

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No

BP-804T(F)/PY-804 (F)-CBGS

**B.Pharmacy VIII Semester (PCI Scheme)/
(Non-PCI Scheme)**

Examination, June 2020

Choice Based Grading System (CBGS)

Pharmaceutical Product Development

Time : Three Hours

Maximum Marks : 75

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. What are Optimization Techniques? Discuss in details about various optimization techniques used for pharmaceutical product development with suitable examples.
2. What are Preformulation Studies? Why these are important in development of new pharmaceutical products? Discuss objectives and regulations related to preformulation.
3. Discuss the role of suspending and emulsifying agents in formation of stable suspension and emulsion.
4. What are Semi-solid preparations? Discuss in detail about various excipients used in semi-solid preparations.
5. What do you mean by NDDS? Discuss in detail about various excipients used in the formulation of NDDS.

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[2]

6. Discuss the selection, quality control and regulatory considerations of packaging materials used for pharmaceutical preparations.
7. What are Coat materials? Describe the various excipients used in the formulation of tablets and capsules.
8. Write short notes on any three of the following.
 - a) Cyclodextrins and their applications
 - b) Excipients used in parenteral and aerosol products
 - c) Solvents and solubilizers
 - d) Non-ionic surfactants and their applications

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