Previous Year Questions Unit Wise| Teaching of Mathematics| D.El.Ed| SCERT Delhi

Unit 1 Mathematical Reasoning

1.1 Process of Generalisation: Pattern Recognition and Inductive Reasoning

1. How the ability of pattern recognition and inductive reasoning are important aspects of mathematical learning? Give two activities that would help children to develop these abilities. (5+5=10) (2016)
2. What do you mean by generalisation of pattern? How is it related to algebra? (2.5+2.5=5) (2017)
3. How will you develop the skill of generalisation in students of class 7? Explain using examples. (5) (2018)
4. How pattern recognition and inductive reasoning are helpful in the process of generalisation. Explain with suitable examples. (5+5=10) (2019)

1.2 Structure of Mathematics: Axioms, Definitions, Theorems

1. Explain the terms Axioms and Theorems with the help of suitable examples. (2.5+2.5=5) (2019)
2. How is the theorem different from Postulates and Axioms? Discuss the types of theorem you discuss in your class, with suitable examples. (3+2=5) (2022)

1.3 Validation Process of Mathematical Statements: Proofs, Counter Examples, Conjecture

1. Discuss the importance of definition and counter examples in Mathematics. Explain with suitable examples. (5) (2018)
2. What is ‘Conjecture’ in mathematics? Explain with suitable examples. How will you develop mathematical reasoning in students at elementary level? (1+3+6=10) (2018)
3. What do you mean by the word ‘conjecture’? Validate your understanding with suitable examples.

1.4 Problem Solving in Mathematics: A Process

1. Describe ‘Problem Solving Method’ of teaching Mathematics with the help of an example. How is this method useful in daily life? (5+5=10) (2016)
2. Explain “Problem Solving Process” in Mathematics with the help of suitable examples. What is the importance of “Problem Solving Process” in Mathematics? (7+3=10) (2017)

3. Problem solving in Mathematics is an art. Do you agree with the statement? Explain it. What are the benefits of the problem solving process for students? (3+7=10) (2022)

1.5 Creative Thinking in Mathematics

1. How will you develop creative thinking in your students through Mathematics teaching? Give examples. (3+2=5) (2016)
2. What steps may be taken to promote creativity among students in Mathematics class? Give examples. (2+3=5) (2017)
3. How creative thinking is helpful in developing Mathematical reasoning in students? Explain using suitable examples. (5) (2018)
4. How will you develop the Mathematical creative thinking among students at elementary level? Explain with activities. (5) (2019)