

BOARD OF INTERMEDIATE EDUCATION:AP:HYDERABAD

The Subject Committee suggested the following changes in the Mathematics syllabus for Intermediate Second year (Bridge Course w.e.f. 2013-14)

PAPER – II

	No. of Periods
I. <u>Algebra</u>	
1. Partial Fractions	04
2. Exponential and Logarithmic series	06
II. <u>Co-Ordinate Geometry</u>	
3. The Circle	10
4. Conics	10
III. <u>Statistics</u>	
5. Measures of Dispersion	09
IV. <u>Calculus</u>	
6. Integration	14
7. Definite Integration	12
8. Differential Equations	10
Total No. of Periods	<hr/> 75 <hr/>

Detailed syllabus of Paper-II is enclosed herewith after incorporating necessary changes.

BOARD OF INTERMEDIATE EDUCATION:AP:HYDERABAD

BRIDGE COURSE

MATHEMATICS – II

(for Bi,P.C. Students w.e.f. 2013-14)

DETAILED SYLLABUS

I. Algebra (10 periods)

1. Partial fractions: Resolving $\frac{f(x)}{g(x)}$ into partial fractions when

- 1.1. $g(x)$ Contains non - repeated linear factors only.
- 1.2. $g(x)$ Contains repeated and non - repeated linear factors only.
- 1.3. $g(x)$ Contains non - repeated irreducible factors only.
- 1.4. $g(x)$ Contains - repeated and non - repeated irreducible factors only.

(number of factors of $g(x)$ should not exceed 4)

2. Exponential and Logarithmic series:

- 2.1. e^x expansion for real x
 - 2.2. expansion of $\log(1 + x)$, condition on x .
- (only statements of the results and very simple problems)

II. COORDINATE GEOMETRY (20 periods)

3. The Circle:

- 3.1. Equation of a circle - standard form - centre and radius - given ends of diameter - parametric equations of circle.
- 3.2. Position of a point - power of a point - length of tangent from a given point -
- 3.3. Equations of tangent, normal, chord of contact -
- 3.4. Relative positions of two circles - circles touching each other - common tangents -
- 3.5. Angle between two intersecting circles - orthogonal circles –

4. Conics

- 4.1. Standard forms of Parabola, Ellipse and Hyperbola (without proofs) – Simple Examples
- 4.2. Equations of tangent and Normal (without proofs) -Simple Examples.

III. STATISTICS (09 periods)

5. Statistics

- 5.1. Range
- 5.2. Mean deviation
- 5.3. Variance and standard deviation of grouped and ungrouped data.
- 5.4. Coefficient of variation and Analysis of frequency distribution with equal mean but different variance.

IV. Calculus (36 periods)

6. Integration:

- 6.1. Integration as the reverse process of differentiation - standard forms -
- 6.2. Methods of Integration.
- 6.3. Integration by parts - standard forms -
- 6.4. Rational functions - irrational functions

7. Definite Integration:

- 7.1. Properties (without proof) - simple problems on evaluation of definite integral.
- 7.2. Reduction formulae of $\int_0^{\pi/2} \sin^n x dx$, $\int_0^{\pi/2} \cos^n x dx$, $\int_0^{\pi/2} \tan^n x dx$ & $\int_0^{\pi/2} \cot^n x$ - (without proofs) - simple problems.

8. Differential equations:

- 8.1. Formation - general and particular solutions and primitives - degree and order of differential equations.
- 8.2. Solving first order and first degree differential equations - variables separable method -homogeneous equations.
