

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**M.PHARM - SEMESTER-3 EXAMINATION – SUMMER-2019**

**Subject Code: 930001****Date: 27/05/2019****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.

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|-------------|-----|---|-----------|
| <b>Q.1</b>  | (a) | Write advantages of experimental design. Differentiate between full and fractional factorial designs. | <b>06</b> |
|             | (b) | Differentiate one way ANOVA and two way ANOVA.  | <b>05</b> |
|             | (c) | Write a note on Pharmacoinformatics.  | <b>05</b> |
| <b>Q.2</b>  | (a) | Explain following terms with examples.<br>i) Factors ii) Levels iii) Effects iv) Interaction          | <b>06</b> |
|             | (b) | Write short note on ‘ Response surface method’.   | <b>05</b> |
|             | (c) | Describe Plackett- Burman experimental design with its` applications.                                 | <b>05</b> |
| <b>Q.3</b>  | (a) | Discuss the various features and applications of central composite designs.                           | <b>06</b> |
|             | (b) | Discuss design model for 2 <sup>2</sup> factorial design.   | <b>05</b> |
|             | (c) | Explain the important applications of experimental designs in clinical trials.                        | <b>05</b> |
| <b>Q.4</b>  | (a) | Describe the essential elements of patents draft.   | <b>06</b> |
|             | (b) | Write Advantages of TRIPS Provisions of the GATT Agreement.   | <b>05</b> |
|             | (c) | Write a short note on contour plot.   | <b>05</b> |
| <b>Q.5</b>  | (a) | Write a short note on “ Laboratory Notebook”.   | <b>06</b> |
|             | (b) | Write salient features of the patent Rules 2003.  | <b>05</b> |
|             | (c) | Write the advantages of filing a provisional specification for patent filing.                         | <b>05</b> |
| <b>Q. 6</b> | (a) | What are the different types of patents, which can be secured under the Indian Patents Act?           | <b>06</b> |
|             | (b) | Discuss non- patentable inventions with examples.   | <b>05</b> |
|             | (c) | Discuss importance of patent search. Which are different websites for that?                           | <b>05</b> |
| <b>Q.7</b>  | (a) | Define Trademark. Which different types of trademark can be registered as per Indian trademark law.   | <b>06</b> |
|             | (b) | Write a note on copy write protection.  | <b>05</b> |
|             | (c) | Explain ‘Revocation of patent’ in detail as per The Patent act, 1970.                                 | <b>05</b> |

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