ASSIGNMENT BOOKLET

Bachelor Degree Programme
&
Certificate Programme in Teaching of Primary School Mathematics

Teaching of Primary School Mathematics

(Valid from 1ˢᵗ July, 2018 to 30ᵗʰ June, 2019)

It is compulsory to submit the assignment before filling in the exam form.

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THE PEOPLE'S
UNIVERSITY

School of Sciences
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110068
(For July, 2018-2019 Session)

Dear Student,

Please read the section on assignments in the Programme Guide for Elective Courses that we sent you after your enrolment. A weightage of 30 per cent, as you are aware, has been earmarked for continuous evaluation, **which would consist of one tutor-marked assignment** for this course. The assignment is in this booklet.

Instructions for Formatting Your Assignments

Before attempting the assignment please read the following instructions carefully:

1) On top of the first page of your answer sheet, please write the details exactly in the following format:

ROLL NO.: …………………………………………

NAME: …………………………………………

ADDRESS: …………………………………………

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COURSE CODE: …………………………….

COURSE TITLE: …………………………….

STUDY CENTRE: ……………………..…..   **DATE:** …………………….……………...

PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

2) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.

3) Leave 4 cm margin on the left, top and bottom of your answer sheet.

4) Your answers should be precise.

5) While solving problems, clearly indicate which part of which question is being solved.

6) This assignment is valid only upto 30th June, 2019. If you have failed in this assignment or fail to submit it by 30th June, 2019, then you need to get the assignment for the next cycle (For July 2020) and submit it as per the instructions given in that assignment.

7) It is compulsory to submit the assignment before filling in the exam form.

   We strongly suggest that you retain a copy of your answer sheets.

We wish you good luck.

ASSIGNMENT

Note:

1) In any question, whenever we ask you to suggest an activity, we expect you to give one other than those covered in the units.

2) For any question worth 5 marks, the word limit is about 200 words, for a 10 mark question it is 350 words, and for a 15 mark question it is 500 words.

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1. a) Suggest an activity to help a child of class 3 realise that division by 0 is meaningless? (5)

    b) When a student in the third standard was asked to write the number six hundred sixty seven, she wrote 60076. What could be the possible reasons for making such an error. What will be your strategy to rectify her errors and help her to learn the correct way of writing the numbers. (5)

2. a) Give pictorial representations of (5)

    i) $\dfrac{3}{4} \times \dfrac{1}{3}$ ii) $\dfrac{3}{4} + \dfrac{1}{3}$

    b) Give 3 reasons for children not being comfortable with solving word problems. Illustrate these reasons through a single example related to algebra. (5)

3. a) A class 4 child was asked to solve a few problems on fractions. Her response to these problems were

    i) $6\dfrac{3}{5} + \dfrac{2}{5} = 6 \times \dfrac{3}{5} + \dfrac{2}{5} = 6$

    ii) $\dfrac{7}{3} \times 10 = \dfrac{7 \times 10}{3 \times 10} = \dfrac{7\cancel{0}}{3\cancel{0}} = \dfrac{7}{3}$

    iii) $\dfrac{36}{56} = \dfrac{3\cancel{6}}{5\cancel{6}} = \dfrac{3}{5}$

    Why do you think she responded like that? Suggest an activity to help her to understand the operations correctly? (10)

4. a) Illustrate the process of moving from particular to general giving one example each from a mathematical and non-mathematical context. (5)

    b) Give two examples in the context of addition of numbers with carry-over giving an evidence that children develop their own strategies to solve problems. (5)

5. a) A common misconception children have is that the larger the perimeter, the larger the area of a two-dimensional figure. Devise an activity to clear this misconception. (5)

    b) Suggest an activity to evaluate a child's abilities to add and subtract in the context of measuring time. Explain why this activity is an activity for evaluation. (5)

6. a) Explain why the three pre-number concepts need to be developed by a learner for her to be able to count. Your explanation needs to include specific examples. (6)

    b) Ilustrate how the E – L – P – S sequence can be applied to help children understand the concept of 'angle'. (4)

7. a) Children have several misconceptions regarding negative numbers. List four of them. Also, for any one of these misconceptions, give a detailed strategy for helping the children correct it. (6)

    b) The diversity in any classroom has major implications for teaching mathematics. Explain this statement, with examples from teaching algebra to support your explanation. (4)

8. a) List 3 errors that you would except a child of class 5 would make while measuring different angles with a protractor. Choose 3 – 4 children of class 5 from your neighbourhood, give each of them a protractor to measure an angle and closely observe how they are using the protractor. If they did anyone, find out the reasons for making the error/s. (6)

    b) For a class 4 of 30 children device one activity each for

        i)   introducing the concept of length.

        ii) evaluating the ability to measure length. (4)

9. Outline a series of three activities (each requiring a different level of learner's ability) to help a learner develop an understanding of 'place value'. Also specify the link between different activities which makes the series. (Note that giving a 'series' means that the links between the different activities must also be brought out). (10)

10. Give an example each, with justification, to support the following statements:

    i)   Classroom relationships become a resource for developing the mathematical abilities of children.

    ii) Each child needs time to reflect on the mathematical concept or process being taught.

    iii) Learning experiences should be designed so as the build on existing proficiencies, interests and experiences, for effective mathematical teaching.

    iv) Each of us must develop the ability to estimate.

    v)   Mathematical problems can have diverse solutions. (10)