

NOVEMBER/DECEMBER 2018

**MCH34A — SCIENTIFIC RESEARCH
METHODOLOGY**

Time : Three hours

Maximum : 75 marks



SECTION A — (5 × 6 = 30 marks)

Answer ALL questions.

1. (a) Define : Primary and secondary source of research journals.

Or

- (b) What are the objectives of a research work?

2. (a) Explain the different methods of vacuum distillation.

Or

- (b) Discuss the chemistry of working with hazardous materials.

3. (a) Discuss the normal distribution curve.

Or

- (b) Explain the determinate and indeterminate errors.

4. (a) Explain the student 't' test.

Or

- (b) Discuss the least square analysis.
5. (a) What do you understand by page and chapter format? Indicate the general format and corrections in writing.

Or

- (b) What are the different quotations and footnotes? How are they useful?

SECTION B — ($3 \times 15 = 45$ marks)

Answer any THREE questions.

6. How will you select a research problem? Indicate how a research proposal is formulated.
7. Write a note on
- (a) Distillation under reduced pressure.
- (b) Crystallization.
8. What are the types of error encountered in analytical measurements? How can there be avoided?

9. Discuss the 'F' test with an example.

10. (a) How are data displayed in tables and figures?
- (b) Indicate any three commonly used abbreviations and their meaning.

