

SUBJECT: PHARMACEUTICAL ENGINEERING – II

Day: Saturday
Date: 04/05/2019

Time: 10.00 A.M. TO 01.00 P.M.
Max. Marks: 60

S-2019-4379

N.B.:

- 1) **Q. No. 1 and Q. No. 5** are **COMPULSORY**. Out of the remaining attempt any **TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.

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- Q.1** Attempt any **FIVE** of the following: (10)
- a) What is mechanisms of heat transfer?
 - b) What is significance of distillation in pharmacy?
 - c) What is principle of tray dryer?
 - d) Give details of falling rate period in drying.
 - e) Give example of azeotropic mixtures?
 - f) What are different modes of fluid bed drying?
- Q.2** What is distillation? Give principle and working of azeotropic distillation unit. (10)
- Q.3** a) Explain principle and working of forced circulation evaporator. (06)
b) Explain principle and working of flash dryer. (04)
- Q.4** Write short notes on any **TWO** of the following: (10)
- a) Drum dryer
 - b) Heat exchangers
 - c) Fractional distillation

SECTION - II

- Q.5** Attempt any **FIVE** of the following: (10)
- a) Give two examples of polymorphism.
 - b) What are methods of granulations?
 - c) What are ideal requirements for packaging materials in Pharmacy?
 - d) Draw a neat labelled diagram of circulating magma crystallizer.
 - e) What is extrudization?
 - f) What are objectives for granules preparation?
- Q.6** What is crystallization? Explain principle and equipments based on supersaturation by adiabatic solvent evaporation. (10)
- Q.7** a) Explain use of hydrometric charts in pharmacy. (06)
b) What are advantages of agitated tank crystallizer over tank crystallizer? (04)
- Q.8** Write short notes on any **TWO** of the following: (10)
- a) Dehumidification
 - b) Fluid bed processing
 - c) Co-crystallization

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