C 31087

THIRD SEMESTER B.Com./B.B.A. DEGREE EXAMINATION, NOVEMBER 2017

(CUCBCSS—UG)

Common Course

A 11—BASIC NUMERICAL SKILLS

Time : Three Hours

Maximum : 80 Marks

Part I

Answer all questions.

1. Given the term in the sequence 1, 3, 7, 15, 31, next term is :

   (a) 62.

   (b) 46.

   (c) 63.

   (d) 60.

2. A set contains only one element is called ——————.

   (a) Singleton set.

   (b) Null.

   (c) Power set.

   (d) None of these.

3. The classification 10-19, 20-29, 30-39 is the example of :

   (a) Exclusive.

   (b) Inclusive.

   (c) Both.

   (d) None.

4. Lorenz Curve is used to study :

   (a) Skewness.

   (b) Kurtosis.

   (c) Correlation.

   (d) Dispersion.

5. Pie diagrams are —————— dimensional diagrams.

   (a) One.

   (b) Two.

   (c) Three.

   (d) Four.

6. A series is obtained by adding a constant number to its preceding term is ——————.

   (a) G.P.

   (b) A.P.

   (c) G.P. or A.P.

   (d) None.

Turn over

7. A well defined collection of defined object is called —————.

   (a) Matrix.

   (b) Set.

   (c) Equation.

   (d) None.

8. If A matrix of order 3 × 7 and B is order of 7 × 4, then AB is of order —————.

   (a) 3 × 4.

   (b) 7 × 7.

   (c) 3 × 7.

   (d) 7 × 3.

9. What is the median for the following 1, 3, 5, 2, 6, 4, 7.?

   (a) 2.

   (b) 5.

   (c) 6.

   (d) 4.

10. ————— is filled by the enumerator.

   (a) Questionnaire.

   (b) Schedule.

   (c) Questionnaire or schedule.

   (d) All.

$(10 \times 1 = 10$ marks)

Part II (Short Answer Questions)

Answer any **eight** *questions.*

11. What is quadratic equation ?

12. What is editing ?

13. Define set.

14. What is geometrical progression ?

15. Name the type of data for which multiple diagrams is used.

16. Represent $A = \{x/x$ is an integer, $x^2 \le 4\}$ in roster form.

17. Solve $4x = 20$.

18. Find the Q.D. of the following :

    391, 384, 591, 407, 672, 522, 777, 1490, 2488.

19. The third term of a GP is 4. Find the product of its first 5 terms.

20. Rahul borrows Rs. 500 for four months at a simple interest rate of 12%. How much interest does he pay ?

$(8 \times 2 = 16$ marks)

Part III (Short Essays)

Answer any six questions.

21. Distinguish between questionnaire and schedule.

22. Consider the statement : "Integers between —3 and 3". Write the roster and set builder forms.

23. Find the inverse of a matrix A given by :

$$A = \begin{matrix} 5 & -2 & 4 \\ -2 & 1 & 1 \\ 4 & 1 & 0 \end{matrix}$$

24. Which term of the AP 4,9,14,.....is 109 ?

25. A lorry covers the first 30 km. at the speed of 15 km. per hour, the second 30 km at the speed of 20 km. per hour and the last 30 km. at the speed of 25 km. per hour. Find the average speed of the lorry.

26. Find the simple interest rate for Rs. 3,000 to earn Rs. 270 interest in 9 months.

27. In an election 72,000 votes were casted. Out of four candidates, the first got 24,000 votes, the second got 20,000 votes, the third got 18,000 votes and the fourth got 10,000 votes. Draw a Pie-chart for these data.

28. Solve $5y + y = 30$.

$$(6 \times 4 = 24 \text{ marks})$$

Part IV (Long Essays)

Answer any two questions.

29. Construct with the help of the data given below Fisher's Ideal Index Number :

Commodity	Base Year Price	Base Year Quantity	Current Year Price	Current Year Quantity
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24
E	8	40	12	36

30. Solve : $3x + 8 = 17$.

31. From the following data find the trend values by 5 yearly moving averages :

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Sales	36	43	43	34	44	54	34	24	14

$$(2 \times 15 = 30 \text{ marks})$$