

GUJARAT TECHNOLOGICAL UNIVERSITY
M.PHARM – SEMESTER– III – EXAMINATION – SUMMER 2017

Subject Code: 930001**Date: 27/04/2017****Subject Name: Experimental Design and Patents****Time: 02:30 PM to 05:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Classify Central Composite Designs (CCD). Explain CCD in detail. **06**
 (b) Describe Placket-Burman design with its applications. **05**
 (c) Explain terms. 1) Independent variable, 2) Interaction effect, 3) Model **05**
- Q.2** (a) What is contour plot? Describe significance of contour plots with an example. **06**
 (b) Describe full and reduced model as per experimental design with suitable example. **05**
 (c) What is compulsory license? Explain in detail. **05**
- Q.3** (a) What is experimental Design? Describe Factorial Design with suitable example. **06**
 (b) Define ANOVA? Write differences between one way and two way ANOVA. **05**
 (c) Calculate the main effect and interaction by Yates method for the data given below and Construct the polynomial equation using Yate's method and comment on the same. **05**
- | Run | 1 | A | B | AB | C | AC | BC | ABC |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Particle size (nm) | 291.6 | 342.4 | 219.8 | 276.2 | 271.6 | 314.5 | 203.4 | 255.5 |
- Q.4** (a) Define IPR. Explain with examples, inventions which are not patentable. **06**
 (b) Which are the documents and forms required for filing an application for patent in India? **05**
 (c) Define Trademark. Describe in detail copyright. **05**
- Q.5** (a) What is Claim? Explain various types of Patent claim. **06**
 (b) Describe brief account on guidelines for preparation of "Laboratory Notebook". **05**
 (c) Define Patent. Discuss various types of patent. **05**
- Q.6** (a) Give brief discussion about term WIPO, TRIPS agreement and GATT. **06**
 (b) Write a short note on PCT filing. **05**
 (c) What is infringement? Explain different types of infringement. **05**
- Q.7** (a) Write a note on Patent Act 1970. **06**
 (b) Explain significance of patent search for research. **05**
 (c) Explain 'Revocation of patent' in detail as per The Patent act, 1970. **05**
