

"Dissemination of Education for Knowledge, Science and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe
Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR
(Empowered Autonomous)



DEPARTMENT OF STATISTICS

For B.Sc. II
2024-2025

19 August, 2024 to 29 August, 2024

Ms. A. M. Makandar

Co-ordinator



Mrs. V. C. Shinde
HEAD
DEPARTMENT OF STATISTICS
VIVEKANAND COLLEGE, KOLHAPUR
JEMPOWERED AUTONOMOUS)

Shri Swami Vivekanand Shikshan Sanstha's VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS) Department of Statistics REMEDIAL COACHING

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Shri Swami Vivekanand Shikshan Sanstha's VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS) Department of Statistics REMEDIAL COACHING

Goals & Objectives

- 1. To identify the strengths and weaknesses of students.
- 2. To enhance the academic abilities of students who need additional support in comparison to other students.
- 3. To provide necessary facilities and support for the academic development of all students.



Mrs. V. C. Shinde
HEAD
DEPARTMENT OF STATISTICS
VIVEKANAND COLLEGE, KOLHAPUR
COMPOWERED AUTONOMOUS)

Shri Swami Vivekanand Shikshan Sanstha's VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS) Department of Statistics REMEDIAL COACHING NOTICE

Date: 12/08/2024

All the students of **B.Sc.** II are hereby informed that the lectures of "Remedial Coaching" will be conducted from 19/08/2024 to 29/08/2024 in the **Department of Statistics** at 10:00 a.m., as per the following timetable.

TIMETABLE

Date: 19/08/2024 to 29/08/2024. (10 Days) Time: 10.00 am to 11.00 am

Sr. No.	Date	Name of Teacher	Sign
1.	19/08/2024	Mrs. V. C. Shinde	Mr
2.	20/08/2024	Mrs. V. C. Shinde	Mar
3.	21/08/2024	Mr. A. B. Bhosale	Jeson-
4.	22/08/2024	Ms. M. A. Mulik	m. A. Mulik
5.	23/08/2024	Ms. A. M. Makandar	A) shyang
6.	24/08/2024	Ms. P. V. Ransubhe	Royal
7.	26/08/2024	Mr. D. D. Patil	Tan
8.	27/08/2024	Mr. A. S. Tangawade	DST
9.	28/08/2024	Mr. A. B. Bhosale	Agron
10.	29/08/2024	Ms. M. A. Mulik	m. A. Mulik



Mrs. V. C. Shinde
HEAD
DEPARTMENT OF STATISTICS
WENT OF STATISTICS
(EMPOWERED AUTONOMOUS)

Shri Swami Vivekanand Shikshan Sanstha's VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS) Department of Statistics SYLLABUS - REMEDIAL COACHING

Sr. No. Unit No. Name of Unit		Name of Unit	No. of Hours
1.	Unit 1	Measures of Central Tendency	1
2.	Unit 2	Measures of Dispersion	1
3.	Unit 3	Correlation, Regression & Multiple correlation	2
4.	Unit 4	Probability	2
5.	Unit 5	Mathematical Expectation	2
6.	Unit 5	Some Standard Discrete Probability Distributions	2



Mrs. V. C. Shinde
HEAD
PEPARTMENT OF STATISTICS
WANAND COLLEGE, KOLHAPUR
WANAND COLLEGE, KOLHAPUR

Department of Statistics Diagnostic Test

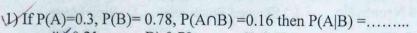
Date: 9/08/2024

Time: 11.30-12.30

Marks: 50

Name of the Student: Kadam Parimal C.

Class: B.Sc. II



M 0.21

B) 0.79

C) 0.53

2) An important property of distribution function F (x), such as it is

A) An increasing function

B) A decreasing function

C) A monotonically decreasing function

DY A non – decreasing function

3) If X is a discrete r.v. with mean E(X) then E [X-E(X)]² is called

A) Mean

B) Variance

C) Standard Deviation

D) Second raw moment

4) If X has p.m.f. P (x) = $\frac{1}{k+1}$, x = 0, 1, 2... k and the mean of the distribution is 6. Then the value of k is ...

A) 6

B) 18

C) 36

DY 12

5) A r.v. X follows discrete uniform distribution assuming the values -3, -2, -1, 0, 1, 2, 3 then mean and variance of X are ...

(A)4 and 6

B) 0.25 and 4 C) 0 and 4

D) 7 and 4

6) When population is finite and sampling is done without replacement so that the events are statistically dependent although random then the distribution under consideration is ...

A) Bernoulli

By Hyper geometric C) Binomial

D) Discrete uniform

7) Let $\Omega = \{HH, HT, TH, TT\}$ and A and B are two events defined on sample space Ω then which of the following events shows partition of sample space Ω

A) $A = \{HH, TT\}, B = \{HT, TH\}$

B) A= {HH}, B= {HT, TH, TT}

B) $A = \{HH, HT\}, B = \{TH, TT\}$ D) All the above

8) The three-regression plane coincide if, where |R| is the determinant of simple correlation coefficients.

A |R| = 0

B) |R| = 1 C) |R| > 0 D) |R| > 1

9) In a trivariate population, if $r_{12} = 0.75$, $r_{13} = 0.6$ and $r_{23} = 0.5$ then the value of $R^2_{1,23}$ is.... B)0.53CX0.63 D)0.83

(10) For the following distribution:

the following distribution.						
X	1	2	3	4	5	
P (x)	0.1	0.2	0.3	0.25	0.15	

The value of median is ...

