

# KAMARAJ COLLEGE (Autonomous)

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(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(4 Pages)

Reg. No:.....

Question Code: 26E03903

Course Code: 25USH021

UG Degree - End Semester Examinations, April 2026

Second Semester

B.COM HONOURS

Problem Solving through Aptitude - II

(For those who joined in June 2025 onwards)

Time : 3Hours

Maximum : 75 Marks

## PART - A ( $10 \times 1 = 10$ Marks)

Answer ALL Questions

Choose the correct answer :

CO:1 1. Which of the following is a composite number?

- K:1 (a) 2 (b) 3  
(c) 5 (d) 9

CO:1 2. If  $a : b = 2 : 3$  and  $b = 12$ , then  $a =$

- K:1 (a) 6 (b) 8  
(c) 10 (d) 4

CO:2 3. The roots of  $x^2=9$  are \_\_\_\_\_

- K:1 (a) 3 (b) -3  
(c)  $\pm 3$  (d) 0

CO:2 4. If the discriminant is negative, the roots are \_\_\_\_\_

- K:2 (a) Real & equal (b) Real and Unequal  
(c) Imaginary (d) Rational

CO:3 5. The value of  $\pi$  is approximately \_\_\_\_\_

- K:1 (a) 2.14 (b) 3.14  
(c) 2.24 (d) 4.13

CO:3 6. A cone has radius 3.5 cm and height 6 cm. Its volume is \_\_\_\_\_

- K:1 (a)  $88 \text{ cm}^3$  (b)  $77 \text{ cm}^3$   
(c)  $44 \text{ cm}^3$  (d)  $154 \text{ cm}^3$

- CO:4 7. If a pie chart shows education as  $90^\circ$ , the percentage spent  
K:1 on education is\_\_\_\_\_
- (a) 20% (b) 30%  
(c) 25% (d) 40%
- CO:4 8. If total production is 500 units and defective units are 50,  
K:1 the percentage of defective units is\_\_\_\_\_
- (a) 5% (b) 10%  
(c) 90% (d) 12%
- CO:5 9.  $3 : 27 :: 4 : ?$   
K:1
- (a) 16 (b) 64  
(c) 12 (d) 81
- CO:5 10. Pointing to a woman, Ravi said, "She is my mother's only  
K:1 daughter." Who is she to Ravi?
- (a) Sister (b) Cousin  
(c) Aunt (d) Mother

**PART - B (5 X 5 = 25 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 250 words.**

- CO:1 11. (a) If the ratio of boys to girls in a class is 3 : 2 and there are  
K:3 30 boys, find the number of girls.

**(OR)**

- (b) Find out the HCF and LCM of 24 and 36 using the prime factorization method.

- CO:2 12. (a) The sum of two numbers is 15 and their difference is 3.  
K:4 Discover the numbers.

**(OR)**

- (b) Simplify:  $(2x + 3)(x - 4)$

- CO:3 13. (a) Find the volume of a cuboid of length 10 cm, breadth 4  
K:3 cm and height 6 cm.

**(OR)**

- (b) A rectangular field is 40 m long and 25 m wide. Find its area and perimeter.

- CO:4 14. (a)  
K:3
- | Item      | Amount (₹) |
|-----------|------------|
| Food      | 3,000      |
| Rent      | 4,000      |
| Transport | 1,000      |

i) Find the total expenditure and percentage spent on rent.

ii) Identify the item with the least expenditure and find its percentage.

**(OR)**

(b)

Month	Profit (₹)
Jan	2,000
Feb	2,500
Mar	3,000

i) Find the total profit and average profit?

ii) Find the percentage increase from January to March.

C0:5 15. (a) i) Find the next three numbers? 7, 14, 28, 56, \_\_, \_\_, \_\_

K:3 ii) Find the missing alphabet? B, E, H, K, \_\_, \_\_

**(OR)**

(b) i) Pointing to a man, Seema said, "He is my father's brother." Who is he to Seema?

ii) Find the next three numbers: 2, 3, 5, 7, 11, 13, 17, \_\_, \_\_, \_\_

**PART - C (5 X 8 = 40 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 500 words.**

C0:1 16. (a) The ratio of the incomes of A and B is 5 : 7 and the ratio of  
K:3 their expenditures is 3 : 4. If A saves ₹2000 and B saves ₹3000, find their incomes.

**(OR)**

(b) The population of a town increases by 10% annually. If the present population is 50,000, find the population after 2 years.

C0:2 17. (a) The product of two consecutive positive integers is 132.  
K:3 Find the integers.

**(OR)**

(b) Solve:  $x^2 - y^2 = 21$  ;  $x + y = 7$

C0:3 18. (a) A rectangular hall is 20 m long and 15 m wide. Value the cost of flooring it at ₹25 per m<sup>2</sup>.  
K:5

**(OR)**

(b) A water tank is in the shape of a cylinder of radius 7 m and height 3 m. Assess the capacity of the tank in litres.

C0:4 19. (a)

K:5

Item	Expenditure (₹)
Food	3,600
Rent	2,400
Education	3,000
Medicine	1,800

i) Convert the data into a pie-chart angle and interpret.

ii) Assess the Percentage of each expenditure on total expenditure.

**(OR)**

(b)

Product	Cost Price (₹)	Selling Price (₹)
A	500	650
B	800	950
C	1,000	1,300

i) Calculate profit on each product.

ii) Identify product with highest profit.

iii) Value profit percentage for Product C.

C0:5 20. (a) A man saves Rs.20 in the first month, Rs.30 in the second month, Rs.40 in the third month and so on. Predict how much has he saved at the end of 5 years?  
K:6

**(OR)**

(b) Find 3 terms in Geometric Progression if their sum is 26 and their product is 216.