

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 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 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 :

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- 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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- 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) Viscous 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 -----