

B.Sc. (Part-I) (Semester-II) (CBCS (NEP2020)) Examination, March 2024**Balasaheb Desai College, Patan****STATISTICS****Sub. Code: 90228****Descriptive Statistics –II ((Paper – III)****Day and Date: Saturday 30/03/2024****Time : 02:30 p.m. to 04:30 p.m.****Total Marks: 40****Period: 2 Hours****Total Pages: 02****Instructions :** i) *All questions are compulsory .*ii) *Figures to the right indicate full marks.***1. Choose the most correct alternative: (08)****1) The concept of rank correlation was given by:**

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|-------------|------------|
| a) Galton | b) Kendall |
| c) Spearman | d) Mood |

2) Volume and Pressure have...

- | | |
|-------------------------|-------------------------|
| a) Positive correlation | b) Negative correlation |
| c) Perfect Correlation | d) No correlation |

3) If two regression lines are perpendicular to each other, then correlation coefficient (r) is...

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|------------------|------|
| a) $\frac{1}{2}$ | b) 0 |
| c) 1 | d) 2 |

4) The two lines of regression intersect at...

- | | |
|-----------------------|-------------------------|
| a) (0,0) | b) (\bar{X}, \bar{Y}) |
| c) (b_{yx}, b_{xy}) | d) $(0, \bar{Y})$ |

5) Which of the following is the fundamental set class of frequency?

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|--|--|
| a) A set of ultimate class frequencies | b) A set of Positive class frequencies |
| c) Both (a) and (b) | d) None of these |

6) The order of the class frequency (ABC) is

- | | |
|------|------|
| a) 9 | b) 2 |
| c) 8 | d) 3 |

7) Vital statistics is mainly concerned with

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|--------------|---------------------|
| a) births | b) deaths |
| c) marriages | d) all of the above |

8) For babies of age less than one year, the age-SDR specifically called as ...

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|----------------------------|----------------------|
| a) infant mortality rate | b) foetal death rate |
| c) maternal mortality rate | d) none of these |

2. Attempt any *Two* of the following

(16)

- 1 Define Correlation and Explain the types of correlation
- 2 Derive the equation of regression line of Y on X by least square method
- 3 Define i) Crude Death Rate (C.D.R)
ii) Specific Death Rate (S.D.R)
iii) Crude Birth Rate (C.B.R.)
iv) General Fertility Rate (G.F.R.)

3. Attempt any *Four* of the following

(16)

- 1 For three attributes A, B, C express the following class frequencies the term of ultimate class frequencies
i) (AB) ii) (AC) iii) (Aβ) iv) (C)
- 2 Define i) Positive and negative class ii) Ultimate class
- 3 Define Yule's coefficient of association (Q) and show that $-1 \leq Q \leq 1$
- 4 Write note on Scatter diagram method
- 5 With usual notation show that
$$r = \sqrt{b_{xy}b_{yx}}$$
- 6 Explain Gross Reproduction Rate (GRR) and Net Reproduction Rate (NRR)

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