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(Pages : 2)

Name.....

Reg. No.....

THIRD SEMESTER B.Com./B.B.A. DEGREE (UG-CCSS) EXAMINATION JANUARY 2014

(SDE)

[Common Course]

A 13—BASIC NUMERICAL SKILLS

(2011 Admissions)

Time : Two Hours and Forty-five Minutes

Maximum : 27 Weightage

Answers should be written only in **English**.

Part B

Section A

I. Short answer type questions. Answer all *nine* questions :

1. Solve $(2 - x) + 4(3 + x) - 12 = x + 13$.
2. Find 10th term of the AP : $-1, 0, 1, \ldots$
3. Define Disjoint sets.
4. Define Universal set.
5. Define Arithmetic Progression.
6. Define Standard deviation.
7. Define Column Matrix.
8. What do you mean by roots of the quadratic equation ?
9. What do you mean by submatrix ?

(9 × 1 = 9 weightage)

Section B

II. Short essay *or* paragraph questions. Answer any *five* questions out of seven :

10. Using the sets $A = \{2, 3, 4, 5, 6, 7, 8\}$; $B = \{2, 4, 5, 6, 7\}$; $C = \{5, 6, 7, 8\}$. Verify that $(A - B) \cup C = (A - B) \cap (A - C)$.
11. Solve $x^2 + 10x + 21 = 0$ by factorization method.
12. Solve the system of equations by elimination method : $13x + 17y = 91$ and $13x + 3y = 49$.

Turn over

13. Find the total interest amount at the end of 8th year for Rs. 11,300 at 9% p.a. simple interest ?

14. What are the benefits of weighted Arithmetic Mean.

15. Which term of the series – 2, 0, 2, 4, ... is 102 ?

16. Find BA, if $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & 4 & 2 \\ 1 & 0 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 1 & 2 \\ 1 & 6 & 1 \\ 2 & 3 & 4 \end{bmatrix}$.

(5 × 2 = 10 weightage)

Section C

III. Essay (Answer any *two* question out of 3).

17 Compute Standard Deviation of the following data :

X :	2	7	11	15	18	20	25
Frequency :	2	6	10	12	10	8	2

18. In a school of Fine Arts 150 students are dancers and 98 students are singers. If 63 students are both dancers and singers. Find out total number of students in the school ?

19. Mr. Aravind borrowed from a bank Rs. 10,000 and agreed to pay back the loan with an interest of Rs. 1,400 in 12 installments. Each installment is Rs. 100 less than the previous one. Find the first five installments.

(2 × 4 = 8 weightage)