

Total No. of Questions : 4]

SEAT No. :

P3988

[Total No. of Pages : 2

[5246] - 216

M.Pharmacy (Semester - I & II)

ACTIVE PHARMACEUTICAL INGREDIENTS (APIS)

MANUFACTURING TECHNOLOGY

(2013 Pattern) (Credit System)

Time : 3 Hours]

[Max. Marks : 50

Instructions to the candidates :

- 1) Question number one is compulsory.*
- 2) Figures to the right indicate full marks.*
- 3) Draw well labeled diagrams wherever necessary.*

Q1) Write about pharmaceutical intermediates. Discuss about Fluidized bed dryers in manufacturing process. **[10]**

Q2) Attempt any three questions from following **[15]**

- a) Discuss unit process for oxidation reactions with suitable examples.
- b) Explain the terms Fine chemicals & Heavy chemicals with examples.
- c) Write about eye protection equipments.
- d) Give an account of Finger & Arm protection in API manufacturing.

Q3) Write short notes on (any two) : **[15]**

- a) Chemical mixtures.
- b) Esterification process in manufacturing of APIs.
- c) Stoichiometry in drug synthesis.
- d) Catalysts used in API manufacturing.

P.T.O.

Q4) Give an account of manufacturing process of following drugs with process and instrumentation diagram (any two) **[10]**

- i) Aspirin
- ii) Adrenaline
- iii) Sulphamethoxazole

OR

Write with suitable examples regarding biochemical process in API manufacturing.

