

Total No. of Questions : 4]

SEAT No. :

P3999

[Total No. of Pages : 1

[5246]-227

M.Pharmacy (Semester - I & II)
INDUSTRIAL PHARMACY AND PRODUCTION
MANAGEMENT
(2013 Pattern)

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) Elaborate in detail pilot plant scale-up and design for tablet and liquid oral preparations. **[10]**

Q2) Answer any Three : **[15]**

- a) As per the Drugs and Cosmetics Act what are the requirements related to sale of drugs?
- b) What is vendor development capacity and assessment of production rate changes?
- c) Explain what is pharmaceutical validation process for various products.
- d) Explain the safety monitoring and preventive system for industrial hazards due to chemicals and pharmaceuticals.

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

- a) Elaborate on quality assurance and GMP considerations.
- b) Statistical design and applied optimization methods.
- c) Effluent testing and treatment: for pharmaceutical industry
- d) Material handling for various pharmaceutical products.

Q4) Describe in detail the mechanical, electrical and electronic parts of pharmaceutical machinery and equipments. **[10]**

OR

Explain in details the typical models of automation for solid and liquid manufacturing.

