

M.Sc.(Chem.) Semester - 4 (CBCS) Examination
March/April - 2026 (As Per Syllabus Year June-2019)
Pharmaceutical Technology (Core)

Time: 2:30 Hours**Marks:70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Q.1(A) Answer the following questions. (04)**
(1) Define median and mode with example.
(2) Define Powder and list out its properties.
- Q.1(B) Answer any two questions out of three. (10)**
(1) Give the principle, introduction and application of Lyophilization
(2) Explain Molecular Aggregation.
(3) Write a note on hot air-drying method for powder preparation.
- Q.2(A) Answer the following questions. (04)**
(1) Explain Clear Liquid with examples.
- Q.2(B) Answer any two questions out of three. (10)**
(1) Discuss basic theories behind the emulsification.
(2) What are pharmaceutical suspensions? Discuss its merits and demerits.
(3) Discuss physical instability of emulsification with figure.
- Q.3(A) Answer the following question. (04)**
(1) Define dosage form, give classification of dosage forms based on route of administration.
- Q.3(B) Answer any two questions out of three. (10)**
(1) Explain following in brief:
a) Effervesce tablet, b) Buccal tablet,
c) Hypodermic tablet, d) Layered tablet,
e) Film Coated tablet
(2) Write various tablet testing parameters, discuss any one in detail.
(3) Explain wet granulation method in detail.
- Q.4(A) Answer the following questions. (04)**
(1) What is shell integrity test?
(2) Define Capsule and explain about its size and volume.
- Q.4(B) Answer any two questions out of three. (10)**
(1) Give an account of types of gelatines and its extraction process.
(2) Explain manufacturing process of hard gelatine capsules.
(3) Explain evaluation of gelatine as raw material.
- Q.5(A) Answer the following questions. (04)**
(1) Explain Disintegrants and Binders in brief with suitable example.
- Q.5(B) Answer any two questions out of three. (10)**
(1) What are pharmaceutical excipients? write the role and desirable characteristics.
(2) Explain classification of excipients.
(3) Differentiate between active pharmaceutical ingredients (APIs) and excipients.
Why excipients are considered critical for formulation development?
