



CLUSTER UNIVERSITY SRINAGAR

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Sub:- Conduct of Bridge Course in Mathematics for in-eligible students admitted to various UG/IG Courses – framing of syllabus therefor.

Notification No: 04 -CUS of 2022

Dated: 25 - 08 - 2022

Cluster University of Srinagar is likely to conduct the Bridge Course in Mathematics of the level of Hr. Sec. part-II for such of the students who have been admitted to various UG/IG courses in its Constituent Colleges during the previous academic sessions. Accordingly the syllabus, framed on the pattern of 11th & 12th classes with the score of four credits, is hereby notified as under for facilitation of the concerned students:-

Unit- I

Sets, Relations and Functions: Sets and their representation, types of sets, subsets, power set, number of subsets of a finite set, universal set, operation on sets, union, intersection, difference, complement of a set. Cartesian product of sets, relation, domain, co-domain and range of a relation, types of relations. Functions, types of functions, constant function, identity function, inverse of a function, composition of functions.

Unit- II

Differentiation and integration: Derivative of a single valued function, derivative of ax^n , $(ax + b)^n$, $\log x$, e^x , a^x , $\sin x$, $\cos x$, $\tan x$. Derivative of sum, product and division of two functions.

Integration as inverse process of differentiation. Integration by substitution, by partial fraction and by parts.

Unit- III

Matrices and determinants: Matrices, types of matrices, equality, addition, multiplication and scalar multiplication of matrices, transpose of a matrix, symmetric and skew-symmetric matrices. Simple properties of addition, multiplication and scalar multiplication of matrices, concept of elementary row and column operations. Determinant of a square matrix (order 2 and 3), properties of determinants, area of a triangle using determinants. Adjoint of a square matrix, singular & non-singular matrices, inverse of a square matrix.

Unit-IV

Measures of dispersion (Range, quartile deviation, mean deviation, and standard deviation for grouped and ungrouped data. Random experiment, sample space, event, trial, types of events, mutually exclusive events, probability of an event, addition and multiplication law of probability for two events with examples, conditional probability, independent events, multiplication law, Bayes Theorem (statement only), and some simple examples in each case.

Text Books Recommended:

- (1) NCERT Text book of Mathematics prescribed for class 11th.
- (2) NCERT Text book of Mathematics prescribed for class 12th.


Controller of Examinations
Cluster University Srinagar
25-08-22

No: CUS/Exam/Bridge-Crs/914-25/2022

Dated: 25.08.2022

Copy for information and favour of necessary action forwarded to the:-

1. Dean Academic Affairs;
2. Principals of all Constituent Colleges for further information of the concerned students;
3. Deans of all Faculties;
4. PA to Vice-Chancellor for information of Hon'ble Vice-Chancellor;
5. I/C IT for uploading on the University website;