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FOR KARNATAKA CLASS 11 PREPARATION

Karnataka 1st PUC Model Question Paper 2027 for Statistics (Paper 1)

EXAM	YEAR	TYPE	SUBJECT
Karnataka Class 11	2027	Sample Paper	Statistics

GOVERNEMENT OF KARNATAKA
KARNATAKA SCHOOL EXAMINATION AND ASSESSMENT BOARD
6th CROSS, MALLESHWARAM, BENGALURU-560 003
2026-27 I PUC MODEL QUESTION PAPER- 1

Subject: 31 - Statistics **Maximum Marks:** 80
Time: 3.00 Hours **No. of Questions:** 38

Instructions:

1. Statistical table and graph sheets will be supplied on request.
2. Scientific calculators are allowed.
3. All working steps should be clearly shown.
4. For Section – A questions, only the first written answers will be considered for evaluation.
5. For questions having diagram and graph, alternative questions are given at the end of the question paper in a separate section for visually challenged students.

SECTION – A

I. Choose the most appropriate answer from the choices given: **(5 X 1 = 5)**

1) A number assigned for every unit for identification of different categories is called
a) A nominal scale b) An ordinal scale
c) A variable d) An attribute

2) Width of the class interval is
a) UCL + LCL b) UCL ÷ LCL c) UCL – LCL d) UCL × LCL

3) If $Q_2 = 40$, then the value of D_5 is
a) 10 b) 20 c) 30 d) 40

4) The probability of null event is
a) 1 b) 0.75 c) 0.5 d) 0

5) If E(X) = 6, the value of E(2X) is
a) 24 b) 12 c) 6 d) 0

II. Fill in the blanks by choosing the appropriate answers given in the brackets: **(5 X 1 = 5)**
(3, Random variable, Captions, Central tendency, Event, Sample space)

6) In a table, column headings are called _____.

7) _____ is the property of concentration of the values around a central value in a data.

8) For mesokurtic distribution, the value of β_2 is _____.

9) The set of all possible outcomes of a random experiment is a _____.

10) _____ is a function which assigns a real number to every sample point in the sample space.

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III. Match the following: **(5 X 1 = 5)**

11)

A	B
a. Error of inadequacy	i. Harmonic mean
b. Pie chart	ii. Absolute measure
c. Average speed	iii. 1
d. Standard deviation	iv. Cause of statistical error
e. $P(A) + P(A^c)$	v. 0
	vi. Two-dimensional diagram

IV. Answer the following questions: **(5 X 1 = 5)**

12) Which graph is used to locate median?

13) Find mode from the following data:
3, 4, 5, 5, 6, 8, 5, 7, 5, 8, 5, 5, 4, 5, 3

14) What is the relationship among Mean, Median and Mode for a symmetrical distribution?

15) Define interpolation.

16) What is the value of 'r' for two independent random variables?

SECTION – B

V. Answer any FIVE of the following questions: **(5 X 2 = 10)**

17) Write two branches of Statistics.

18) Mention the two stages of statistical enquiry.

19) Find geometric mean of 1, 4 and 16.

20) Calculate coefficient of range for the following data:
Height (cms): 160, 158, 159, 165, 148, 139, 142, 155.

21) If $n = 9$ and $\Sigma d^2 = 24$, find the coefficient of rank correlation.

22) What is the difference between coefficient of correlation and coefficient of association?

23) If A and B are mutually exclusive events and $P(A) = 0.4$ and $P(B) = 0.5$ then, find $P(A \cup B)$.

24) If X is a random variable and a is a constant, then prove that $E(a) = a$.

SECTION – C

VI. Answer any FOUR of the following questions: **(4 X 5 = 20)**

25) Mention any five functions of Statistics.

26) Define primary data. Mention the methods of collection of primary data.

27) Marks obtained by the students in a certain test are given below.

37	49	54	51	37	15	12	33	23	25
18	35	33	42	45	55	69	63	46	29
18	37	46	59	29	35	27	45	47	65

Prepare a frequency distribution table with the class intervals 10–20, 20–30, …….

28) Prepare a blank table showing the particulars relating to the residents of a certain locality according to,

i) Occupation: Office assistants, Business men, Teachers, Bank employees.
ii) Sex: Men, Women.
iii) Marital status: Married, Single.

29) The production of wheat and rice of a region are given below:

Year		2005	2006	2007	2008	2009	2010
Production (in metric tons)	Wheat	12	15	18	19	22	26
	Rice	25	30	32	36	40	45

Draw a multiple bar diagram to represent the data.

30) Compute Yule's coefficient of association between marriage and examination result from the following data pertaining to 525 students.

	Pass	Fail
Married	90	65
Unmarried	260	110

31) Using binomial expansion method, interpolate the missing index number from the following data.

Year	2011	2012	2013	2014	2015
Index Number	100	107	?	157	212

VII. Answer any TWO of the following questions: (2 X 5 = 10)

32) Draw histogram from the following data.

Marks	0 - 20	20 – 40	40 – 60	60 – 80	80 – 100
Number of students	5	15	30	20	10

33) Calculate mean deviation from mode for the following data.

x	0	1	2	3	4	5	6
f	18	22	35	25	20	12	2

34) Following are the details of the marks scored by students in Kannada and English examination. Coefficient of correlation = 0.3

	Kannada	English
Mean	40	50
S.D.	10	16

Estimate the marks in Kannada when the scores in English is 30.

35) A box contains 6 white and 4 black marbles. Two marbles are drawn at random from this box. Find the probability that they are of:
(i) different colours (ii) the same colour.

SECTION – D

VIII. Answer any TWO of the following questions: **(2 X 10 = 20)**

36) Calculate Bowley's coefficient of skewness from the following data.

C.I	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80	80 – 90	90 – 100
f	1	3	11	43	32	21	9

37) Calculate Karl Pearson's coefficient of correlation from the following data.

x	y			
	0 – 10	10 – 20	20 – 30	30 – 40
0 – 20	8	7	3	-
20 – 40	-	6	4	-
40 – 60	-	3	5	6
60 – 80	-	-	1	7

38) **a)** A card is drawn from a pack of 52 playing cards. What is the probability that it is a king known that drawn card is black?

b) A person, by paying Rs.5 enters into a game of shooting a target. With one shot, if he hits the target, he gets Rs.25, otherwise, he gets nothing. If his probability of hitting a target is 0.2, then find his expectation.

SECTION - E
(For Visually challenged students only)

29) Write down the procedure to draw multiple bar diagram.

32) Write down the procedure to draw histogram.

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