A) 2

BX 3

C) 4

D) Not exists

The component of time series attached to a long-term variation is terms are ... A) Cyclical variations B) Seasonal variation C/Secular trend

D) Irregular variations

The mean, median and mode of the distribut A) Positively Skewed B) Symmetric	ion is 23,25 &27 respectively then distribution is C) Negatively Skewed D) Normal
0\0 00	e of dispersion? B) Variance D) Mean deviation
B)	C) Skewed Positively D) Platykurtic
(15) If X & Y are independent random variable then.	
A) Cov. $(X, Y) = 0$ B) Corr $(X, Y) = 0$) $E(XY)=E(X)$. $E(Y)$ D) All of them
16) If X has Poisson distribution with $E(X) = 3$ then	V(2x+3) is
A) 12 B) 3 C) 6 D) 0	
1) Let X has geometric distribution with parameter	0.2 then its mean is
A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) $\frac{3}{4}$ D) 4	
18) If X follows NBD (k, p) then variance of X is	
A) $\frac{q}{p^2}$ B) $\frac{kq}{p}$ C) $\frac{kp}{q^2}$	$\mathbb{D})\frac{kq}{p^2}$
19) If $f(x,y) = e^{-(x+y)}$, $x,y \ge 0$ then marginal distribution	ution of X is
A) e^x B) e^y C) e^{-x} D) e^{-y}	THE PARTY OF THE P
20) In time series Analysis, when the change is by cor	Istant rate then model used is
A) Additive B) Multiplicative C) Mixed	D) Exponential.
A) 0.3 B)-0.3 C) Zero D) None	ion between y and x is of these
(22) With usual notations the regression equation X ₃ on	$1 X_1$ and X_2 is
11 **	$a_{1.3} X_1 + b_{23.1} X_3$
$C/X_3 = b_{31.2}X_1 + b_{32.1}X_2$ D) $X_3 = b_3$	
23) The coefficient of multiple determination is	21.5 AZ
A) $R_{1.23}$ B) $R^2_{1.23}$ C) $R^2_{32.1}$ D) R^2_{12}	
24) The correct relationship between R ² _{1,23} and r ₁₃ is	
A) $1 - R^2_{1.23} = (1 - r^2_{12}) (1 - r^2_{13.2})$ B)	$P^2 = (1, 2, 3, 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3,$
C) $1 - R^2_{1,23} = (1 - r^2_{13}) (1 - r^2_{13,2})$ D)	$R_{1.23} = (1 - r_{12})(1 - r_{13.2})$
25) Which of the following is not one of four	$(1-r^2)(1-r^2)(1-r^2)$
Which of the following is not one of four types of v	
A) Predictable B) Irregular C) Cyclical	l D) Trend

Department of Statistics Diagnostic Test

	28	
-	50	

Date: 9/08/2024

Time: 11.30-12.30

Marks: 50

Name of the Student: Patil Shreya Pravin

Class: B.Sc. II

1) If P(A)=0.3, P(B)=0.78, $P(A\cap B)=0.16$ then P(A|B)=....

A) 0.21

BY 0.79

C) 0.53

D) 0.63

2) An important property of distribution function F (x), such as it is

A) An increasing function

B) A decreasing function

C) A monotonically decreasing function , DYA non - decreasing function

3) If X is a discrete r.v. with mean E(X) then E [X-E(X)]² is called

A) Mean

B) Variance

C) Standard Deviation

D) Second raw moment

4) If X has p.m.f. P (x) = $\frac{1}{k+1}$, x = 0, 1, 2... k and the mean of the distribution is 6. Then the value of k is ...

A) 6

B) 18

. er36

D) 12

5)A r.v. X follows discrete uniform distribution assuming the values -3, -2, -1, 0, 1, 2, 3 then mean and variance of X are ...

A)4 and 6 B) 0.25 and 4 C) 0 and 4

D) 7 and 4

6) When population is finite and sampling is done without replacement so that the events are statistically dependent although random then the distribution under consideration is ...

A) Bernoulli

B) Hyper geometric C) Binomial

D) Discrete uniform

The Let $\Omega = \{HH, HT, TH, TT\}$ and A and B are two events defined on sample space Ω then which of the following events shows partition of sample space Ω

A) $A = \{HH, TT\}, B = \{HT, TH\}$

B) $A = \{HH\}, B = \{HT, TH, TT\}$

B) $A = \{HH, HT\}, B = \{TH, TT\}$

D) All the above

8) The three-regression plane coincide if, where |R| is the determinant of simple correlation coefficients.

A) R = 0

B) |R| = 1 C) |R| > 0

D) |R| > 1

9) In a trivariate population, if $r_{12} = 0.75$, $r_{13} = 0.6$ and $r_{23} = 0.5$ then the value of $R^2_{1.23}$ is.

A)0.73

B)0.53

C)0.63

DY0.83

10) For the following distribution:

5 X 0.15 0.3 0.25 P(x) 0.1 0.2

The value of median is

B) 3

D) Not exists

The component of time series attached to a long-term variation is terms are ...

