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# M. PHIL DEGREE END SEMESTER EXAMINATION - MARCH 2018 SEMESTER - 1: M.PHIL IN COMMERCE <br> <br> COURSE: 15MP1COMT2: QUANTITATIVE TECHNIQUES 

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(For Regular - 2017 Admission)
Time: Three Hours
Max. Marks: 75

## SECTION A

Answer any Eleven questions, each question carries 5 marks

1. Explain the functions of statistics.
2. What do you mean by measures of central tendencies?
3. Explain the procedure for testing of hypothesis
4. What are the advantages of non-parametric test?
5. Explain the uses of regression analysis
6. What is standard error? Explain its utility.
7. What is sampling distribution? Explain the commonly used sampling distributions.
8. What is Central Limit Theorem?
9. State the applications of chi square test.
10. State the requisites of a good measure of average.
11. State the mathematical properties of standard deviation.
12. What is F test? When is it used?
13. What is mean deviation? Explain its merits and demerits
14. What is SPSS? State the capabilities of SPSS in data analysis.

## SECTION B

Answer any Two questions, each question carries $\mathbf{1 0}$ marks
15. Calculate Karl Pearson's coefficient of correlation

| $X$ | 78 | 89 | 99 | 60 | 59 | 78 | 68 | 61 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $Y$ | 125 | 137 | 156 | 112 | 107 | 132 | 123 | 108 |

16. Obtain regression equation $Y$ on $X$ and estimate $Y$ when $X=55$ from the following

| $X$ | 40 | 50 | 38 | 60 | 65 | 50 | 35 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $Y$ | 38 | 60 | 55 | 70 | 60 | 48 | 30 |

17. The following data relate to the yield of four varieties of wheat each sown, on five plots find whether there is a significant difference between the mean yield of these varieties.

| Plot | Varieties |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | A | B | C | D |  |
| I | 99 | 103 | 109 | 104 |  |
| II | 101 | 102 | 103 | 100 |  |
| III | 103 | 100 | 107 | 103 |  |
| IV | 99 | 105 | 97 | 107 |  |
| V | 98 | 95 | 99 | 106 |  |

18. From the following details find out whether there is any association between passing the examination and studying in the day classes

| Nature of Class | Result |  |
| :--- | :---: | :---: |
|  | Passed | Failed |
| Day Classes | 10 | 20 |
| Evening Classes | 4 | 66 |

$(10 \times 2=20)$

