



UNIVERSITY OF CALCUTTA

Notification No. CSR/03/2026

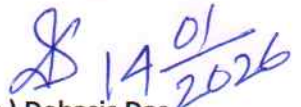
It is notified for information of all concerned that in terms of the provisions of Section 54 of the Calcutta University Act, 1979, (as amended), and, in the exercise of his powers under 9(6) of the said Act, the Vice-Chancellor has, by an order dated 29.12.2025, approved the Question Patterns for semester-6 of 4-year Honours & Honours with Research and 3-year MDC in Mathematics under CCF, 2022.

The above shall be applicable for semester-6 of 4-year Honours and Honours with Research and 3-year MDC in Mathematics under CCF, 2022 which was introduced from the academic session 2023-2024 and shall take immediate effect.

SENATE HOUSE

Kolkata-700073

14.01.2026


Prof.(Dr.) Debasis Das
REGISTRAR
UNIVERSITY OF CALCUTTA

Question Pattern for Mathematics Major papers (Semester 6)

DSCC-13:- Metric Space and Complex Analysis

Group A : Metric Space (45 marks)

(a) Short answer type: 5 questions are to be attempted out of 7 questions each carrying 3 marks. Each question may have further parts.

(b) Long answer type: 6 questions are to be attempted out of 8 questions each carrying 5 marks. Each question may have further parts.

Group B : Complex Analysis (30 marks)

6 questions are to be attempted out of 9 questions each carrying 5 marks. Each question may have further parts.

DSCC-14:- Multivariate Calculus and Application of Calculus

Group A : Multivariate Calculus (50 marks)

(a) Short answer type: 5 questions are to be attempted out of 8 questions each carrying 3 marks. Each question may have further parts.

(b) Long answer type: 5 questions are to be attempted out of 8 questions each carrying 7 marks. Each question may have further parts.

Group B : Application of Calculus (25 marks)

Long answer type: 5 questions are to be attempted out of 8 questions each carrying 5 marks. Each question may have further parts.

DSCC-15:- Numerical Analysis (75 marks)

(a) Short answer type: 5 questions are to be attempted out of 8 questions each carrying 3 marks. Each question may have further parts.

(b) Long answer type: 6 questions are to be attempted out of 9 questions each carrying 5 marks. These questions will be set from the topics **Representation of numbers and errors in Numerical Analysis, Approximation, Interpolation, Numerical Differentiation and Numerical Integration.** Each question may have further parts.

(c) Long answer type: 6 questions are to be attempted out of 9 questions each carrying 5 marks. These questions will be set from the topics **Numerical solution of linear and nonlinear equations, matrix inversion, algebraic Eigen value problem and Numerical solution of initial value problems for ordinary differential equations.** Each question may have further parts.

Question Pattern for Mathematics Minor Papers

MINOR

MN 3: Ordinary Differential Equations and Group Theory

Group-A - Ordinary Differential Equations (45 marks)

9 questions are to be attempted from a set of 16 questions each carrying 5 marks. Questions may have further parts

Group-B – Group Theory (30 marks)

6 questions are to be attempted from a set of 10 questions each carrying 5 marks. Questions may have further parts

MN 4: Mechanics

- (a) Short answer type: 6 questions are to be attempted out of 10 questions each carrying 2 marks.
- (b) Long answer type: (i) 7 questions are to be attempted out of 11 questions each carrying 6 marks [2 questions are to be set from Statics, 4 questions are to be set from Law of gravitation portion, 3 questions are to be set from Work Power Energy portion, 2 questions are to be set from Impulse of a force portion]. Questions may have further parts
- (ii) 3 questions are to be attempted out of 6 questions each carrying 7 marks [questions are to be set from Motion of a particle in a plane]. Questions may have further parts.

Question Pattern for Mathematics MDC Papers

MDC CORE COURSE

MDC- CC7 – Mathematical Methods

Group-A –Sequence and series of functions (25 marks)

5 questions are to be attempted from a set of 9 questions each carrying 5 marks. Questions may have further parts.

Group-B –Application of differential calculus (35 marks)

7 questions are to be attempted from a set of 11 questions each carrying 5 marks. Questions may have further parts.

Group-C – Fourier series and Laplace Transform (15 marks)

3 questions are to be attempted from a set of 7 questions each carrying 5 marks. Questions may have further parts

MDC- CC8 – Discrete Mathematics

Group-A –Graph Theory (30 marks)

6 questions are to be attempted from a set of 10 questions each carrying 5 marks. Questions may have further parts.

Group-B – Application of congruence, Combinatorics, Recurrence Relations and Generating functions, Boolean Algebra (45 marks)

i) 6 questions are to be attempted from a set of 10 questions each carrying 5 marks. These 11 questions will be set from **Combinatorics, Recurrence Relations and Generating functions**. The Questions may have further parts

ii) 3 questions are to be attempted from a set of 5 questions each carrying 5 marks. These 5 questions will be set from **Boolean Algebra**. The Questions may have further parts

MDC MINORS

MDC-MN 5: Advanced Calculus

Group A: (20 marks)

4 questions are to be attempted out of 7 questions each carrying 5 marks.

Group B(25 marks):

5 questions are to be attempted out of 9 questions each carrying 5 marks

Group C(30 marks):

6 questions are to be attempted out of 10 questions each carrying 5 marks.

MDC-MN 6: Statistics and Numerical Analysis

Group-A –Statistics (50 marks)

i) 5 questions are to be attempted from a set of 9 questions each carrying 5 marks. Questions may have further parts. These 9 questions will be set from **Probability Theory Probability Distribution and Mathematical Expectation**

ii) 5 questions are to be attempted from a set of 9 questions each carrying 5 marks. Questions may have further parts. These 9 questions will be set from **Elements of Statistical Methods, Statistical Inference, Sampling Theory**

Group-B – Numerical Analysis (25 marks)

5 questions are to be attempted from a set of 9 questions each carrying 5 marks. Questions may have further parts.