Reg. No. : ....

Name : ....

V Semester B.A. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/ Improvement) Examination, November 2023
(2019 – 2021 Admissions)
CORE COURSE IN ECONOMICS/DEVELOPMENT ECONOMICS
5B07 ECO/DEVECO : Basic Tools for Economic Analysis – I

Time : 3 Hours   Max. Marks : 40

PART – A

Answer **all** questions. **Each** carries **one** mark.

1. Simplify $5^{1/3} \times 5^{5/3}$.

2. What is an equation ?

3. Describe the linear function.

4. Define absolute frequency.

5. What is meant by Kurtosis ?

6. Describe equally likely events.   (6×1=6)

PART – B

Answer **any six** questions. **Each** carries **two** marks.

7. Find the sum of the 10 terms in the series 1, 3, 9, 27, . . .

8. If an investment grows at a compound annual growth rate of 5%, starting with an initial value of Rs. 10,000, what will be the value of the investment after 5 years ?

9. Distinguish between equal set and equivalent set.

10. Define the cost function and give an example.

P.T.O.

11. List out the important measures of Dispersion.

12. Find the mean, median and mode for the data set 3, 7, 9, 4, 5, 4, 6, 7 and 9.

13. What is histogram ? Illustrate it.

14. A card is drawn from a pack of cards. What are the probabilities of getting

   a) a spade

   b) a black card and

   c) a King or a Queen. **(6×2=12)**

PART – C

Answer **any four** questions. **Each** carries **three** marks.

15. Solve the quadratic equation : $x^2 - 5x + 6 = 0$.

16. State the rules of Logarithm with example.

17. Give the cost function is TC = 2q + 200 and Revenue function is
    TR = $3q^2$ + 4q – 2.
    Find the profit function and profit when 10 units are produced.

18. Compute median for the following data.

Class	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
Frequency	8	12	20	23	18	7	2

19. Define frequency polygon and draw frequency polygon for the following data.

Class	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
Frequency	6	9	15	20	10	5

20. Axiomatic approach of probability theory. **(4×3=12)**

PART – D

Answer **any two** questions. **Each** carries **five** marks.

21. Solve for x, y and z

    2x – y + z = 3,

    x + 3y – 2z = 11

    3x – 2y + 4z = 1

22. Describe the fundamental concepts of relations and functions highlighting their use in economics.

23. What is an average ? Examine the important requisites of a good average.

24. State and explain the theorems of probability. **(2×5=10)**

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