BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI-HYDERABAD CAMPUS
INSTRUCTION DIVISION, FIRST SEMESTER 2015-2016

COURSE HANDOUT (Part II)

14-05-2016

In addition to Part I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course.

Course Number **: BITS F113**
Course Title **: General Mathematics I**
Instructor-In charge **: Dr. K V S Shiv Chaitanya**

1. Scopes and objective of the course:

This Course deals with intermediate mathematics needed for Pharmacy students. Course covers set theory, Functions, Coordinate geometry, basic algebra & theory of equations, permutations and combinations, Binomial theorem, Trigonometry, One Dimensional Calculus: Limit and continuity, Differentiation, Integration, Application of derivatives and definite integration.

2. Text Books:

1. Mathematics for Class XI : Text book for CBSE national council of educational research and training .
2. Mathematics for Class XII part I : Text book for CBSE national council of educational research and training .
3. Mathematics for Class XII part II : Text book for CBSE national council of educational research and training

3 Reference books :

1 Thomas Finney : Calculus & analytic geometry 12th edition Pearson

2 Stewart : Calculus early transcendentals 5e 2003 thomson .

3 Lectures of Prof M Ganesh on review of elementary Calculus for the Course Engineering Math.

4 Lecture Plan:

Lect No.	Topic	Article
1-2	Sets, operation on sets, finite and infinite set, power set, Cartesian product, relations and functions	Chapter I &II of text book I
3-6	Trigonometric functions and their identies, simple trigonometric equations, trigonometric functions of sum and differences of two angles, inverse trigonometric functions	Chapter III of text book I , Chapter II text book 2
7-8	Complex numbers and quadratic equations	Chap. V article 1-4 & 6
9-10	Permutations & Combinations	Chap.VII of text book I
11-12	Binomial theorem for positive integer power	Chapter VIII of text book I

13-14	Arithmetic progression, geometric progression, Arithmetic mean , geometric mean ,infinite series , infinite geometric series ,exponential and logarithmic series	Chap. IX& appendix 1 of text book 1
15-17	Condition for parallelism and perpendicularity of two lines , angle between lines Equations of line in various forms(slope, intercept, through given two points, slope point, general) distance of a point from a line	Chapter X of text book I
18-21	Conic sections, eccentricity, latus rectum, Locus, circle, parabola, hyperbola, ellipse, pair of lines.	Chapter XI of text book I
22-24	Three dimensional geometry (distance, equations of line and plane in space, distance of a point from plane, equation of sphere)	Chap. XII of text book 1 & Chap. XI of text book 3
25-35	Limits , continuity , differentiability , higher order derivatives , Chain rule Logarithmic differentiation, mean value theorem, Rolle's theorem, Applications of derivatives to rates, slope of tangents, maxima and minima, indeterminate forms	Chap .XIII textbook 1.Chap. V & VI text book 2
36-42	Concept of anti derivatives and indefinite integrals, Methods of substitution, parts, partial fractions, trigonometric reduction formulas, fundamental theorem of calculus, Definite integrals, area under curve	Chapter VII & VIII of text book 3

5 Evaluation Scheme:

EC No.	Evaluation Component	Duration	Weightage (%)	Date & Time	Nature of Component
1.	Test I	60 min	20	08/09 & 10-11 AM	Closed Book
2.	Test II	60 min	20	25/10 & 10-11 AM	Closed book
3.	TH	-	20		Open Book
4.	Compre. Exam.	3 Hours	40	02/12 & FN	Closed Book

6 Announcements: All announcements in relation to the above course will be put up on the Physics Dept NB

7. Make up policy: Make up for the mid-semester/comprehensive examination will be given to genuine cases.

8. Chamber consultation hours: To be announced in the class.

Instructor In-Charge
BITS F113