Sankalchand Patel University

Faculty of Science

B.Sc. Mathematics(SEM-IV)

In Effect from Academic Year 2017-18

Subject Code:1SC1000424	**Subject Title: Business Mathematics-IV**

Course Objective:

This course is designed to enable students to acquire the understanding the application of Integral Calculus, Permutations and Combinations in real life situation problem.

Teaching scheme (hours) per week		**credit**		**Theory Marks**		**Practical Marks**		**Total**
Theory	**Practical**	**Theory**	**Practical**	**University Assessment**	**Cont. Assessment**	**University Assessment**	**Cont. Assessment**	
2	**-**	**2**	**-**	**35**	**15**	**-**	**-**	**50**

Subject Contents			
Unit No.	**Topic**	**Total Hours**	**Weight (%)**
1	[Integral Calculus] [only examples] Indefinite integral: Definition, Working rules of integration, integration of x^n, a^x, e^x, integration of $\frac{1}{x^2 \pm a^2}; \frac{1}{\sqrt{x^2 \pm a^2}}; \frac{1}{\sqrt{a^2 - x^2}}; \frac{1}{\lvert x \rvert \sqrt{x^2 - a^2}}$ integration of trigonometric functions , integration by method of substitution, **Some standard results:** $\int f(x)dx = F(x) + c \Rightarrow$ $\int f(ax+b)dx = \frac{1}{a}F(ax+b)+c$, $\int [f(x)]^n . f'(x)dx$, $\int \frac{f'(x)}{f(x)}dx$, $\int \frac{1}{ax^2+bx+c}dx$, $\int \frac{1}{\sqrt{ax^2+bx+c}}dx$.	15	25
2	Permutations and Combinations: [only examples] Fundamental rules of counting, Definition of Permutations and Permutation of n different things, Permutation of repeated things, Circular Permutation, Definition of Combination standard results and examples.	15	25

Course Outcome:

- After successfully completion of the course, the student will be able to …
- Understanding the application of Integral Calculus.
- Know about the Permutations and Combinations.

List of References:

(1) Business Mathematics by. D.C.Sancheti & V.K.Kapoor, Sultan Chad & Sons Publication, New Delhi.
(2) Business Mathematics by. B.S.Shah Prakashsan, Ahmedabad.
(3) Any Advance Calculusbooks used in Science Streme .