22223 3 Hours / 80 Marks

1.

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) Use of Non-programmable Electronic Pocket Calculator is permissible.

Seat No.

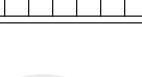
(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Attempt any EIGHT of the following:

- a) Write the importance of dosage form.
- b) Write the applications of Prodrugs.
- c) Name the container depending on their utility.
- d) Explain any one mixing mechanism.
- e) Write the criterions for selection of filter media.
- f) Explain digestion process of extraction.
- g) Differentiate between Dry heat sterilization and Moist heat sterilization
- h) Name the tablets used to prepare solution.
- i) Write the approximate capacity of capsule with respect to its number.
- j) Write the Mantous tuberculin test.
- k) Calculate the quantity of dextrose required to prepare 1. Fl.oz of a 10%.
- 1) Define 'containers'. What are the basic materials used in making of container.
- 2. Attempt any FOUR of the following:
 - a) Write any six salient features of IVth Edition of I.P.
 - b) Explain construction and working of Silverson mixer homogneniser with a well labelled diagram.
 - c) Calculate the volume of 18%, 15% and 3% cetrimide solution be mixed to get 8% cetrimide solution 200 ml.
 - d) Explain construction and working of cyclone separator with a well labelled diagram.
 - e) Write the principle, construction of Hot air oven with a well labelled diagram.
 - f) Describe the maceration process for concentrated preparation.

3. Attempt any FOUR of the following:

- a) Give the classification of dosage form.
- b) Explain the construction and working with diagram of mill work on the mechanism of cutting.
- c) Describe the apparatus used for separation of two miscible liquids.
- d) Illustrate the steps involved in sugar coating.
- e) Explain the method of preparation of small pox vaccine using animals.
- f) Explain the factor affecting rate of filtration using Darcy's law.



12

Marks

16

12



4. Attempt any FOUR of the following:

a) Define the following terms:

- i) Syrup
- ii) Emulsion
- iii) Gargles
- b) Explain Aerosol container with a well labelled diagram.
- c) Write the significance of size reduction.
- d) Explain Evaporating still with well labelled diagram.
- e) Define filter aid, write the ideal qualities and any two examples of it.
- f) Write the advantages and list the types of modern unit dose packaging.

5. Attempt any <u>FOUR</u> of the following:

- a) Define various grades of powder according to I.P.
- b) Explain construction and working of leaf filter with well labelled diagram.
- c) Write the applications of simple distillation.
- d) Describe the method of filling of soft gelatin capsule.
- e) Explain the factors affecting evaporation.
- f) Explain construction and advantages of fluidised bed dryer.

6. Attempt any <u>FOUR</u> of the following:

- a) Find the concentration of sodium chloride required to make 50 ml isotonic solution containing 0.5% ephedrine HCl and 1.5% chlorobutal [Note: The F.P. of 1% w/v solution of ephedrine HCl = -0.165° C and the F.P. of 1% w/v solution of -0.138° C)
- b) Compare the process of maceration for organised drug and unorganised drug and draw a well labelled diagram of Soxhlet apparatus.
- c) Define Aseptic techniques, write the source of contamination and name the methods of sterility testing.
- d) Write the excipients used in Formulation of tablet and explain the parts of single punch tabet machine with a well labelled diagram.
- e) Define immunity and explain the types of immunity.
- f) Explain the following equipments used for mixing (Any one)
 - i) Double cone blender
 - ii) Propeller mixer.

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