A) Cyclical variations

B) Seasonal variation (Secular trend

D) Irregular variations

The mean, median and mode of the distribution is 23,25 &27 respectively then distribution is A) Positively Skewed B) Symmetric C) Negatively Skewed D) Normal
13) Which of the following is not absolute measure of dispersion?
A) Standard deviation B) Variance C) Coefficient of Variance D) Mean deviation
14) If the third ordered central memont (us) is pagetive then the distribution is
14) If the third ordered central moment (μ ₃) is negative then the distribution is A) Symmetric B) Skewed Negatively C) Skewed Positively D) Platykurtic
B) 15) If X & Y are independent random variable then
A) Cov. (X, Y) =0 B) Corr(X, Y)=0 C) E(XY)=E(X). E(Y) D) All of them
16) If X has Poisson distribution with $E(X) = 3$ then $V(2x+3)$ is
A) 12 B) 3 e) 6 D) 0
용하면 있는 10 대통령 : 10 대통령은 10 대통령 : 10 대통령
17) Let X has geometric distribution with parameter 0.2 then its mean is
A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) $\frac{3}{4}$ D) 4
18) If X follows NBD (k, p) then variance of X is
A) $\frac{q}{p^2}$ B) $\frac{kq}{p}$ C) $\frac{kp}{q^2}$, D) $\frac{kq}{p^2}$
19) If $f(x,y) = e^{-(x+y)}$, $x,y \ge 0$ then marginal distribution of X is
A) e^x B) e^y C) e^{-x} D) e^{-y}
20) In time series Analysis, when the change is by constant rate then model used is
A) Additive B) Multiplicative C) Mixed D) Exponential.
A) 0.3 B)-0.3 C) Zero D) None of these
22) With usual notations the regression equation X ₃ on X ₁ and X ₂ is
A) $X_3 = b_{32.1}X_1 + b_{31.2}X_2$ B) $X_3 = b_{21.3}X_1 + b_{23.1}X_3$
$CYX_3 = b_{31.2}X_1 + b_{32.1}X_2$ D) $X_3 = b_{23.1}X_1 + b_{21.3}X_2$
23) The coefficient of multiple determination is
A) $R_{1.23}$ B) $R^2_{1.23}$ C) $R^2_{32.1}$ D) $R^2_{12.3}$
24) The correct relationship between R ² _{1,23} and r ₁₃ is
C(1, 1, 1, 2)
Which of the following is not one of four types of variation that is estimated in time series analysis? A Predictable D Leads
A) Predictable B) Irregular C) Cyclical D) Trend

Department of Statistics Diagnostic Test

Date: 9/08/2024

Time: 11.30-12.30

Marks: 50

Name of the Student:

Ajagekar Maithili Sunil. Class: B.Sc. II

1) I	f P(A) = 0.3, P(B)	= 0.78 , $P(A \cap I)$	=0.16 then P	(A B) =
1	11001	D) 0.70	0 0 00	DIA

A) 0.21

(0.53)

D) 0.63

(2) An important property of distribution function F (x), such as it is

A) An increasing function

B) A decreasing function

C) A monotonically decreasing function D) A non – decreasing function

3) If X is a discrete r.v. with mean E(X) then E [X-E(X)]² is called

A) Mean

B) Variance C) Standard Deviation

D) Second raw moment

 $\sqrt{4}$) If X has p.m.f. P (x) = $\frac{1}{k+1}$, x = 0, 1, 2... k and the mean of the distribution is 6. Then the value of k is ...

A) 6

B) 18

C) 36

X5)A r.v. X follows discrete uniform distribution assuming the values -3, -2, -1, 0, 1, 2, 3 then mean and variance of X are ...

A)4 and 6

B) 0.25 and 4 C) 0 and 4

D) 7 and 4

6) When population is finite and sampling is done without replacement so that the events are statistically dependent although random then the distribution under consideration is ...

A) Bernoulli B) Hyper geometric C) Binomial

D) Discrete uniform

The Let $\Omega = \{HH, HT, TH, TT\}$ and A and B are two events defined on sample space Ω then which of the following events shows partition of sample space Ω

A) $A = \{HH, TT\}, B = \{HT, TH\}$

B) $A = \{HH\}, B = \{HT, TH, TT\}$

B) $A = \{HH, HT\}, B = \{TH, TT\}$

(D) All the above

8) The three-regression plane coincide if, where |R| is the determinant of simple correlation coefficients.

A) |R| = 0

|R| = 1 C) |R| > 0 D) |R| > 1

9) In a trivariate population, if $r_{12} = 0.75$, $r_{13} = 0.6$ and $r_{23} = 0.5$ then the value of $R^2_{1,23}$ is... CX0.63 B)0.53

10) For the following distribution

me 101	IOWIL	ig ais	mout	1011.	
X	1	2	.3	4	5
P (x)	0.1	0.2	0.3	0.25	0.15

The value of median is .

D) Not exists

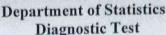
The component of time series attached to a long-term variation is terms are ...

