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Total No. of printed pages = 4

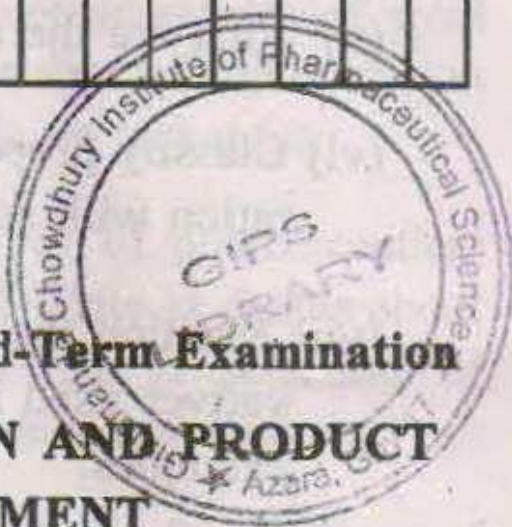
PY 134201

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2016

M. Pharm 2nd Semester End-Term Examination
DOSAGE FORM DESIGN AND PRODUCT
DEVELOPMENT



Full Marks-100 Pass Marks-35 Time-Three hours

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

1. Answer any *ten* of the following questions :

3×10=30

- (i) Why film coatings are applied to tablets or capsules ? Mention its advantages over sugar coating.
- (ii) What is station of tooling in tablet compression machine ? Write about different types of tooling system in rotary tablet machine.
- (iii) What is plasticizer ? Classify plasticizer and give the examples of plasticizer used in aqueous film coating.

[Turn over

(iv) Write the salient features and limitations of mouth dissolving tablets.

(v) What are the ideal characteristics of DPI ?

(vi) Classify propellants used in aerosols preparation with suitable examples.

(vii) Mention the ideal characteristics of preservatives used in oral liquid preparation with examples.

(viii) Write a brief note on microbial air testing.

(ix) Write about the personnel requirements for a position in pilot plant organization.

(x) Write the functions of propellants in aerosol package.

(xi) Write with examples about the factors in skin penetration of drug from dermatological product.

2. Answer any *eight* of the following questions :

5×8=40

(i) Discuss the different methods for determination of rheological behaviour of topical vehicle.

(ii) Write in details of testing of pharmaceutical aerosol.

(iii) Discuss the product considerations of solid dosage forms in each stages of unit operation in the pilot plant scale up technique.

(iv) What are the objectives of pharmaceutical process optimization ? Write in details about the role factorial design in selection of optimize batch in product development.

(v) Discuss the challenges in formulation of mouth dissolving tablet (MDT). Mention the role of super superdisintegrants in MDT.

(vi) Discuss factors affecting in selection of taste masking technology. Enlist different methods for quantitative evaluation of taste masked product.

(vii) Discuss in details of formulation and processing of DPI.

(viii) Discuss different methods to control contamination in the development parenteral dosage form.

(ix) Write a note on different statistical softwares used in the analysis of pharmaceutical data processing.

3. Answer any *three* of the following questions :

3×10=30

(i) Discuss in details about the soft gelatin capsule manufacture, processing and control. Write the pharmaceutical applications of soft gelatin capsule. 7+3=10

(ii) Discuss the physics of tablet compression. Write a brief note on computerization for in process quality control of tablet. 5+5=10

(iii) What are metered dose inhalers ? Discuss metered dose inhalers designs and Novel Electrohydrodynamic (EHD) devices. 2+4+4=10

(iv) Write notes on any *two* : 5×2=10

(a) Parenteral admixture and incompatibility

(b) Newer excipients in controlled release dosage form

(c) Automated coating procedures.