

Indian Knowledge System

Topic : Arithmetic (8.3)

Faculty:-A N Mukunda Rao

Submitted by:-

Yashavanth H S - 1SI22EC119

Tanmay Simha K J - 1SI22EC106

ECE 6th Sem B

1. What is arithmetic?

- a) A branch of biology dealing with numbers
- b) A branch of mathematics dealing with computation using numbers
- c) A branch of physics studying motion
- d) A type of ancient writing system

Answer: b) A branch of mathematics dealing with computation using numbers

2. Who contributed to the development of Indian arithmetic in the 5th century CE?

- a) Brahmagupta
- b) Pythagoras
- c) Aryabhata
- d) Euclid

Answer: c) Aryabhata

3. What numerical system did Indian arithmetic develop that used symbols from 0 to 9?

- a) Roman numeral system
- b) Binary system
- c) Decimal place value system
- d) Fractional system

Answer: c) Decimal place value system

4. Who established the use of 0 as a number and provided rules for its operations?

- a) Euclid
- b) Aryabhata
- c) Severus Sebokht
- d) Brahmagupta

Answer: d) Brahmagupta

5. Which mathematical operations did Brahmagupta define for zero?

- a) Addition, subtraction, multiplication, and division
- b) Exponents and logarithms
- c) Square roots and cube roots
- d) Only addition and subtraction

Answer: a) Addition, subtraction, multiplication, and division

6. According to Syriac bishop Severus Sebokht, what was special about the Indian system of mathematics?

- a) It used only three symbols
- b) It had a rational method of calculation using nine symbols
- c) It was based on pictorial representation
- d) It was less efficient than other systems

Answer: b) It had a rational method of calculation using nine symbols

7. By when was the Indian decimal place value system well known?

- a) 3rd century CE
- b) 5th century CE
- c) Middle of the 7th century CE
- d) 10th century CE

Answer: c) Middle of the 7th century CE