**M. Pharm 1st Semester Examination**

**Subject- Modern Pharmaceutics (MPHI03T)**

 **Full Marks- 75 Time – 3 hours**

 **Answer all the questions.**

**1. Discuss formulation considerations and evaluation parameters of Small Volume Parenteral. (15)**

 **‘or’**

 **Describe in detail about the formulation and evaluation of SMEDS**

**2. Answer all. (10+5)**

 **(a) How solubility of poorly water soluble drug can be improved**

 **(b) Discuss FTIR as a method to study Drug-Excipient compatibility.**

 **‘or’**

 **Answer all. (10+5)**

**(a) Discuss on detail the physics of tablet compression.**

**(b) Write short note on pharmacokinetic parameters**

**3. Answer all. (10+5)**

**(a) Enlist various parameters affecting dissolution and describe them in detail.**

**(b) Describe how the Korsmeyer-Peppas model is used to determine release mechanism.**

 **‘or’**

 **Write short notes on (5 x 3)**

 **(a) Heckel plot**

 **(b) F1 and F2 Factors**

 **(c) BCS Classification of drugs.**

**4. Answer all. (7.5 +7.5)**

 **(a) Write a note on “Total Quality Management”**

 **(b) Discuss the layout of building as per cGMP guideline.**

 **‘or’**

 **Answer all. (7.5 +7.5)**

 **(a) Explain Budget and cost control**

 **(b) Explain Industrial and personal relationship.**

**5. What do you by product optimization? Describe in detail about various types of factorial designs with its merits and demerits. (15)**

 **‘or’**

 **Answer all. (5+10)**

 **(a) Describe the scope and merits of validation.**

 **(b) Enlist various types of validation and describe them.**