**H.M.M COLLEGE FOR WOMEN, DAKSHINESWAR**

**SUBJECT: EDUCATION (MAJOR)**, **SEMESTER: IV**

**QUESTION BANK**

**COURSE: STATISTICS IN EDUCATION (EDUDSC407T)**

**EACH QUESTION HAS 5 MARKS-**

(a) What do you mean by Kurtosis in normal distribution?

(b) What do you mean by correlation between two variables?

(c) What are the properties of Mean and Median?

(d) What is central tendency in statistics?

(e) Define coefficient of correlation.

(f) Compute median of the following scores: 22, 20, 22, 25, 19, 30, 27.

(g) What is negative skewness?

(h) Explain the meaning of percentile score.

 (i) What do you mean by Variability of a frequency distribution?

(j) What are the different measures of Variability?

(k) Explain the importance of graphical presentation of data.

(l) The performance of a student in four school subjects is as follows:

English - 55%

 Mathematics – 45%

Social Science-60%

 Science-40%

Draw a pie gram to represent his/her performance.

(m) What do you mean by Normal distribution curve in statistics?

(n) What do you mean by Skewness of Normal distribution curve in statistics?

(o) What are the uses of Mean and Median?

(p) What are the uses of S.D?

(q) What do you mean by positive skewness?

(r) How skewness of NPC is determined?

(s) What are the properties of S.D?

(t) What are the properties and uses of Mode?

2. **EACH QUESTION HAS 15 MARKS**-

(a) Describe the characteristics of Normal Distribution. 15

(b) How is kurtosis of a normal distribution determined? 15

(c) Explain the three measures of central tendency with their uses. 9+6

(d) What are the uses of frequency polygon and histogram? 7+8

(e) What is standard deviation? Calculate standard deviation of the following distribution:

 5+10

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Score | 10–19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 |
| Freq. (f) | 5 | 8 | 12 | 14 | 7 | 4 |

(f) Determine rank-difference coefficient of correlation from the following table : 15

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Serial no of the students | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Marks obtained in Math | 30 | 10 | 20 | 35 | 45 | 40 | 65 | 80 | 30 | 25 |
| Marks obtained in P.Sc. | 40 | 30 | 20 | 45 | 55 | 65 | 20 | 40 | 20 | 20 |

(g) Compute the Quartile deviation of the following frequency distribution: 15

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Score | 20–24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |
| Freq. (f) | 6 | 7 | 14 | 12 | 8 | 3 |

(h) Compute the Mean and Median of the following frequency distribution: 7+8

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  Score | 19·5 – 24·5 | 24·5 – 29·5 | 29·5 – 34·5 | 34·5 – 39·5 | 39·5 – 44·5 | 44·5 – 49·5 |
| Freq. (f) | 5 | 12 | 15 | 10 | 4 | 4 |

(i) The following scores were obtained from a group of students on an achievement test in English. Tabulate the scores into a frequency distribution with size of class interval of 5:

12, 38, 42, 23, 18, 6, 27, 14, 3, 19, 35, 43, 22, 6, 8,2, 3, 52, 7, 28, 46, 56, 43, 27, 33, 35, 40, 46, 52, 54

(j) Determine coefficient of correlation in product moment method from the following table:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Serial no of the students | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Marks obtained in L.Sc. | 32 | 12 | 22 | 30 | 40 | 40 | 62 | 82 | 32 | 22 |
| Marks obtained in P.Sc. | 55 | 22 | 27 | 48 | 54 | 66 | 24 | 44 | 21 | 22 |

(k) Define statistics. What are the uses of statistics? 5+10

(l) Why statistics is important in education? 15

(m) Plot frequency polygon and Histogram on the same graph from the following table:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Score | 20–24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |
| Freq. (f) | 5 | 8 | 15 | 11 | 7 | 2 |

(n) Calculate median and mode from the following data: 8+7

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Score | 20–29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 |
| Freq. (f) | 5 | 12 | 22 | 20 | 11 | 4 |

(o) Calculate P25 and P75 from the following data:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  Score | 19·5 – 24·5 | 24·5 – 29·5 | 29·5 – 34·5 | 34·5 – 39·5 | 39·5 – 44·5 | 44·5 – 49·5 |
| Freq. (f) | 6 | 11 | 17 | 15 | 8 | 7 |