| Roll No.: | Enrolment No. |
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PARUL UNIVERSITY

PARUL INSTITUTE OF PHARMACY & RESEARCH

PHARM.D. FOURTH YEAR · FIRST INTERNAL EXAMINATION: 2021-2022

Subject Name: Bio Statistics & Research Methodology

Subject Code: 08207404 Time:10:00 am to 11:30 am Date: 29/7/2021 Total Marks: 30

Instructions:

1. Make suitable assumptions wherever necessary.

2. Figures to the right indicate full marks.

I Long Essay. (Answer Any One)

10 X 1 = 10M

- 1. What is correlation coefficient? Explain any two methods of correlation coefficient
- 2. Find mean, median and mode for the following data

| Class | 15-20 | 20-25 | 25-30 | 30-35 | 35-40 | 40-45 | 45-50 | 50-55 | 55-60 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Freq | 3 | 8 | 10 | 19 | 25 | 21 | 6 | 5 | 3 |

II Short Essay. (Answer Any Two)

5 X 2 = 10M

- 1. There are two series of index numbers *P* for price index and *S* for stock of the commodity. The mean and standard deviation of *P* are 100 and 8 and of S are 103 and 4 respectively. The correlation coefficient between the two series is 0.4. With these data obtain the regression lines of *P* on *S* and *S* on *P*.
- 2. Write about types of research.
- 3. Calculate Karl Person's coefficient of correlation between age of playing habits from the data given below :

(5 Marks)

| Age | 20 | 21 | 22 | 23 | 24 | 25 |
|-----------------|-----|-----|-----|-----|-----|-----|
| No. of student | 500 | 400 | 300 | 240 | 200 | 160 |
| Regular Players | 400 | 300 | 180 | 96 | 60 | 24 |

III Short Answers. (Answer All)

 $2 \times 5 = 10M$

- 1. Write about Motivation of Research
- **2.** What is Null Hypothesis?
- **3.** What is relation between mean, median and mode?
- 4. What is data?
- 5. The range of data 17,15,25,34,32 is _____

***** ALL THE BEST *****