# B.B.A. DEGREE EXAMINATION, May 2015 

(BUSINESS APPLICATIONS)
(SECOND YEAR)
(PART-III)

## 230: QUANTITATIVE M ETHODS

Time: Three hours

Maximum: 100 marks

SECTION-A
(10×2=20)
Answer ALL questions

1. What are the two types of statistical data?
2. Define the term frequency.
3. Who introduced the standard deviation?
4. What do you mean by Co-efficient of Variation?
5. What do you mean by Central Moments?
6. What is me ant by Skewness?
7. What do you mean by correlation?
8. What is regression equation?
9. De fine the term hypothesis.
10. Write any two advantages of regression analysis.

SECTION-B
$(4 \times 10=40)$
Answer any FOUR questions
11. State any five benefits of statistics. Explain.
12. Distinction between Primary and Secondary Data.
13. List out different sources of secondary data.
14. What are the advantages and disadvantages of standard deviation?
15. Describe the types of Skewness.
16. Find out the arithmetic mean.

| Sales ('000) | $10-20$ | $20-30$ | $30-40$ | $40-50$ | $50-60$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| No. of days | 3 | 6 | 11 | 3 | 2 |

Answer any TWO questions
17. Find out Co -efficient of variation from the following:

| Wages Rs. | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ | $50-60$ | $60-70$ | $70-80$ |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No . of Workers | 12 | 18 | 35 | 42 | 50 | 45 | 20 | 8 |

18. What are the difference between correlation and regression?
19. When $\mathrm{X}=30$ and $\mathrm{Y}=26$, determine the equation of X and Y :

| Husband age(X) | 26 | 28 | 30 | 31 | 35 |
| :--- | :---: | :--- | :--- | :--- | :--- |
| Wife age(Y) | 20 | 27 | 28 | 30 | 25 |

20. A manufacturing company is engaged in producing three types of product $\mathrm{M} . \mathrm{N}$ and O. The production department produces each day, components sufficient to make 100 units of $\mathrm{M}, 50$ units of N and 60 units of O .

The management is confronted with the problem of optimizing the daily production of products in the assembly department, where any 200 man hours are available daily for assembly the products.

The following additional; information is available.

| Type of Product | Profit contribution per <br> unit of production(Rs.) | Assembly time per product(hrs) |
| :--- | :---: | :---: |
| M | 24 | 1.6 |
| N | 40 | 3.4 |
| O | 90 | 5 |

The company y has a daily order for 40 units of product M and total of 30 units of product N and O . Formulate this problem as linear programming problem so as to maximize total profit.

