

QP Code: 324006

Reg. No.....

**Third Semester B. Pharm Degree Supplementary Examinations  
May 2023**

**Pharmaceutical Engineering**

**(2017 Scheme)**

**Time: 3 Hours**

**Max. Marks: 75**

- *Answer all questions to the point neatly and legibly* • *Do not leave any blank pages between answers* • *Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together* • *Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Essays**

**(2x10=20)**

1. Explain the heat transmission through a circular pipe by Fourier's law using suitable equations and a labelled diagram.
2. Explain the principle, construction and working of fluidized bed dryer with a labelled diagram.

**Short Notes**

**(7x5=35)**

3. Explain the construction and working of non-perforated basket centrifuge.
4. Explain the construction of Hammer mill with its demerits.
5. Bag filter with a diagram.
6. Explain Energy losses for flow of fluids.
7. Working of planetary mixer with a labelled diagram.
8. Differentiate between Meta filter and cartridge filter with diagrams.
9. Describe the principle and construction of horizontal tube evaporator.

**Answer Briefly**

**(10x2=20)**

10. Labelled diagram of venturi meter.
11. Mechanism of size reduction.
12. Factors influencing evaporation.
13. Economy of multiple effect evaporators.
14. Demerits of Sieve shaker.
15. Types of heat transfer mechanisms.
16. Application of fractional distillation.
17. Screw conveyors.
18. Turbines.
19. Filter medias.

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