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Total No. of printed pages = 3

MPH 103 T

Roll No. of candidate | | | | | | | | | | |

2021

M.Pharm. 1st Semester (Regular) Examination

Pharmaceutical Chemistry

MODERN PHARMACEUTICS

(New Regulation w.e.f. 2017-18)

Full Marks – 75 Time – Three hours

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

1. Answer the following questions : (20 × 1 = 20)

(i) Which of the following technique is not suitable for drug-excipient study?

(a) HPLC (b) DSC

(c) DRS (d) NMR

(ii) Which of the following technique is most suitable for studying drug Crystallinity?

(a) Thermal analysis (b) XRD

(c) Hot stage microscopy (d) Single Crystal X Ray

(iii) The first mathematical equation that describes drug release from matrix system

(a) Higuchi model (b) Hixon Crowell model

(c) Korsmeyer Peppas model (d) Zero Order model

(iv) A linear relationship between relative porosity of a powder and the applied pressure is known as

(a) Heckel Plot (b) Force displacement curve

(c) Compaction Profile (d) None of the above

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(v) According to BCS classification Class III drugs are having

(a) High Solubility and High Permeability

(b) Low Solubility and High Permeability

(c) High Solubility and Low Permeability

(d) Low Solubility and Low Permeability

(vi) _____ is an increase in the mechanical strength of material resulting from Particle/Particle Interactions.

(a) Consolidation (b) Compression

(c) Deformation (d) None of the above

(vii) Solubility of acidic or basic drug must be determine over the pH range of

(a) 2-10 (b) 1-8

(c) 3-12 (d) 1-5

(viii) BET Theory of adsorption is used to determine

(a) Particle Volume (b) Particle Shape

(c) Surface Area (d) Particle size

(ix) The ICH Code Q1B stands for the guideline title

(a) Stability of new drug substance and product

(b) Stability testing of new dosage form

(c) Evaluation of stability data

(d) None of the above

(x) Which of the following dosage form is regarded as thermodynamically stable?

(a) Emulsion (b) Suspension

(c) Microemulsion (d) Multiple emulsion

(xi) Ostwald Ripening is observed in _____ type of dosage forms.

(xii) _____ qualification is a series of tests that measure the performance capability of the equipment.

(xiii) Angle of repose is determined by the equation _____.

(xiv) Dissolution Type IV (Flow through Cell) is used for maintaining _____ condition.

(xv) _____ validation is also called as pre-marketing validation.

(xvi) What is the meaning of "current" according to GMP regulation?

(xvii) ANOVA stands for ————————.

(xviii) Define Heckel plot.

(xix) ———————— is a common method for statistical optimization.

(xx) What do you mean by IQ facilities?

2. Answer any seven from the following: (7 × 5 = 35)

(a) Write the content of Master formula as per WHO.

(b) Write a note on statistical design.

(c) Give a brief description of physics of tablet compression.

(d) Write the components of validation protocol.

(e) Discuss the factors affecting dissolution.

(f) Write a brief note on the theoretical aspects of SMEDDS.

(g) Describe the applications of factorial designs and contour designs in pharmaceutical formulations.

(h) Explain the ICH guidelines for calibration and validation of pharmaceutical equipments.

(i) Write a brief note on total quality management.

3. Answer any two out of three: (2 × 10 = 20)

(a) (i) What is consolidation? Discuss the various consolidation parameters. (6)

(ii) Write a brief note of linearity concept of significance. (4)

(b) (i) What do you mean by Preformulation study? Give its importance. (3)

(ii) Write in detail on various aspects of preformulation studies in dosage form designs and its importance. (7)

(c) (i) Mention the objectives of cGMP. (4)

(ii) Write details on various aspects pharmaceutical inventory management and control. (6)