

23124

3 Hours / 80 Marks



20111

Seat No.

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- Instructions* –
- (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.

**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 mediaState 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 highlighting 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 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) LotionCompare 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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- e) Differentiate between powders and granules.
- 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.
  - j) The preparations containing antibodies are called as -----
  - k) The dissolution test has been introduced in ----- edition of I.P.
  - l) 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 300mg.
    - 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 -----
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