

19U149

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Name:

Reg. No.....

FIRST SEMESTER B.Com. PROFESSIONAL DEGREE EXAMINATION, NOVEMBER 2019

(Regular/Supplementary/Improvement)

(CUCBCSS-UG)

CC15U BCP1 C01 – NUMERICAL SKILLS

(Complimentary Course)

(2017 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

PART A

Answer *all* questions. Each question carries 1 mark

1. The classification 2-4 5-7 8-9 10-12 is the example of
(a) Inclusive (b) Exclusive (c) Both a & b (d) None of these
2. A set that contains no elements is called
(a) Singleton set (b) Equal set (c) Nullset (d) None of these
3. Collection ofdata involves huge expenses.
(a) Secondary (b) Primary (c) Both a or b (d) All of these
4. Geometric mean of 16 and 4
(a) 2 (b) 8 (c) 16 (d) 4
5. Statistical results are
(a) Absolutely correct (b) Not true
(c) True on an average (d) Universally true

Fill in the blanks:

6. If A and B are any two sets and A subset of B then $A \cap B$ is
7. A Quadratic equation has roots.
8. When the distribution is positively skewed mean, median and mode are
9. In the case of simple interest principal remains
10. The point $(-2, -7)$ lies in quadrant.

(10 x 1 = 10 Marks)

Part B

Answer any *eight* questions. Each question carries 2 marks.

11. Define consumer price index number.
12. Solve $x^2 + 10x + 21 = 0$
13. If $U = \{1, 2, 3, 4, 5\}$ and $A = \{2, 4, 5\}$ Find A^c
14. Sum of Three terms of a G.P is 35 and product is 1000. Find the terms.
15. Using Venn diagram represent
a) $A \cup B$ b) $A \cap B$

16. What do you mean by Pie diagram?
17. Which term of the series -2, 0, 2, 4 is 102?
18. Find the value of the determinant
- | | | |
|---|---|---|
| 2 | 3 | 1 |
| 4 | 2 | 6 |
| 6 | 3 | 9 |
19. For what period will ` 85,000 amounts to ` 1,57,675 at 4.5% per annum simple interest?
20. What is statistical Investigation?

(8 x 2 = 16 Marks)

PART C

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

21. Find quartile deviation
- | | | | | | | | | |
|-----------|---|---|----|----|----|----|----|----|
| Size | : | 5 | 8 | 10 | 12 | 19 | 20 | 32 |
| Frequency | : | 3 | 10 | 15 | 20 | 8 | 7 | 6 |
22. Solve the equation $4x^2 - \sqrt{3}x + 1/4 = 0$
23. Find the sum of all natural numbers between 200 and 400 which are divisible by 4
24. Solve the equation by Cramer's rule $2x - 3y = 3$ and $4x - y = 11$
25. Write a short note about the methods of measuring trend.
26. Let $A = \begin{bmatrix} 2 & 3 & -4 \\ 6 & 7 & 8 \end{bmatrix}$ $B = \begin{bmatrix} 6 & -3 & 2 \\ 5 & 0 & 8 \end{bmatrix}$ Find $4A - 3B$
27. Using the method of least squares find the trend values
- | | | | | | | | | |
|--------|---|------|------|------|------|------|------|------|
| Year | : | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Profit | : | 60 | 72 | 75 | 65 | 80 | 85 | 95 |
28. What are the limitations of diagram in statistics?

(6 x 4 = 24 Marks)

Part D

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

29. Draw Ogive curve from the following data and represent median.
- | | | | | | | | | |
|--------------|---|-----|-------|-------|-------|-------|-------|-------|
| Class limits | : | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 |
| Frequency | : | 8 | 15 | 18 | 30 | 16 | 12 | 6 |
30. Calculate S.D. from the following data.
- | | | | | | | | |
|--------------|---|-----|------|-------|-------|-------|-------|
| Class limits | : | 0-5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-30 |
| Frequency | : | 6 | 8 | 10 | 15 | 12 | 9 |
31. If $A = \begin{bmatrix} 1 & 1 & 1 \\ 1 & -2 & 3 \\ 2 & -1 & 3 \end{bmatrix}$ Show that $A(\text{adj}A) = (\text{adj}A)A$

(2 x 15 = 30 Marks)