A) Cyclical variations

By Seasonal variation C) Secular trend

D) Irregular variations

The mean, median and mode of the distribution is 23,25 &27 respectively then distribution is A) Positively Skewed B) Symmetric C) Negatively Skewed D) Normal
Which of the following is not absolute measure of dispersion? A) Standard deviation B) Variance C) Coefficient of Variance D) Mean deviation
 If the third ordered central moment (μ₃) is negative then the distribution is A) Symmetric B) Skewed Negatively C) Skewed Positively D) Platykurtic B) If X & Y are independent random variable then
A) Cov. $(X, Y) = 0$ B) Corr $(X, Y) = 0$ C) $E(XY) = E(X)$. $E(Y)$ D) All of them
If X has Poisson distribution with $E(X) = 3$ then $V(2x+3)$ is
A) 10
17) Let X has geometric distribution with parameter 0.2 then its mean is
A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) $\frac{3}{4}$ \sqrt{D}) 4
If X follows NBD (k, p) then variance of X is
A) $\frac{q}{p^2}$ B) $\frac{kq}{p}$ C) $\frac{kp}{q^2}$ D) $\frac{kq}{p^2}$
19) If $f(x,y) = e^{-(x+y)}$, $x,y \ge 0$ then marginal distribution of X is
A) e^x B) e^y C) e^{-x} D) e^{-y}
20) In time series Analysis, when the change is by constant rate then model used is
A) Additive B) Multiplicative C) Mixed D) Exponential.
A) 0.3 B)-0.3 C) Zero D) None of these
With usual notations the regression equation X ₃ on X ₁ and X ₂ is
A) $X_3 = b_{32.1}X_1 + b_{31.2}X_2$ B) $X_3 = b_{21.3}X_1 + b_{23.1}X_3$
C) $X_3 = b_{31.2}X_1 + b_{32.1}X_2$ D) $X_3 = b_{23.1}X_1 + b_{21.3}X_2$
23) The coefficient of multiple determination is
A) $R_{1.23}$ B) $R^2_{1.23}$ C) $R^2_{32.1}$ D) $R^2_{12.3}$
24) The correct relationship between R ² _{1.23} and r ₁₃ is
A) $1 - R^{2}_{1.23} = (1 - r^{2}_{12}) (1 - r^{2}_{13.2})$ B) $R^{2}_{1.23} = (1 - r^{2}_{12}) (1 - r^{2}_{13.2})$ C) $1 - R^{2}_{1.23} = (1 - r^{2}_{13}) (1 - r^{2}_{13.2})$ D) $R^{2}_{1.23} = (1 - r^{2}_{13}) (1 - r^{2}_{12.3})$
25) Which of the following is not one of four to
Which of the following is not one of four types of variation that is estimated in time series analysis? Predictable B) Irregular C) Cyclical D) Trend





Date: 9/08/2024

Time: 11.30-12.30

Marks: 50

Name of the Student: Mane Krushna Balavant

Class: B.Sc. II

1) If P(A)=0.3, P(B)=0.78, $P(A\cap B)=0.16$ then P(A|B)=.....

AT0.21

B) 0.79

C) 0.53

D) 0.63

2) An important property of distribution function F (x), such as it is

A) An increasing function

B) A decreasing function

C) A monotonically decreasing function D) A non - decreasing function

3) If X is a discrete r.v. with mean E(X) then E [X-E(X)]² is called

A) Mean

B) Variance

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D) Second raw moment

4) If X has p.m.f. P (x) = $\frac{1}{k+1}$, x = 0, 1, 2... k and the mean of the distribution is 6. Then the

value of k is ...

A) 6

B) 18

C)36

D) 12

5)A r.v. X follows discrete uniform distribution assuming the values -3, -2, -1, 0, 1, 2, 3 then mean and variance of X are ...

A)4 and 6

B) 0.25 and 4

C) 0 and 4

D) 7 and 4

6) When population is finite and sampling is done without replacement so that the events are statistically dependent although random then the distribution under consideration is ...

A) Bernoulli B) Hyper geometric C) Binomial

D) Discrete uniform

7) Let $\Omega = \{HH, HT, TH, TT\}$ and A and B are two events defined on sample space Ω then which of the following events shows partition of sample space Ω

A) $A = \{HH, TT\}, B = \{HT, TH\}$

B) $A = \{HH\}, B = \{HT, TH, TT\}$

B) $A = \{HH, HT\}, B = \{TH, TT\}$

D) All the above

8) The three-regression plane coincide if, where |R| is the determinant of simple correlation coefficients.

A)|R|=0

B) |R| = 1 C) |R| > 0

D) |R| > 1

9) In a trivariate population, if $r_{12} = 0.75$, $r_{13} = 0.6$ and $r_{23} = 0.5$ then the value of $R^2_{1,23}$ is...

A)0.73

B)0.53

C)0.63

D)0.83

10) For

the ioi	IOWIL	ig disi	Hour	1011.	
X	1	2	3	4	5
P(x)	0.1	0.2	0.3	0.25	0.15

The value of median is ...

B)3

C) 4

D) Not exists

The component of time series attached to a long-term variation is terms are ...

