## 23124 3 Hours / 80 Marks



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Seat No.						

Instructions	_	(1)	A11

- (1) All Questions are Compulsory.
- (2) Answer each next main Question on a new page.
- (3) Illustrate your answers with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Special Instruction:

In case student has attempted sub-question of Question No. 3 more than once, only first attempt should be considered for assessment.

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Marks

## 1. Attempt any SIX of the following:

30

- a) Define Parenterals. State any 3 ideal properties of Parenterals. Differentiate between small volume parenterals and large volume parenterals.
- b) Define:
  - i) Filtration

ii) Filter media

State and explain Darcy's equation for theory of filtration.

- c) List out salient features of Fifth edition of I.P. write importance of pharmacopoeia with respect to
  - i) Pharmaceutical industry
- ii) Drug administration

- iii) Academics
- d) Define:
  - i) Immunity

ii) Immunological products.

Write a note on BCG vaccine highliting its;

- i) Method of Preparation
- ii) Description

iii) Storage

iv) Use

- v) Dose
- e) Differentiate between hard and soft gelatin capsules. Explain the method of manufacturing of soft gelatin capsule by rotary die process.
- f) Explain in detail components of suspension formulation. Add a note on methods of preparation of suspension.
- g) Classify granulation techniques and describe the wet granulation method with advantages and disadvantages.

## 2. Attempt any $\overline{\text{TEN}}$ of the following :

**30** 

- a) Describe the steps involved in sugar coating with suitable examples of ingredients used in each step.
- b) Discuss any three types of glass used as a packaging material in pharmaceuticals.
- c) Define:
  - i) Liniment

ii) Lotion

Compare liniment with lotion in respect of

i) Type of preparation

ii) Application method

iii) labelling instructions

- iv) Example
- d) Classify Novel drug delivery systems on approach of Novel drug delivery system with one example of each.

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Marks

e)	Differentiate	between	powders	and	granules.
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- f) Define current good manufacturing practices. State importance and objectives of CGMP
- g) Draw a neat diagram of Fluidized bed dryer and label the following components.
  - i) Inlet

ii) Outlet

- iii) Fluidized solid
- h) State and explain any three types of ointment bases.
- i) Enlist the evaluation tests for parenterals. Discuss the sterility test in details.
- j) Differentiate between Quality assurance and Quality control.
- k) Write advantages and disadvantages of Liposomes.

## 3. Attempt ALL question of the following:

20

- a) Define sublimation.
- b) Name the first pharmaceutical industry started in India.
- c) Give two examples of natural gel forming substances.
- d) What is the pH value of tears?
- e) Which step involves moistening of drug during percolation process?
- f) ----- Container protects the product from dust, moisture and air.
- g) Give two examples of artificial sweetening agents.
- h) Give the disintegration time of sugar coated tablet.
- i) Define Nasal drop.
- i) The preparations containing antibodies are called as -----
- k) The dissolution test has been introduced in ----- edition of I.P.
- 1) Define Pharmacy.
- m) The extraction of vegetable drugs with cold or boiling water for a short period of time is -----
- n) The major component of glass is ----
  - i) Limestone

ii) Soda ash

iii) Silica

- iv) Boron
- o) An example of inorganic or mineral colour is
  - i) Titanium dioxide

ii) Betacyanin

iii) Amaranth

iv) Patent Blue

- p) Define Sieve number.
- q) What will be the allowed weight variation if the average weight of tablet is 300 mg.
  - i) 10%

ii) 5%

iii) 2.5%

iv) 7.5%

- r) Elixirs are ----
  - i) Hydroalcoholic liquids
- ii) Aqueous liquids

iii) Viscars liquids

- iv) Semisolids
- s) Which of the following is the example of artificial preservative.
  - i) Honey

ii) Lemon

iii) Sodium chloride

- iv) Sodium benzoate
- t) Calamine lotion is used as a ------