

(10) Seat No: _____

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Sardar Patel University,
B. Ed. (Advanced) Programme CBCS
October 2016
Semester – 1 External Examination
UE01EB2A08
CPS – 1 : Understanding Mathematics

Date: 21/10/16

Day: Friday

Total Marks: 70

Timing: 10:00 am to 1:00 pm

Instructions:

- All the Six questions are compulsory.
- The figures in the brackets to the extreme right indicate marks.

Q.1 (A) Answer the following questions in brief. (Any Five out of Six) (15)

1. How Drill technique help teacher in teaching Mathematics?
2. Explain the nature of explanation skill in teaching Mathematics with suitable illustration.
3. Write the advantages and disadvantages of Lecture cum Discussion method in teaching Mathematics.
4. Prepare an evaluation stage for the concept 'Area of a Traingle'.
5. Why student – student interaction is most important in learning Mathematics?
6. Explain the concept of Lecture cum discussion method in teaching Mathematics

Q.2 Answer the following question. [10]

Problem-solving is a process—an ongoing activity in which we take what we know to discover what we don't know. Discuss this statement in context to :

- a. Concept of Problem Solving Method
- b. Steps of Problem Solving Method to teach concept 'Angles'.

OR

Q.2 Write short notes on the following topics.

1. Use of Effective Communication in Mathematics Classroom
2. Demonstration technique in Mathematics teaching

Q.3 Answer the following questions in approximately 160 words each. (Any Two out of Three) [10]

1. Prepare two students' activities to teach the concept 'Number Line'.
2. Describe relevant use of terminology in Mathematics teaching.
3. 'Questions are a powerful way of: Learning Mathematics.' Give your comments.

Q.4 (A) Answer the following questions in brief. (Any Five out of Six) [15]

1. Write three applications of concept Profit and Loss in our daily life.
2. Differentiate between monomial and polynomial with suitable illustration.
3. State the properties of parallelogram.
4. What is compound Interest? Write the formula to find the Compound Interest.

(P.T.O.)

5. Write six trigonometric ratios used in Trigonometry.
6. Factorize the following using difference of square method
 - a. $4Y^2 - 9X^2$
 - b. $36a^2 - 81b^2$

Q. 5 Answer the following questions in brief.

[10]

1. Write one linear equation.
2. Write a mathematical equation of Pythagoras theorem for the triangle PQR.
(Where Q is a right angle)
3. Factorise $40a^2b + 15ab^2$
4. What is the cube root of 8 and 27?
5. State the formula for finding area of a cylinder.
6. Give the formula for finding profit.
7. What is the coefficient for leading term in the polynomial $5a^2 + 2a - 8$
8. Give reason why $x^2 + 2x + 5$ is a polynomial.
9. Write the Heron's formula for finding area of a triangle.
10. Give the degree of the following polynomial: $2x^5 - 5x^3 - 10x + 9$

Q. 6 Answer the following questions in approximately 160 words each. (Any Two out of Three)

[10]

1. Add following polynomial
 - a. $2x^2 + 6x + 5$ and $3x^2 - 2x - 1$
 - b. $2x^2 + 6y + 3xy$ and $3x^2 - 5xy - x$
2. A shopkeeper offers a discount of 20% on the selling price. On a special sale day, he offers an extra 25% off coupon after the first discount. If the article was sold for Rs. 3600, find
 - a. The marked price of the article
 - b. The cost price if the shopkeeper still makes a profit of 80% on the whole after all discounts are applied.
3. The perimeter of the quadrilateral is 50 cm and the lengths of three sides are 9 cm, 13 cm and 17 cm. Find the missing side of the quadrilateral.

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