A) Cyclical variations

B) Seasonal variation C) Secular trend D) Irregular variations

The mean, median and mode of the distribution is 23,25 &27 respectively A) Positively Skewed B) Symmetric C) Negatively Skewed	y then distribution is D) Normal
13) Which of the following is not absolute measure of dispersion? A) Standard deviation	
A) Standard deviation C) Coefficient of Variance D) Mean deviation	
14) If the third ordered central moment (μ ₃) is negative then the distribution is	
A) Symmetric B) Skewed Negatively C) Skewed Positively D	D) Platykurtic
B) 15) If X & Y are independent random variable then	
A) Cov. $(X, Y) = 0$ B) $Corr(X, Y) = 0$ C) $E(XY) = E(X)$. $E(Y)$ D) Algebras Algebras (X, Y) = 0	ll of them
16) If X has Poisson distribution with $E(X) = 3$ then $V(2x+3)$ is	
A) 12 B) 3 C) 6 D) 0	
17) Let X has geometric distribution with parameter 0.2 then its mean is	
A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) $\frac{3}{4}$ D) 4	
18) If X follows NBD (k, p) then variance of X is	
A) $\frac{q}{p^2}$ B) $\frac{kq}{p}$ C) $\frac{kp}{q^2}$ D) $\frac{kq}{p^2}$	
	and the second
19) If $f(x,y) = e^{-(x+y)}$, $x,y \ge 0$ then marginal distribution of X is	COLUMN TRANSPORT
A) e ^x B) e ^y C) e ^{-x} D) e ^{-y}	
20) In time series Analysis, when the change is by constant rate then model used is A) Additive B) Multiplicative C) Mixed D) Exponential.	attaliana pertura
21)If correlation between x and y is -0.3, then correlation between y and x is	
D) None of these	
A) $X_3 = b_{32.1}X_1 + b_{31.2}X_2$ B) $X_3 = b_{21.3}X_1 + b_{23.1}X_3$	
C) $X_3 = b_{31.2}X_1 + b_{32.1}X_2$ D) $X_3 = b_{23.1}X_1 + b_{21.3}X_2$	
23) The coefficient of multiple determination is	Planter with the stiger of
A) $R_{1,23}$ B) $R^2_{1,23}$ C) $R^2_{32,1}$ D) $R^2_{12,3}$	
24) The correct relationship between R ² _{1,23} and r ₁₃ is	
A) $T - R^2_{1,23} = (1 - r^2_{12}) (1 - r^2_{13,2})$ B) $R^2_{1,23} = (1 - r^2_{12}) (1 - r^2_{13,2})$	
C) $1 - R^2_{1.23} = (1 - r^2_{13})(1 - r^2_{13.2})$ D) $R^2_{1.23} = (1 - r^2_{13.2})(1 - r^2_{13.2})$	
25) Which of the following is not one of four types of variation that is estimated in time. A) Predictable B) Irregular C) C	
A) Predictable B) Irregular C) Cyclical D) Trend	me series analysis?

Shri Swami Vivekanand Shikshan Sanstha's VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS) Department of Statistics REMEDIAL COACHING

Dignostic Test
Students List

Sr. No.	Name of Student	Percentage	Sign
1.,	Kadam Parimal Chandrashekhar	92	garinal
2.	Patil Shreya Pravin	52	Sutil
3.	Ajagekar Maithili Sunil	40	M.s. Ajagekor
4.,	Mane Krushna Balavant	92	Moushing
5.	Fadtare Divya Ananda	44	Radtale
6.	Sankpal Kajal Baliram	32	Bookpa
7.	Bharankar Sumita Sandip	36	- Phatakat
8.	Patil Shital Shivaji	40	Staley
9.	Gorade Vishal Karyappa	36	Gerade géamble
10.	Kamble Shrirang Bhagwan	44	Samlelee



Mrs. V. C. Shinde
HEAD
DEPARTMENT OF STATISTICS
VIVEKANAND COLLEGE, KOLHAPUR
TARPOWERED AUTONOMOUS)

Shri Swami Vivekanand Shikshan Sanstha's VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS) Department of Statistics REMEDIAL COACHING

"Notice: Remedial Coaching Examination"

Date: 26/08/2024

All the students of B.Sc. II, who have attended the coaching sessions are informed that the Remedial Coaching Exam will be held on 03/09/2024 between 11:30 a.m. to 12:30 p.m. in the Room No. 401, Department of Statistics.

ESTD JUNE 1964

Mrs. V. C. Shinde
HEAD
DEPARTMENT OF STATISTICS
TVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Shri Swami Vivekanand Shikshan Sanstha's VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS)

Department of Statistics REMEDIAL COACHING

Attendance

Sr. No.	Name of Student	24/08/2024	26/08/2024	27/08/2024	28/08/2024	29/08/2024
1.	Patil Shreya Pravin	Fattl	Fall	Fattl	Fath.	Fatt
2.	Ajagekar Maithili Sunil	M.S.A.jagekar	M.S. Ajagekor	Ms. Ajagetar.	M.S.Ajaqekar.	ms Ajagokon
3.	Fadtare Divya Ananda	Radtare	Radtare	Badtare	Radtare	<u>Radtane</u>
4.	Sankpal Kajal Baliram	Bankpal	Ab	Santpal	Spankpal	Bankpal
5.	Bharankar Sumita Sandip	Braunkar	Bhainkar	Braznkaz	Braznkaz	Praenkas
6.	Patil Shital Shivaji	Phiteel	Phileel	Priteel	Phileel	Briteel
7.	Gorade Vishal Karyappa	Planade	Okonode	(Konade,	Ranade	Pranade
8.	Kamble Shrirang Bhagwan	Somble.	Domles.	Sandle,	Somble.	Damble.



Department of Statistics

Remedial Coaching Exam 2024-25 Class: B.Sc. II

Date: 3/09/2024 Time: 11.30-12.30 Marks: 50

Name of the Student: Pati Shreya Pravin

1	. The	both	regression	coefficient	has	
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- a) Same algebraic sign always
- b) Same algebraic sign never
- c) Same algebraic sign sometimes

d) all of these

2. If correlation between X and Y is 0.7, then correlation between (4X+3) and (3y-4) is

- a)0.7
- b)-0.7
- c)0
- d) None of these

3. A set of values with mean 20 and its coefficient of variation is 15% then variance of the series

a)30

d)300

40

4. If $r_{12} = r_{13} = 0$ then $R_{1.23} = \dots$

- c) Unpredictable
- d) None of these

5. The variation in values of times series due to traditions and festivals is known as

- a) Seasonal variation
- b) Cyclical variation
- b) Random variation d) None of these

