

1057

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

Industrial Microbiology (Elective)

IMB-602: Immune-biotechnology, 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:-

- a) What is active immunity?
- b) What is the function of IgE and IgG?
- c) What is a conjugate vaccine?
- d) What is the role of GEAC in Indian biotech regulation?
- e) What is patentable in biotechnology?
- f) What is the role of T lymphocytes in an immune response? (6x1½)

UNIT – I

II. a) What are Antigens and antibodies? Give factors influencing antigen antibody reactions.

b) Explain role of monocytes in immune response. (2x3)

III. Write notes on:-

a) Structure of Immuno-globulins

b) Radial Immuno-diffusion (2x3)

UNIT – II

IV. What are monoclonal antibodies? How they are produced? (6)

V. Write notes on:-

a) Siderospores

b) Recombinant vaccines (2x3)

UNIT – III

VI. What is animal cell culture? How various products can be produced through animal cell technology? (6)

VII. a) How can bacteria be genetically modified? Give two methods.

b) Which metabolites can be produced from genetically modified plants? (2x3)

(2)

UNIT - IV

- VIII. How regulatory authorities in India ensure safe use of biotechnology? Justify your answer with a suitable example. (6)
- IX. a) How bio-hazardous wastes is generated? Give strategies of its safe disposal?
- b) What are mycotoxins? What hazards are involved in the production of fungal products? (2x3)

x-x-x