

B.Ed. Semester-I Examination 2014
Mathematics
Paper : B.Ed. - 115/116
Pedagogical Content Knowledge of Mathematics

Time : Three Hours

Full Marks : 70

Questions are of value as indicated in the margin.

Question No.1 is compulsory.

1. Prepare a lesson plan for 50 minutes duration on any one of the following : 14
 - (a) Profit & Loss
 - (b) Height & Distance
 - (c) Any issue related to Triangle
 2. Answer **any two** of the following: 2×14=28
 - (a) Highlight the major developments of Indian Mathematics. Enumerate the contributions of Ramanujam in Indian Mathematics. 7+7
 - (b) What are the aims of teaching 'Mathematics' at secondary level? How is Aim different from Objectives? Select any topic from Mathematics from Secondary Level of your choice and prepare three behavioural objectives. 5+3+6
 - (c) List-up five major and important characteristics of a text book. How a text book, a work book and a reference book on Mathematics can be used effectively? 5+9
 - (d) What is constructivism? Enumerate the characteristics of a constructivist teacher. Discuss in brief the nature of constructivist classroom. 4+5+5
 3. Answer **any two** questions : 2×8=16
 - (a) Discuss the axiomatic nature of language of mathematics. 4+4
 - (b) State the concept of 'Mathematics Laboratory'. Design a format for establishing mathematics laboratory. 2+6
 - (c) Explain the continuous and comprehensive evaluation at secondary level. 8
 - (d) Discuss the enrichment content and recreational mathematics in brief. 4+4
 4. Write notes on **any four** of the following : 4×3=12
 - (a) Mathematical propositions
 - (b) Contribution of *Aryabhatta* to Indian Mathematics
 - (c) Tagore's perspective for planning an effective lesson
 - (d) Computer Assisted Instruction
 - (e) Formative and Summative assessment
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