6. If $r_{13} = r_{23} = 0$ then $r_{12.3} = \dots$

- a) r12
- b) Zero
- c)1 d) none of these

7.1 Which of the following true for $|R| = \dots$

- a) $1-r_{12}^2-r_{13}^2-r_{23}^2+2r_{12}r_{13}r_{23}$ b) $1-r_{12}^2+r_{13}^2-r_{23}^2+2r_{12}r_{13}r_{23}$
- b) $1+r_{12}^2-r_{13}^2-r_{23}^2+2r_{12}r_{13}r_{23}$ d) $1-r_{12}^2-r_{13}^2-r_{23}^2-2r_{12}r_{13}r_{23}$

8. If cov(x,y)=-6, V(x)=4, v(y)=9 then r=...

- b)1 c)-1 to +1 d) None of these

9. The order of residual X_{1.23} is

- b)2
- c)3
- d) None of these

10. The correlation coefficient is the between the regression coefficients

- a) A.M.

- b) Median c) Mode d) Geometric Mean

1. The additive model in Time Series is

- $Y = T + S + C + I \ b) \ Y = T + S + I \ c) \ Y = S + C + I \ d) \ Y = T + S + C$

12. Rank correlation coefficient is equal to 1 if

- a) $\sum di^2 = 1$ $\sum di^2 = 0$ c) $\sum di^2 > 0$ d) $\sum di^2 < 0$

13. Let (X, Y) be a bivariate discrete r, v. with joint p. m. f.

(x,y)	(0,0)	(1,0)	(0,1)	(1,1)
P(x,y)	1/2	1/4	5/12	1/4

The mean of Y is					
a) 1/3	b)1	A WAR	e)5/12	d)2/3	
14. If X and Y are to	wo random va	ariables with n	neans E(X) and E	E(Y)resp. then the e	xpressions
/ E[(X-E(X)) (Y-					
a) variance of X		b) Vari	iance of Y		
c)covariance betw	een X and Y	d) correlation	on coefficient bet	ween X and Y	
15. The correlation co	pefficient bet	ween X and Y	is zero. We then	conclude that	
a) X and Y have					
b) The variance	of X and Y a	re equal.			
c) There exists i	no relationshi	p between X a	nd Y		
		ionship between			
16.If X has one point				0, then variance of	X is
	by	c)0	d) None of t		
17. Deciles divide the	data into	equal par	rts.		
a)9	b) 4	c)10	d) 100		
18/If $X\rightarrow b(n,1/4)$, the	en the probab	ility distributio	on of Y=n-X is		
a) b(n,1/4) b) b(4n,1)	b(n,3/4)	d) b(2n,1/4)		
19. The second central	moment of F	oisson distrib	ution with mean	m is	
(a) m	b)2m	c) m ²	d) m/2	13	
20. Geometric distribu	ition is a parti	icular case of .			
a) Binomial Distr			b) Poisson Dis	stribution	
Megative binon	nial Distribut	ion		netric Distribution	
21. If X→NB (k, p) the	en	/	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Distribution	
a) mean <variance< td=""><td></td><td>b) mean>var</td><td>riance</td><td></td><td></td></variance<>		b) mean>var	riance		
b) mean=variance		d) mean≤ G	eometric Distribu	ition	
22. Mode of the binom					
not unique b) unique	c) np	d)npq		
23. A random variable 2 a) b(n,q) b) b(m	X→H (N, M,n,p) c)b(when $N \rightarrow \infty$ (m,q) dM	pand $\frac{M}{N} = p$, the dividing $p(n,p)$	istribution of X is.	
24.If a random variable			10 TM (F)		
a) 10 b) 1.8	c) 6	d)2			
25.The recurrence between			sson(m) is P(Y-	(+1) = P.G	-
a) m/(x+2) b		c)x/(m+1)		(1) P()	(-x)

Department of Statistics

Remedial Coaching Exam 2024-25 Class: B.Sc. II

Date: 3/09/2024

Marks: 50

Time: 11.30-12.30

Name of the Student: Ajagekas Machili Suril

1. The both regression coefficient has				
a) Same algebraic sign always		b) S	ame algebra	nic sign never
c) Same algebraic sign sometimes			d) all of th	nese
2. If correlation between X and Y is 0.	7, then	correlation	between (4	X+3) and (3y-4) is
(a)0.7 b)-0.7 c	0(:	d) N	None of thes	e and the second second
3. A set of values with mean 20 and its	s coeffi	cient of var	riation is 15	% then variance of the serie
is				d)300
a)30 b) 3		LC)9		d)300
4. If $r_{12} = r_{13} = 0$ then $R_{1.23} = \dots$				D. N of those
a) 1b)0		c) Unpredic		d) None of these
5. The variation in values of times seri				als is known as
V'		ical variation	on	
b) Random variation	d) Non	e of these	arier to se	
6. If $r_{13} = r_{23} = 0$ then $r_{12.3} = \dots$				
a) r_{12} b) Zero		c)1	d) none	of these
7. Which of the following true for R				the last posterior the
$(a) 1-r^2_{12}-r^2_{13}-r^2_{23}+2r_{12}r_{13}$	r_{23}	b)1-r ² ₁₂	$r^2 + r^2_{13} - r$	$r^2_{23} + 2r_{12}r_{13}r_{23}$
b) $1+r^2_{12}-r^2_{13}-r^2_{23}+2r_{12}r$	r ₁₃ r ₂₃	d) $1-r^2_1$	$_2 - r^2_{13} - r^2_{13} - r^2_{13}$	$r^2_{23} - 2r_{12}r_{13}r_{23}$
8. If $cov(x,y)=-6$, $V(x)=4$, $v(y)=9$ the	n r =			
(a) -1 b)1	c)-1 to	+1	d) None	e of these
9. The order of residual X _{1.23} is				
a) 1 (b)2	c)3			e of these
10. The correlation coefficient is the .		, between t	he regressio	n coefficients
a) A.M. b) Median	c) Mod	le di	Geometric N	Mean
1. The additive model in Time Series	s is			
Y = T+S+C+I b) $Y = T+S+I$	c) Y=	S+C+I	d) Y= '	Γ+S+C
12. Rank correlation coefficient is equ	ual to 1	if		
a) $\sum di^2 = 1$ b) $\sum di^2 = 0$	c)\(\Sigma\) di	² > 0	d)∑ di	2 < 0
100 (10) (0	THE PARTY OF THE P	AND RESIDENCE OF THE PARTY OF T	COUNTY OF	
13. Let (X, Y) be a bivariate discrete				

