

**Total No. of Pages : 02**

**M.Sc (Clinical Research) (2018 Batch) (Sem.-1)**

**Subject Code : MSCR-102-18**

**Paper ID : [75606]**

**Max. Marks : 70**

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **FOUR** questions carrying **TEN** marks each and students have to attempt any **THREE** questions.

**Q1 Write briefly :**

- a. Name major objectives of phase 0 clinical trials.
- b. Define intellectual property rights.
- c. Expand the term and define TRIPS.
- d. Name three major issues in conduct of clinical trials.
- e. Write the basic steps of drug development process.
- f. Define placebo. Write two major disadvantages of using placebo.
- g. Define investigational new drug application. (INDA).
- h. Define lead identification and optimization.
- i. Plot a graph to depict difference between controlled release and prolonged release formulation.
- j. What should be the ideal half life for making sustained release products?

### SECTION-B

- Q2. Briefly describe the various pharmacological approaches to drug discovery.
- Q3. Stepwise describe the high throughput screening (HTS) process.
- Q4. Describe the prerequisites for patents registration
- Q5. Describe the methods of conducting phase-IV clinical trials.
- Q6. Differentiate between quality control and quality assurance process.

### SECTION-C

- Q7. Describe the objectives of various phases of clinical trials.
- Q8. Write short notes on the following :
- a) Total quality management.
  - b) Properties and advantages of controlled release formulations.
  - c) Biopharmaceutical classification system.
- Q9. Describe the various types of intellectual property.
- Q10. Describe the drug development process.