



# Jaypee University, Anoopshahr

(Established under the Govt. of Uttar Pradesh Act No. 8 of 2014)

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[www.jaypeeu.ac.in](http://www.jaypeeu.ac.in)

## PhD Research Program-Entrance Test Format and Syllabi

Maximum marks : 100 marks

Maximum duration of test : 2 hours

Instructions for attempting the test paper :

- [1] Question paper will consists of 22 questions.
- [2] All questions are mandatory.
- [3] In case of Objective type questions, tick only the correct answer. No overwriting should be done. In case of doubt, examiners decision shall be final.
- [4] There will not be any negative marking.

Subjects:

1. Research Methodology
2. Engineering Methamatics
3. Numerical Methods
4. Computer Programing

Examination question format:

[A] Research Methodology + Computer Programing:

- 1. Objective type - 10 questions of 2 marks each - [20 marks]
- 2. Short answe - 6 questions of 4 marks each - [24 marks]

[B] Engineering Methamatics: 3 questions of 6 marks each - [18 marks]

[C] Numerical Methods: 3 questions of 6 marks each - [18 marks]

[D] Brief description of proposed research work: - [20 marks]

Syllabus:

Research Methodology: Literature survey, Data collection, Data analysis, Use of statistical tools, Report preparation, Presentation.

Engineering Methamatics: Calculus, Differential equations, Complex variables, Statistical analysis.

Numerical Methods: Numerical differentiation and integration, Numerical solution of differential equations, Linear algebra, Iterative solution of linear system.

Computer Programing: Algorithms, Pseudo codes, Structured programming, Control flow, Arrays and strings, Pointers, Functions, Iteration, Dynamic memory allocation.