

PAPER – 6 & 7

MATHEMATICS CONTENT & METHOD

Objectives:

Student Teachers...

1. Understand aims ,objectives, meaning content & teaching of mathematics
2. Development of mathematics.
3. Understand the teaching methods, approaches and techniques of teaching mathematics.
4. Formulate instructional objectives in terms of behavioral out comes to prepare lesson plan & developing low cost teaching aids & their utilities.
5. Construct suitable tools for evaluation and understand the concept and use of diagnostic and remedial measures in mathematics.
6. Understand use of mathematics for various recreational activities.
7. Understand the professional efficiency required in mathematics teachers & importance of mathematics laboratory & mathematics club, mathematics text book & its evaluation.
8. Develop attitude & interest in teaching and learning of mathematics.

Unit -I

Chapter No	- 6,13,14,15	Of Std - VIII	= 4
Chapter No	- 1,2,5,7,9,11	Of Std - IX	= $\frac{6}{10}$

Unit- II

Chapter No	- 12,15,17,18,20,21,23,	Of Std – IX	= 7
Chapter No	- 1,3,4,	Of Std – X	= $\frac{3}{10}$

Unit - III

Chapter No	- 5,7,11,12,13,14,15,16,17,18,	Of Std – X	= 10
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Unit - IV

- A. Meaning of mathematics & development of mathematics in context of Indian mathematicians with reference to Bhaskaracharya, Aryabhata, Ramanujam, and contribution of Euclid, Pythagoras and Rene decarte.
- B. Objectives of teaching of mathematics and its behavioral change its domains – cognitive , Psychomotor and affective Methods of teaching of mathematics –inductive, deductive, analytical , synthetic ,lecture ,demonstration , Computer –Assisted-instruction , project.
- C. Using various techniques for teaching mathematics like –oral work, written work drill work, assignment, supervised study, computer-assisted - learning, programmed learning.

Unit - V

- A. Meaning, purpose and importance of a lesson plan, proforma of lesson plan, unit plan, monthly plan & yearly plan.
- B. Developing and preparing low cost improvised teaching aids and its importance. Developing audio visual and digitalized teaching aids, slides, etc., using computer. Skills of 'blackboard' writing, models, chart, T.V, film etc.
- C. Different Types of Evaluation tools in mathematics – ideal question paper based on blue print, concept, importance and preparation of diagnostic testing & remedial work, differences between diagnostic test and achievement test.

Unit -VI

- A. Teaching mathematics through recreational activities – Organizing skill development programme Answering Puzzle, quiz, magic square, question –box, etc.
- B. Professional efficiency of effective mathematics teachers, Objective, activities and importance of mathematics lab and mathematics club.
- C. Importance of text- book, characteristics of good text book, evaluation of text book and importance of surfing internet for e-literature in mathematics.

