

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

COIMBATORE



UNIT 2 QUESTION BANK (PART II)

TOPIC: DISTILLATION

SUBJECT: PHARMACEUTICAL ENGINEERING

Sr. No.	Question	Mapping from Various Sources	Bloom's Taxonomy Level
1	Define distillation and explain its basic principle based on vapor pressure and boiling points.	Common in university exams (Pharmaceutical Engineering unit operations); Basic question in GPAT mocks	Remembering
2	Describe the methodology and apparatus used in simple distillation.	Frequently asked in B.Pharm university question banks; Practical-oriented in Pharmaceutical Engineering	Understanding
3	Explain the principle of flash distillation and its industrial applications (e.g., petroleum refining).	Appears in GPAT mocks and university exams on unit operations	Understanding
4	Differentiate between simple distillation and fractional distillation with suitable examples.	Short note/comparison in M.Pharm and B.Pharm university papers; GPAT-level conceptual question	Analyzing
5	Discuss the principle and methodology of fractional distillation, including the role of fractionating column.	Essay/short notes in Pharmaceutical Engineering university exams; Related to rectification in GPAT	Understanding
6	Explain why distillation under reduced pressure (vacuum distillation) is used for heat-sensitive compounds.	Common in GPAT 2017 (question on method to separate without decomposition); University questions on special techniques	Understanding

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7	Describe the principle of distillation under reduced pressure and its advantages over atmospheric distillation.	Repeated in university question banks; Application for high BP compounds in pharmaceuticals	Applying
8	Enumerate the applications of vacuum distillation in pharmaceutical industry.	Short notes in B.Pharm exams; Linked to purification of thermolabile drugs	Remembering
9	Explain the principle of steam distillation and why it is suitable for immiscible liquids like essential oils.	Frequently asked in university exams (e.g., aromatic waters preparation); GPAT on volatile oils	Understanding
10	Discuss the methodology and advantages of steam distillation for extracting volatile compounds from plant materials.	Short note in Pharmaceutical Engineering; Common in pharmacognosy-related pharmaceuticals questions	Understanding
11	Describe the principle of molecular distillation (short-path distillation) involving mean free path.	Advanced question in GPAT mocks and university papers on high-vacuum techniques	Understanding
12	Compare steam distillation, vacuum distillation, and molecular distillation in terms of principles and applications.	Analytical question in university exams; Suitable for NDDS/unit operations	Analyzing
13	Explain Raoult's law and its relevance to distillation processes.	Found in GPAT mocks (phase diagrams and laws); Basic principle in university theory	Understanding
14	Discuss the limitations of simple distillation and when to prefer fractional or other methods.	Evaluation-type in university question banks; GPAT on choosing techniques	Evaluating

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15	Describe the preparation of absolute alcohol from rectified spirit and the distillation method involved.	Previous year-inspired (azeotropic distillation); Common MCQ in GPAT and university exams	Applying
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