5/12

1/4

1/2

P(x,y)

1/4

The mean of Y is	
a) 1/3 b)1 c)5/12 Ld)2/3	
If X and Y are two random variables with means E(X) and E(Y)resp. then the expression	IS
E[(X-E(X)) (Y-E(Y))] is called	
a) variance of X b) Variance of Y	
c)covariance between X and Y d) correlation coefficient between X and Y	
The correlation coefficient between X and Y is zero. We then conclude that	
a) A and Y have some distribution.	
b) The variance of X and Y are equal.	
c) There exists no relationship between X and Y	
d) There exists no linear relationship between Y and Y	
a) k b)1 a) $K = K = K$ b)1 b)1 c) $K = K = K$ b)1 c) $K = K = K$ c) $K $	
Oll de Cara Cal	••
77. Declies divide the data into equal parts.	
b) 4 , c) 10 d) 100	
18. If $X \rightarrow b(n, 1/4)$, then the probability distribution of $Y=n-X$ is	
b) b(4n,1) c) b(n,3/4) d) b(2n,1/4)	
19. The second central moment of Poisson distribution with mean m is	
0)2m c) m ²	
20 Geometric distribution is a particular case of	
a) Binomial Distribution	
2) Tregative binomial Distribution d) Hyperson	
(-) p) mon	
a) mean <variance b)="" mean="">variance</variance>	
b) mean=variance d) mean≤ Geometric Distribution	
22. Mode of the binomial distribution is	
a) not unique b) unique c) np d)npq	
23.A random variable $X \to H$ (N, M,n) when $N \to \infty$ and $\frac{M}{N} = p$, the distribution of X is	
a) $b(n,q)$ b) $b(m,p)$ c) $b(m,q)$ d) $b(n,p)$ 24. If a random variable $X \rightarrow H$ (10.6.2) d.	
24. If a random variable $X \rightarrow H$ (10,6,3) then the mean of X is a) 10 b) 1.8 c) 6 d)2	
a) $m/(x+2)$ b) m/x c) $x/(m+1)$ $y/(m+1)$ $y/(m+1)$ $y/(m+1)$ $y/(m+1)$ $y/(m+1)$ $y/(m+1)$ $y/(m+1)$	
(x+2) b)m/x c)x/(m+1) d)m/(x+1)	

Department of Statistics

Remedial Coaching Exam 2024-25 Class: B.Sc. II

Date: 3/09/2024

Marks: 50

Time: 11.30-12.30

Name of the Student:

Fadtare Divya A.

1. The both reg	ression coe	fficient h	as			nis Recognision and
a) Same a	lgebraic sign	n always		b) Sa	ame algebra	aic sign never
V	gebraic sign				d) all of th	nese
2. If correlation	n between X	and Y is	s 0.7, then	correlation	between (4	X+3) and (3y-4) is
va)0.7				d) N		
	ies with me	an 20 and	l its coeff	icient of var	iation is 15	% then variance of the series
is a)30		b) 3		2019		d)300
4/If r ₁₂ =r ₁₃ =	0 then R _{1.2}	3 =				
a) 1		Lb)0		c) Unpredic	table	d) None of these
5. The variation	n in values	of times	series due	to tradition	s and festiv	als is known as
a) Seasor				lical variatio		
b) Rando	m variation		d) Non	e of these		
6. If $r_{13} = r_{23}$	$= 0$ then r_{12}	$_{2.3} = .$				
(a) r ₁₂	b) 2	Zero		c)1	d) none	of these
7. Which of t	he following	g true for	R =			
ay 1-r ² 12	$-r^2_{13}-r$	$^{2}_{23} + 2r$	$r_{12}r_{13}r_{23}$	b) $1-r^2_{12}$	$+r^2_{13}-r$	$r^2_{23} + 2r_{12}r_{13}r_{23}$
b) 1+r ² 1;	$r^2_{13} - r^2_{13} - r^2_{13}$	-2 ₂₃ + 2	$r_{12}r_{13}r_{23}$	d)1-r212	$_2 - r^2_{13} -$	$r^2_{23} - 2r_{12}r_{13}r_{23}$
8. If cov(x,y)=						
(a) -1	b)1		c)-1 to	+1	d) Non	e of these
9. The order of	f residual X	1.23 is				
/	Lb)2		c)3		d) Non	e of these
10. The correl	ation coeffic	cient is t	he	between the	he regression	on coefficients
a) A.M.				de de		
M. The additi	ve model in	Time Se	eries is			In I between both and
a) Y = T-	+S+C+I b)	Y = T + S +	-I c) Y=	S+C+I	d) Y=	T+S+C
12. Rank corr						
a) ∇di^2	= 1 /5)2	$di^2 = 0$) c)∑ di	$ x ^2 > 0$	d)∑ di	2 < 0
3. Let (X, Y)	he a hivari	ate discre	ete r, v. w	rith joint p. r		
	(0,0)	(1,0)	(0,1)	(1,1)		
(x,y)	(0,0)	(-,-)	1		STATE OF THE PARTY	

