and write briefly about Generic codes and their functions. 4+7=1

3. What do you mean by IPHM? Describe different approaches for plant health management. 2+9=1

Or

Describe different types of R-genes for resistance of plant diseases. Also write briefly about plant-fungi interactions. 6+5=1

(Continued)

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

(a) Genome organization in prokaryotes

(b) Transposons

(c) Acquired immunity

(d) Conjunction

(e) Antigen-antibody reactions

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