# 23124 3 Hours / 80 Marks (1) All Questions are Compulsory. Instructions – (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.

## Attempt any SIX of the following : 1.

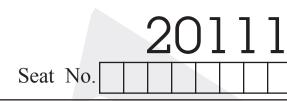
- a) Define Parenterals. State any 3 ideal properties of Parenterals. Differentiate between small volume parenterals and large volume parenterals.
- b) Define :
  - Filtration ii) Filter media i)
  - State and explain Darcy's equation for theory of filtration.
- c) List out salient features of Fifth edition of I.P. write importance of pharmacopoeia with respect to
  - Pharmaceutical industry Drug administration i) ii)
  - iii) Academics
- d) Define :
  - i) Immunity Immunological products. ii)
  - Write a note on BCG vaccine highliting its;
  - Method of Preparation i) ii) iii) Storage
    - iv) Use

Description

- 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 TEN of the following :

- 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 Lotion ii)
  - Compare liniment with lotion in respect of
  - Type of preparation Application method i) ii)
  - iii) labelling instructions iv) Example
- d) Classify Novel drug delivery systems on approach of Novel drug delivery system with one example of each.



30

Marks

30



Marks

- e) Differentiate between powders and granules.
- f) Define current good manufacturing practices. State importance and objectives of CGMP.
- Draw a neat diagram of Fluidized bed dryer and label the following components. g) Inlet Outlet i) ii)
  - iii) Fluidized solid
- State and explain any three types of ointment bases. h)
- i) Enlist the evaluation tests for parenterals. Discuss the sterility test in details.
- Differentiate between Quality assurance and Quality control. i)
- k) Write advantages and disadvantages of Liposomes.

### 3. Attempt ALL question of the following :

- 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 ?
- Which step involves moistening of drug during percolation process? e)
- ----- Container protects the product from dust, moisture and air. f)
- Give two examples of artificial sweetening agents. **g**)
- Give the disintegration time of sugar coated tablet. h)
- Define Nasal drop. i)
- The preparations containing antibodies are called as -----i)
- The dissolution test has been introduced in ------ edition of I.P. k)
- 1) Define Pharmacy.
- m) The extraction of vegetable drugs with cold or boiling water for a short period of time is -----.

#### The major component of glass is -----n)

- i) Limestone ii) Soda ash
- iii) Silica iv) Boron
- o) An example of inorganic or mineral colour is -
  - Titanium dioxide Betacyanin i) ii)
    - 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.

5%

- 10% ii) iv) 7.5%
- iii) 2.5%
- r) Elixirs are -----

i)

i)

- Hydroalcoholic liquids i)
- Aqueous liquids ii) iv) Semisolids iii) Viscars liquids
- Which of the following is the example of artificial preservative. s)
  - Honey Lemon ii)
  - iii) Sodium chloride iv) Sodium benzoate
- t) Calamine lotion is used as a ------

20