

ASTU M.Ph. (Reg) 4.06.14

Total No. of printed pages = 5

PY134201

Roll No. of candidate

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2014

(Even Semester)

**DOSAGE FORM DESIGN AND
PRODUCT DEVELOPMENT**

Full Marks-100 Pass Marks-55 Time-Three hours

The figures in the margin indicate full marks
for the questions.

SECTION - A

Attempt any *ten* questions.

1. Choose the correct answer. $10 \times 1 = 10$

(i) Which method for the production of dispersions involves the formation of particles from materials dissolved in true solutions ?

- (a) Bottom-up
- (b) Top-down
- (c) Milling
- (d) High pressure homogenization

[Turn over

(ii) Which of the following is not a mechanism for the separation of a physically unstable suspension of magnesium hydroxide in water ?

- (a) Flocculation
- (b) Aggregation
- (c) Ostwald ripening
- (d) Hydrolysis

(iii) Which one of the following dispersions does not have liquid continuous phase ?

- (a) Nanosuspension
- (b) Microemulsion
- (c) Gel
- (d) Foam

(iv) Of the following oral liquid formulations which would be considered as an oropharyngeal formulation ?

- (a) Syrup
- (b) Elixir
- (c) Mouthwash
- (d) Linctus

- (v) A tablet to treat a headache must first be dissolved in water before swallowing. Which one of the following best describes this type of tablet ?
- (a) Modified release
 - (b) Oral disintegrating
 - (c) Effervescent
 - (d) Buccal
- (vi) Capsules normally fall into two main categories. Which are they ?
- (a) Hard gelatin capsules and layered capsules
 - (b) Soft gelatin capsules and compressed capsules
 - (c) Compressed and layered capsules
 - (d) Hard gelatin capsules and soft gelatin capsules
- (vii) A rectal suppository is used to treat a fever. This would represent what type of drug delivery ?
- (a) Parenteral and local
 - (b) Parenteral and systemic
 - (c) Enteral and local
 - (d) Enteral and systemic

- (viii) What is class 100 room ?
- (ix) What are eudragit chemically ?
- (x) Name two propellants used to prepare aerosol delivery system.
- (xi) Name the instrument use to measure particle volume.

SECTION - B

2. Answer any *ten* questions. 10×4=40

- (a) Describe the utility of mouth dissolving tablet. What are the common ingredients used to prepare mouth dissolving tablet ?
- (b) Write a note on Heckle plot.
- (c) Describe the use of various HPMC as an excipients to control the release of the drug.
- (d) Give your suggestions to prevent precipitate formation during preparation of multivitamin syrup or drop.
- (e) Write the probable ingredients and their use to prepare an antacid suspension of Aluminum Hydroxide and Magnesium Hydroxide.
- (f) Write a note on macrogol base.
- (g) Write a note on dry powder inhaler.

- (h) Describe the method of air testing microbiologically for aseptic room.
- (i) Describe any one statistical method for optimization.
- (j) Describe granulation method scale up.
- (k) Write short note on soft gelatin capsule manufacture.

3. Answer any *five* questions. 5×10=50

- (a) Describe different in process quality control tests for tablet.
- (b) Write in detail about film coating method with instrumentation.
- (c) Describe the quality control of pharmaceutical aerosols.
- (d) Describe the rheological behaviour of dermatological vehicle.
- (e) Write in detail about the recent advances in parenteral formulations like implantable formulation etc.
- (d) Describe Physics of tableting.