## GURUDAS COLLEGE

## Internal Examination 2020, B.Sc Part-II <br> STATISTICS ----GENERAL------PRACTICAL <br> THIRD PAPER

Date-5.12.2020 Time: 1.30 hours

The figures in the margin indicate full marks.

1. You are given the following incomplete frequency distribution:

| Wages <br> (in Rs.) | $300-324$ | $325-349$ | $350-374$ | $375-399$ | $400-424$ | $425-449$ | $450-474$ | $475-499$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 5 | 17 | 80 | x | 325 | y | 88 | 9 |

It is known that the total frequency is 1000 and the median is 413.13 . Estimate the missing frequencies and the mode.
2. Ten competitors in a musical test were ranked by the three judges $\mathrm{A}, \mathrm{B}$ and C in the following order:

| Ranks by <br> A | 1 | 6 | 5 | 10 | 3 | 2 | 4 | 9 | 7 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Ranks by <br> B | 3 | 5 | 8 | 4 | 7 | 10 | 2 | 1 | 6 | 9 |
| Ranks by <br> C | 6 | 4 | 9 | 8 | 1 | 2 | 3 | 10 | 5 | 7 |

Using rank correlation method, discuss which pair of judges has the nearest approach to common likings in music.
3. Compute price index number for the year 2005 using 2000 as base year using Fisher's method.

Also show that it satisfies Time Reversal Test.

| Commodity | Quantity [units] |  | Expenditure [Rs] |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{2 0 0 0}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 0}$ | $\mathbf{2 0 0 5}$ |
| A | 100 | 150 | 500 | 900 |
| B | 80 | 100 | 320 | 500 |
| C | 60 | 72 | 150 | 360 |
| D | 30 | 33 | 360 | 297 |

