



1. Describe about various Bacteriophage vectors. 10

OR

Discuss various methods for transfer of r-DNA into suitable host cell. 10

2. Discuss PCR technique in detail. 10

OR

Give the role of r-DNA technology in the formation of transgenic plant Bt cotton. 10

3. a) Write a note on restriction enzymes. 2½

b) What is the role of Adopters in r-DNA technology? 2½

c) Discuss the concept of cDNA library. 2½

d) Give brief account on Hybridoma technology. 2½

OR

e) Write a note on pBR322. 2½

f) Discuss gene gun method. 2½

g) Discuss in brief about Human genome sequencing project. 2½

h) Give the role of r-DNA technology in vaccine formation. 2½

4. a) What are the characteristics of ideal host? 2½

b) Discuss insertional inactivation method. 2½

c) Write a note on DNA fingerprinting method. 2½

d) Discuss the concept of gene therapy. 2½

OR

e) Write a note on YAC. 2½

f) Discuss any one method of transfection. 2½

g) Give the procedure of Maxam-Gilbert method. 2½

h) How r-DNA technology helps in Interferon production? 2½

5. Solve **any ten** of the following.

- a) Give any two examples of restriction enzymes. 1
- b) What is the function of Ligase enzyme? 1
- c) Give example of selectable marker gene. 1
- d) Define Linker. 1
- e) What is electroporation? 1
- f) Enlist any two methods used for screening of recombinant host cells. 1
- g) Define genomic library. 1
- h) What is the significance Maxam-Gilbert method? 1
- i) Which enzyme is used in PCR technique? 1
- j) Which media is used for monoclonal antibody formation? 1
- k) Which bacteria is used in Bt cotton formation? 1
- l) Give the example of human growth hormone. 1
