

**First Year Pharmacy  
PHARMACEUTICS - I  
(101)**

**Time : Three Hours**

**Maximum Marks : 80**

- Note :**
- i) Attempt total *six* questions. Question No.1 is compulsory. From the remaining questions attempt any *five*.
  - ii) Illustrate your answer with neat sketches wherever necessary.

1. Attempt any five : 2 each
  - a) Why are additives needed in preparing different dosage form?
  - b) Name the various Pharmacopoeias commonly used in India.
  - c) What are the different containers made from plastic?
  - d) What do you know about "Elutriation"?
  - e) Define the term "Clarification".
  - f) Enlist the diluents used in Tablet.
  
2. Attempt any two: 2×7
  - a) How will you prepare 500ml, 30% Dextrose solution from 60% and 20% dextrose solution respectively.
  - b) Calculate the percentage of sodium chloride necessary to make an injection containing 1% procaine hydrochloride iso-osmotic with blood plasma. (Sodium chloride equivalent of procaine hydrochloride is 0.20).
  - c) Differentiate between Dry heat sterilization and moist heat sterilization.

3. Explain construction, working and application any two of the following: 2×7

- a) Ball mill
- b) Agitated powder mixer
- c) Tray Dryer
- d) Steam distillation

4. Write note on any two of the following: 2×7

- a) Desiccation process.
- b) Types of containers as per I.P.
- c) Advantage and disadvantage of Aerosol System.
- d) Manufacturing defects of tablets.

5. Attempt any two questions: 2×7

- a) Differentiate between filtration, clarification and straining. Write in brief about membrane filter.
- b) Write in detail about modified percolation process.
- c) Write the principle and methods used for test for sterility.

6. Attempt any two questions: 2×7

- a) Write advantage, disadvantage and application of moist heat method of sterilisation.
- b) Describe construction working and application of Hot Air Oven.
- c) Describe briefly various excipients used during formulation of compressed tablets.

7. Write note on any two of the following: 2x7

- a) Enteric coating of tablet
- b) Describe in brief on the following
  - i) Friability test
  - ii) Weight variation test
- c) Capsule filling machine (Hand operated)

8. a) Match the column 'A' against column 'B'. 3½

Column 'A'	Column 'B'
A) Phagocytosis	i) Preparation containing readymade antibodies
B) Active immunity	ii) Is viral vaccine and virus are grown on chick embryo cells
C) Antiserum	iii) Produced by injection vaccine
D) Measle vaccine	iv) Preparation containing antigens
E) Vaccine	v) Produce immunity in human beings

b) Fill in the blanks: <http://www.rgpvonline.com> 3½

- i) Negroes have a high resistance to \_\_\_\_\_ disease.
- ii) B.C.G vaccine contains living culture of the \_\_\_\_\_ strains of \_\_\_\_\_.
- iii) The Schick test is done to detect the immunity or susceptibility to \_\_\_\_\_.
- iv) The majority of bacterial vaccines are store at a temperature between \_\_\_\_\_ to \_\_\_\_\_.

[4]

c) State whether True or False. 3½

- i) 1 Tea spoon full = 4ml
- ii) Oily injection is sterilized by moist heat sterilization.
- iii) Simple distillation is used for the preparation of distilled water.
- iv) Vanishing cream is W/O type emulsion base.
- v) Parenteral preparation must be sterile.

d) Define the following terms: 3½

- i) Film coated tablets
- ii) Immunity
- iii) Pasteurisation
- iv) Drying

