

UNIT I DIFFERENTIAL CALCULUS 12

Representation of functions - Limit of a function - Continuity - Derivatives - Differentiation rules - Maxima and Minima of functions of one variable.

UNIT II FUNCTIONS OF SEVERAL VARIABLES 12

Partial differentiation – Homogeneous functions and Euler 's theorem – Total derivative – Change of variables – Jacobians – Partial differentiation of implicit functions – Taylor 's series for functions of two variables – Maxima and minima of functions of two variables – Lagrange 's method of undetermined multipliers.

UNIT III INTEGRAL CALCULUS 12

Definite and Indefinite integrals - Substitution rule - Techniques of Integration - Integration by parts, Trigonometric integrals, Trigonometric substitutions, Integration of rational functions by partial fraction, Integration of irrational functions - Improper integrals.

UNIT IV MULTIPLE INTEGRALS 12

Double integrals – Change of order of integration – Double integrals in polar coordinates – Area enclosed by plane curves – Triple integrals – Volume of solids – Change of variables in double and triple integrals

UNIT V EXTENDED WRITING 12

Reading- longer texts- close reading –Writing- brainstorming -writing short essays – developing an outline- identifying main and subordinate ideas- dialogue writing-Listening – listening to talks conversations- Speaking – participating in conversations- short group conversations-Language development-modal verbs- present/ past perfect tense - Vocabulary development-collocations fixed and semi-fixed expressions.

TEXT BOOKS:

1. Board of Editors. Using English A Coursebook for Undergraduates Engineers and Technologists. Orient BlackSwan Limited, Hyderabad: 2015
2. Richards, C. Jack. Interchange Students' Book-2 New Delhi: CUP, 2015.

REFERENCES:

1. Bailey, Stephen. Academic Writing: A practical guide for students. New York: Rutledge,2011.
2. Means,L. Thomas and Elaine Langlois. English & Communication for Colleges. CengageLearning, USA: 2007
3. Redston, Chris & Gillies Cunningham Face2Face (Pre-intermediate Student's Book & Workbook) Cambridge University Press, New Delhi: 2005 ", 12th Edition, Pearson India, 2016.