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SEAT No. :

P4000

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[5246]-228

M.Pharmacy (Semester - I/II)
FERMENTATION TECHNOLOGY
(2013 Pattern) (Elective)

Time : 3 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*

Q1) Explain in detail process monitoring and control parameters used in Bio reactors. **[10]**

Q2) Answer the following (any three) : **[15]**

- a) Michaelis - Menten equation & its deviations.
- b) Explain different techniques used for strain improvement.
- c) Explain various factors affecting microbial growth.
- d) Explain surface fermentation.

Q3) Write note on (any three) : **[15]**

- a) Methods used for immobilization of enzymes.
- b) Fermentation media.
- c) Recombinant protein.
- d) Production of biopesticides.

Q4) Write different food ingredients and additives prepared by process of fermentation. **[10]**

OR

Discuss in details different techniques used for screening of industrial important microbes.

