

Royal University of Bhutan  
Paro College of Education  
Spring Semester Examination – 2014

**B Ed (P) IV – Math in Upper Primary I (MAT 403)**

**Full mark: 100**

**Time: 3 hours**

**Instruction:** You are NOT allowed to use any electronic device. You will be supplied with Grid paper and decimal grid to answer some of the questions.

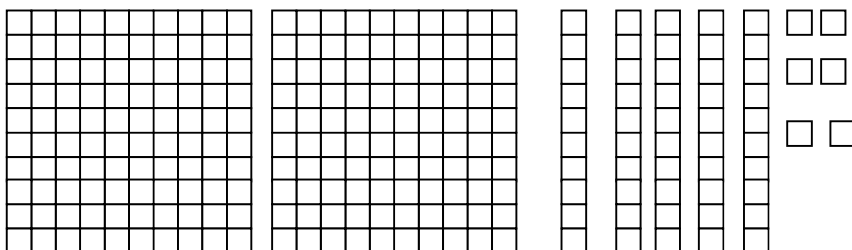
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**(5 x 20 marks = 100 marks)**

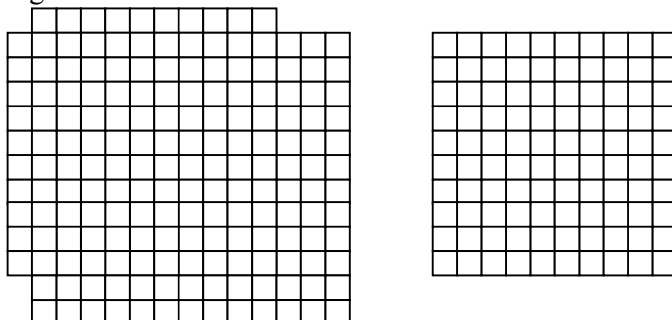
**Direction:** This paper contains six questions. You can answer **ANY FIVE** questions. All questions carry equal marks. Mark for each question or sub question is given in the square bracket.

**Question 1**

- a) Sonam wants to teach addition of fraction in class IV. He is not sure whether to teach fraction using Cuisenaire rods or use grid. If you are in his place, which manipulative will you use? Why? Show all the work in detail. Also, discuss how you would assess? [6 + 4]
- b) A child was factoring 256 using base ten blocks. He took the following blocks.



He arranged the blocks as shown below:



What mistake did he make? What should he do? Discuss how you would help the child? [10]

### Question 2

- a) Find the possible missing values indicated by blank spaces if  
 $23\_45\_56\_$  is divisible by 50. [10]
- b) Discuss three different ways of teaching multiplication to class IV students?  
[10]

### Question 3

- a) A child in class VI solved the following problem as shown:  
 $-5 - 7 = 12$   
What mistake did the child make? How will you correct this child's mistake? [10]
- b) Solve the following division problem using counters. Explain and illustrate with the help of diagrams.  
 $-15 \div -3$  [10]

### Question 4

- a) Design a word problem that will require to calculate  $25 \times 36$ . Model this problem using base ten blocks. [10]
- b) Sonam's father earn three times as much as her mother and her mother earns 5 times as much as Sonam. What is the ratio of earning of father to Sonam? Find the ratio of earning of father : mother : Sonam ? If their total earning is Nu 210,000, how much does each earn? [10]

### Question 5

- a) Factor the number 128 using base ten blocks. Explain everything in detail. [5]
- b) The weight of 27 students is given below:  
45 47 50 42 65 67 70 39 40 52 63 57 48 47 45 44 43  
42 58 69 46 55 47 52 45 60 56  
Draw a box and whisker plot and find: [10]
- i) median weight
  - ii) lower quartile or  $Q_1$
  - iii) upper quartile or  $Q_3$
  - iv) range
- c) Find the LCM of 3 and 4 by using: i) Cuisenaire rods ii) grid [5]

**Question 6**

a) Multiply the following: [10]

- i)  $325 \times 436$  by Lattice method
- ii)  $4625 \times 3456$  by Japanese method
- iii)  $76 \times 84$  by finger multiplication

b) Find two equivalent fractions of  $\frac{2}{10}$  by using: [10]

- i) Cuisenaire rods
- ii) grid
- iii) decimal grid

*Trashî Desele*