

Spring Semester Examination, 2018
Paro College of Education
Royal University of Bhutan
Paro

Module: MAT 202 (Maths in Lower Primary II) **Programme:** B.Ed (P) **Level:** II
Writing Time: 3 hours **Full Marks:** 100

Instruction: Do not write during the first 15 minutes. Use this time for reading the questions. This question paper consists of two sections, A and B. Section A is compulsory. It consists of multiple choice type questions and section B consists of long answer questions. The weighting for Section A is 20 marks and section B is 80 marks. Every question in section A is worth 2 marks and section B is worth 16 marks. The intended marks for the questions in section B are given alongside every question. Instructions for each section are mentioned accordingly. You are NOT allowed to use any electronic devices such as mobile phone and calculator.

SECTION A

One Question - 20 Marks

Question 1

Instructions: Answer all the sub-questions. Choose only one correct answer for each question and write in the answer script the correct answer against the question number.

- a. Zangmo's mean mark in 5 subjects is 72. Her marks in four subjects are: 68, 62, 80 and 74. How much mark has she scored in the fifth subject?
- A 71
B 79
C 284
D 76
- b. From a pack of cards, the theoretical probability of taking out either a King or a Queen is:
- A $\frac{2}{3}$
B $\frac{2}{52}$
C $\frac{1}{13}$
D $\frac{1}{26}$

- c. Which one is NOT the property of Rhombus?
- A can tessellate.
 - B all sides are equal.
 - C opposite sides are parallel.
 - D all interior angles are always 90^0 .
- d. The best estimate for the length of a tube light in centimeter is
- A 100
 - B 200
 - C 300
 - D 50
- e. If a dice numbered 6 to 11 is rolled once, the theoretical probability of getting a two digit number is
- A 50%
 - B 66.6%
 - C 33.3%
 - D 75%
- f. Tenzin ate one fourth of his birthday cake and gave the rest to her 4 friends equally. What fraction of the cake would each friend get?
- A $\frac{3}{16}$
 - B $\frac{3}{4}$
 - C $\frac{1}{4}$
 - D $\frac{13}{16}$

- g. In a bag there are eight pairs of different colour socks. Without looking into the bag what should be the minimum number of socks you need to take out so that you will have at least one pair of matching socks?
- A. 2
 - B. 8
 - C. 9
 - D. 10
- h. The number of faces in a pentagonal pyramid is
- A. 3
 - B. 4
 - C. 5
 - D. 6
- i. How many lines of symmetry an isosceles trapezoid has?
- A. 3
 - B. 2
 - C. 1
 - D. 0
- j. Which one of the following is NOT a polygon?
- A. Rectangle
 - B. Triangle
 - C. Circle
 - D. Kite

Section B (5 ×16 = 80 marks)

Instruction: There are **SEVEN** questions in this section. Answer any **FIVE** questions. Sub-questions must be answered in order and completely for every question. Intended marks for all the sub-questions are mentioned alongside

Question 2

- a. One of the objectives on measurement in Class PP states that "the children will be able to measure mass using non standards units". Prepare a lesson plan along with relevant activities and illustration to achieve this objective. (8)

- b. Prepare an instruction card on how to find the Area and Perimeter of an irregular 2D shapes. Draw suitable diagrams to support your instruction. (4 + 4)

Question 3

- a. What are the basic 2 D shapes introduced in Class I? How would you introduce these 2D shapes to class I children? Write down step by step presentation along with activities that you intend to provide to the children to familiarize these shapes. (2 + 6)

- b.
 - i. What is Line symmetry and Tessellation?
 - ii. Draw two pictures which have lines of symmetry and draw two shapes which tessellates.
 - iii. Describe any one activity that can be carried out to develop the concept of symmetry. (2 + 2 + 4)

Question 4

- a. Multiple 63 and 79 using any three different methods. Which method you liked the most and why? (6 + 2)

- b. Describe a suitable game to help Class I children develop the concept of addition. Write down the step by step instruction on how to play the game along with the illustration. (8)

Question 5

- a. "A rope of certain length will always enclose same area in whatever shape it is bent into". Do you agree with the statement? Justify your answer with appropriate example and illustrations of your own. (8)
- b. Here is subtraction question: $436 - 287$. How would you teach this, to Class II children using Base Ten Blocks? Explain with appropriate illustrations. (4 + 4)

Question 6

- a. The table below shows the number of students in DE course at Paro College of Education.

Sections/ Gender	DE IA	DE IB	DE IIA	DE IIB	DE IIIA	DE IIIB
Boys	16	18	10	20	10	21
Girls	20	8	12	10	18	17

Choose suitable scale and represent the information in the form of:

- Double Bar graph
- Pie Graph for the total number of students.

You are **NOT** provided with the separate graph paper. You need to draw the graphs in the answer sheet itself. (4 + 4)

- b. What are the two approaches of introducing division? Explain using your own stories and represent it using picture. (4 + 4)

Question 7

- a. In a box there are 24 counters numbered from 1 to 24. When randomly picked up what would be the probability of getting the following: (8)
- i. an even number?
 - ii. a two digit number?
 - iii. number which are the multiple of 3?
 - iv. number which are the multiple of 5?
 - v. prime number?
 - vi. a one digit number?
 - vii. Numbers which are the factors of 24?
 - viii. Composite numbers?
- b. Design a suitable game to help Class I children develop concept of subtraction. You need to include the sample of the game and the instruction for playing the game. (8)

Question 8

- a. Write down two multiple choice questions and two word problems suitable for class III children to check the concept of fraction. Include the solution for each question. (8)
- b. What are the two types of probability? Explain with examples. Design an activity to develop the concept of probability to class II children. (2 + 6)