Exam.Code:0006
Sub. Code: 0578

1059

B.A./B.Sc. (General) Sixth Semester

Industrial Microbiology

IMB-602: Immunobiotechnology, Tissue Culture and Government Regulations

Time allowed: 3 Hours Max. Marks: 33

***NOTE:** Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.*

x-x-x

I. Answer the following briefly:-

a) Fab region

b) Immunization

c) Mutagens

d) Mycotoxins

e) Teratogenic biologicals' (5x1)

UNIT – I

II. a) Describe the physiology of immune response and the cells involved.

b) Antigen -Antibody interaction are useful for diagnosis of various diseases'. Explain with suitable examples. (2x3½)

III. a) How the branch of immunology evolved with time? Discuss the scope of immunology in life.

b) Describe the structure of IgM antibodies and their functions. (2x3½)

UNIT – II

IV. a) Define vaccines. Discuss its types and functions.

b) How monoclonal antibodies are produced commercially? (2x3½)

V. a) How the vaccines are produced? Describe the processes and precautions to be followed.

b) What are the applications of monoclonal antibodies in medical science? (2x3½)

UNIT – III

VI. a) What are the products produced by cell culture method? Explain with suitable examples.

b) Describe the applications of genetically modified animal cells. (2x3½)

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VII. a) Explain the type of metabolites produced by recombinant plants.

b) Write in detail about the cell growth systems utilized for cell culture. (2x3½)

UNIT – IV

VIII. a) Discuss the governmental regulations of recombinant DNA research.

b) What kind of health hazards are possible during microbial spoilage? Explain with suitable examples. (2x3½)

IX. a) What are biotechnology programmes? What is the role of International organizations in biotechnology programmes?

b) What do you know about the patenting of biotechnological processes and products? (2x3½)

x-x-x