17U148 (Pages:3) Name: ……

Reg. No……..

FIRST SEMESTER B Com. PROFESSIONAL DEGREE EXAMINATION, NOV 2017

(CUCBCSS-UG)

CC15U BCP1 B03 – NUMERICAL SKILLS

(Core Course)

(2017 - Admission Regular)

Time : Three Hours Maximum : 80 Marks

PART A

Answer ***all*** questions. Each question carries 1 mark.

1. Find the A.M of 20, 25, 15, 10

   (a) 14 (b) 15.5

   (c) 20.5 (d) 17.5

2. In the equation $ax^2+bx+c=0$, if b=0 then the quadratic equation is called as

   (a) General (b) Linear

   (c) Pure (d) None

3. If A= {a, b, c} then the number of elements in the power set is

   (a) 6 (b) 12

   (c) 8 (d) 10

4. If $a^{1/x} = b^{1/y} = c^{1/z}$ and a, b, c are in G.P then x, y, z are in

   (a) H.P (b) A.P

   (c) G.P (d) None

5. Less than ogive and greater than ogive intersect at

   (a) Mode (b) Mean

   (c) Median (d) S.D

Fill in the blanks:

6. If $A^T = A$ then it is a .....matrix

7. Null set is also known as.....

8. A quadratic equation has.....roots

9. The present value of Rs 400 due after 5 years compounded annually at 8% is

10. .....is an ideal index number

(1x10=10 Marks)

PART B

Answer any ***eight*** questions, each questions carries 2 marks.

11. Form quadratic equation with roots 3,-5

Turn Over

12. The compound interest on Rs 7000 for 4 years payable quarterly at 6% p.a.

13. If

Find:

(a) A + B (b) A – B

14. Solve $4x^2-7x+2 = 0$.

15. State Demorgan's law.

16. Find S.D and Coefficient of variation;

41, 43, 45, 47, 55, 56, 60, 61.

17. Elucidate any two methods of measuring trend.

18. By using Venn diagram represent,

(a) A∩B∩C. (b) A-B

19. Which term of the series 12+9+6... is -100.

20. Explain:

(a) Continuous variable. (b) Discrete variable.

(2x8=16 Marks)

PART C

Answer any *six* questions. Each question carries 4 marks.

21. If $A = \begin{pmatrix} 3 & -3 & 4 \\ 2 & -3 & 4 \\ 0 & -1 & 1 \end{pmatrix}$ Find A^{-1}.

22. Find three numbers in AP whose sum is 14 & product is 64.

23. Solve the system of equation 5x+6y = 3, and 7x+11y = 8.

24. If x+4, 3x-2, 4x-2..... is an arithmetic sequence then,

(a) Find x (b) write the sequence

(c) Find the n^{th} term

25. Find median in the following data.

Class limits:	20-29	30-39	40-49	50-59	60-69
Frequency:	10	8	6	4	2

26. Define Primary data

27. A= { 1,3,5,7} B = {5,9,13,17} C = { 1,3,9,13}.

(a) AUBUC (b) (A-B) ∩ C

(c) A∩B∩C (d) (AUC)-B

28. Explain Positive and Negative Skewness

(6x4=24 Marks)

PART D

Answer any ***two*** questions. Each question carries 15 marks.

29. What is a time series, its objectives, and also explain the components.

30. An enquiry into the budgets of class of families in the city of Pune was as follows:

Item	Eatables	Gasoline	Wearing apparels	EMI	Others
Expenditure	35%	10%	20%	15%	20%
Cost in 2011	150	25	75	30	40
Cost in 2015	175	38	85	40	62

What change in cost of living of 2015 has taken place compared to 2011?

31. Solve by Crammers rule.

2x-3y+5z = 11

5x+2y-7z = -12

-4x+3y+z = 5

(15x2=30 Marks)

****