DEPARTMENT OF MATHEMATICS
LESSION PLAN
SESSION 2023-24
SEMESTER – II

NAME OF TEACHER: HARICHARAN MAHANTA

PAPER ALLOTTED: MINOR: MA-2(CALCULUS)

Month	Paper	Content	No of classes
May-June, 2024 (04.05.2024)	**MA-2(Calculus)**	**Unit – 1 : Limits, Continuity and Differentiability: Limit of a function, - definition of a limit, Infinite limits, Continuity and types of discontinuities; Differentiability of a function, Relation between differentiability and continuity, Successive differentiation, Leibnitz theorem and its applications to problems of type; Partial differentiation, Euler's theorem on homogeneous functions and its converse.**	**8**
July, 2024	**MA-2(Calculus)**	**Unit – 2 : Mean Value Theorems and its Applications: Rolle's theorem, Lagrange's mean value theorem, Cauchy's mean value theorem, Geometrical interpretation of mean value theorems and applications to monotonic functions and inequalities;**	**8**
August, 2024	**MA-2(Calculus)**	**Unit – 2 : Taylor's theorem, Taylor's series, Maclaurin's series expansions of Sinx, Cosx,log(1+x),e^x ; Indeterminate forms.**	**8**
August, (1st Week) 2024		**Internal Examination & Class for Slow Learners**	**8**
August, 2024		**END SEMESTER EXAMINATION**	
	Total Classes		**32**

NAME OF TEACHER: DR. KUSUMIKA KUNDU

PAPER ALLOTTED: MAJOR-DS-2 (CALCULUS)

Month	Paper	Topic	No of classes
May-June, 2024 (04.05.2024)	**DS-2 (Calculus)**	**Unit -3 : Integral Calculus Integration of rational and irrational functions, Evaluation of definite integrals, Special integrals, Reduction formulae, derivations and illustrations of reduction formulae for the integration of and their applications; Improper integrals, Beta and Gamma functions.**	**12**

July, 2024	**DS-2 (Calculus)**	**Unit – 4 : Applications Tangent and Normal; Curvature; Asymptotes of general algebraic curves, Parallel asymptotes, Asymptotes parallel to axes; Envelopes; Maxima and Minima; Concavity and convexity,**	**10**
August, 2024	**DS-2 (Calculus)**	**Unit -4: Points of inflexion; Tracing of Cartesian and polar curves; Length of plane curve and area bounded by plane curves, Volume and surface area of solids of revolution.**	**10**
August, (1st Week) 2024	**DS-2 (Calculus)**	**Internal Examination & Class for Slow Learner**	**6**
August, 2024		**END SEMESTER EXAMINATION**	
Total Classes			**38**

NAME OF TEACHER: DR. ABUL KALAM MONDAL

PAPER ALLOTTED: MAJOR-DS-2 (CALCULUS)

Month	Paper	Topic	No of classes
June, 2024 (04.05.2024)	**DS-2 (Calculus)**	**Unit – 1 : Limits, Continuity and Differentiability Limit of a function, - definition of a limit, Infinite limits, Continuity and types of discontinuities; Differentiability of a function, Relation between differentiability and continuity, Successive differentiation, Leibnitz theorem and its applications to functions. Partial differentiation, Euler's theorem on homogeneous functions and its converse**	**12**
July, 2024	**DS-2 (Calculus)**	**Unit – 2 : Mean Value Theorems and its Applications Rolle's theorem, Lagrange's mean value theorem, Cauchy's mean value theorem, Geometrical interpretation of mean value theorems and applications to monotonic functions and inequalities;**	**12**
August, 2024	**DS-2 (Calculus)**	**Unit – 2 : Taylor's theorem, Taylor's series, Maclaurin's series expansions; Indeterminate forms**	**10**
August, (1st Week) 2024	**DS-2 (Calculus)**	**Internal Examination & Class for Slow Learner**	**8**

August, 2024		**END SEMESTER EXAMINATION**	
Total Classes			**42**

NAME OF TEACHER: SUMITA SAHA

PAPER ALLOTTED: MINOR: MA-2(CALCULUS)

Month	Paper Name & Code	Content	No of classes
May-June, 2024 (04.05.2024)	**MA-2(Calculus)**	**Unit -3 : Integral Calculus Integration of rational and irrational functions, Evaluation of definite integrals, Special integrals,**	**4**
July, 2024	**MA-2(Calculus)**	**Unit -3 : Integral Calculus : Reduction formulae, derivations and illustrations of reduction formulae for the integration of and their applications; Improper integrals, Beta and Gamma functions.**	**8**
August, 2024	**MA-2(Calculus)**	**Unit-4 : Applications Tangent and Normal; Curvature; Asymptotes of general algebraic curves, Parallel asymptotes, Asymptotes parallel to axes; Envelopes; Maxima and Minima; Concavity and convexity, Points of inflexion; Tracing of Cartesian and polar curves; Length of plane curve and area bounded by plane curves, Volume and Surface area of solids of revolution.**	**12**
August, (1st Week) 2024		**Internal Examination & Class for Slow Learners**	**8**
August, 2024		**END SEMESTER EXAMINATION**	
	Total Classes		**32**