



**II Semester B.Com. Degree Examination,
September/October 2020**
COMMERCE – COMPUTER SCIENCE – Vocational
Paper 2.5 – Numerical and Statistical Methods
(CBCS)

Time : 3 Hours

Max. Marks : 70

SECTION – A

Answer **any five** questions. Each question carries **2** marks : **(5 × 2 = 10)**

1. (a) What are the decimal codes for $(1010)_2$ and $(0101)_2$?
- (b) Is (82H6) Hexadecimal?
- (c) What is the 2's complement of 110011?
- (d) State the meaning of Secondary data.
- (e) Define Mean.
- (f) What do you mean by regression?
- (g) Give the meaning of moving average.

SECTION – B

Answer **any four** questions. Each question carries **5** marks : **(4 × 5 = 20)**

2. Convert octal 162 to decimal.
3. What is error? Write the different types of errors in computation.
4. Find 1's and 2's complement of 1010101.
5. Compute standard deviation from the following data :

| | | | | | |
|--------------------|---------|---------|---------|---------|---------|
| Daily Wages : | 100–110 | 110–120 | 120–130 | 130–140 | 140–150 |
| No. of Employees : | 23 | 18 | 23 | 25 | 31 |



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6. Compute the Mean wages of the following data :

| | | | | | |
|------------------|-----|-----|------|-------|-------|
| Wages (): | 4-6 | 6-8 | 8-10 | 10-12 | 12-14 |
| No. of Workers : | 6 | 12 | 17 | 10 | 5 |

7. Calculate rank correlation coefficient between X and Y series given below :

| | | | | | | | | |
|----|----|----|----|----|----|----|----|----|
| X: | 70 | 65 | 71 | 62 | 58 | 69 | 78 | 64 |
| Y: | 91 | 76 | 65 | 83 | 90 | 64 | 55 | 48 |

SECTION - C

Answer **any four** questions. Each question carries **10** marks : (4 × 10 = 40)

8. Convert hexadecimal 3B9.2C to decimal and binary.

9. Calculate the binary addition and subtraction for the following (10110) and (0011).

10. Subtract 1001 - 1110 using 1's and 2's complement method.

11. Compute mode from the distribution :

| | | | | | | |
|-------------------|-------|-------|-------|-------|-------|-------|
| Marks : | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 |
| No. of Students : | 5 | 8 | 12 | 16 | 10 | 8 |

12. Calculate standard deviation and coefficient of standard deviation for the following data :

| | | | | | | |
|----|----|----|----|----|----|----|
| X: | 32 | 44 | 56 | 68 | 80 | 92 |
| Y: | 18 | 16 | 14 | 24 | 32 | 38 |

13. Find out the correlation between age of husband and age of wife.

| | | | | | | | |
|---------------------|----|----|----|----|----|----|----|
| Age of husband (X): | 46 | 54 | 56 | 56 | 58 | 60 | 62 |
| Age of wife (Y): | 36 | 40 | 44 | 54 | 42 | 58 | 54 |