5/12

1/4

1/2

P(x,y)

1/4

The mean of Y is	
a) 1/3 b)1	c)5/12 d)2/3
	means E(X) and E(Y)resp. then the expressions
E[(X-E(X)) (Y-E(Y))] is called	
0)	iance of Y
c)covariance between X and Y d) correlation	on coefficient between X and Y
5. The correlation coefficient between X and Y	
a) X and Y have some distribution.	Torresan terresantes
b) The variance of X and Y are equal.	
c) There exists no relationship between X a	
d) There exists no linear relationship between	en X and Y
X6.If X has one point distribution with P (X = k)	=1 and $P(X \neq k)$ =0, then variance of X is
a) k b)1 c)0	None of these
17. Deciles divide the data into equal par	ts.
a)9 b) 4 c) 10	d) 100
18. If $X \rightarrow b(n, 1/4)$, then the probability distribution	on of Y=n-X is
a) $b(n,1/4)$ b) $b(4n,1)$ c) $b(n,3/4)$	d) b(2n,1/4)
19. The second central moment of Poisson distribu	ition with mean m is
a) m b)2m c) m ²	d) m/2
20. Geometric distribution is a particular case of .	
a) Binomial Distribution	b) Poisson Distribution
Negative binomial Distribution	d) Hypergeometri- Di
(x, p) then	
b) mean>vari	ance
b) mean=variance d) mean≤ Ge	cometric Distribution
Mode of the binomial distribution is	
a) not unique b) unique c) np	d)npq
23. A random variable X→H (N. M.n) when N→ ∞	and M = a the 1' and
(m,q)	(II,D)
24.11 a random variable $X\rightarrow H$ (10,6,3) then the mea	n of X is
a) 10 p) 1.8 c) 6 d)2	
25. The recurrence between the probabilities of Poiss	$\operatorname{son}(m)$ is $P(X=x+1) = \dots \qquad P(X=x)$
a) $m/(x+2)$ b) m/x c) $x/(m+1)$	Am/(x+1)

Department of Statistics

Date: 3/09/2024

Remedial Coaching Exam 2024-25 Class: B.Sc. II
Marks: 50

Time: 11.30-12.30

Name of the Stude	ent: Sorpke		ajal Badiza	
/	20.,,7	, , ((901 12001-20	
1. The both regres	ssion coefficient	has	y bit Payer of the	
a) Same alge	braic sign always	S	b) Same algeb	raic sign never
c) Same algeb	raic sign sometin	nes	d) all of	these
2. If correlation be	etween X and Y	is 0.7, then c	correlation between ((4X+3) and (3y-4) is
a)0.7	b)-0.7	c)0	d) None of the	se
				5% then variance of the seri
is				
a)30	b) 3		c) 9	d)300
4. If $r_{12} = r_{13} = 0$	then $R_{1.23} =$			
a) 1	b)0	c)	Unpredictable	d) None of these
5. The variation in	n values of times	series due to	traditions and festiv	vals is known as
a) Seasonal v	variation	b) Cyclic	al variation	
b) Random v	ariation	d) None o	of these	
6. If $r_{13} = r_{23} = 0$	then $r_{12.3} =$			
a) r ₁₂	b) Zero	c)	d) none	of these
7. Which of the fe	ollowing true for	R =		
(a) $1-r^2_{12}-r$	$r^2_{13} - r^2_{23} + 2r_1$	$r_{12}r_{13}r_{23}$	b) $1-r^2_{12}+r^2_{13}-r$	$r^2_{23} + 2r_{12}r_{13}r_{23}$
			$d)1-r^2_{12}-r^2_{13}-$	
8. If $cov(x,y)=-6$,			rsusm (fl.)	
	b)1		d) None	e of these
9. The order of res		and the state of	i more stra	a laminist on its styles.
a) 1	b)2	c)3	d) None	e of these
			etween the regression	
a) A.M.	b) Median	c) Mode	d) Geometric N	

11. The additive model in Time Series is

a) Y = T+S+C+I b) Y = T+S+I c) Y = S+C+I

d) Y = T + S + C

12. Rank correlation coefficient is equal to 1 if

a) $\sum di^2 = 1$ b) $\sum di^2 = 0$ c) $\sum di^2 > 0$

 $d)\sum di^2 < 0$

13. Let (X, Y) be a bivariate discrete r, v. with joint p. m. f.

(x,y)	(0,0)	(1,0)	(0,1)	(1,1)
P(x,y)	1/2	1/4	5/12	1/4

The mean of Y is	
a) 1/3 b)1	c)5/12 d)2/3
14. If X and Y are two random variables with	means E(X) and E(Y)resp. then the expressions
E[(X-E(X)) (Y-E(Y))] is called	
a) variance of X	ariance of Y
e)covariance between X and Y d) correla	tion coefficient between X and Y
15. The correlation coefficient between X and	Y is zero. We then conclude that
a) X and Y have some distribution.	The state of the s
b) The variance of X and Y are equal.	
c) There exists no relationship between X	X and Y
d) There exists no linear relationship betw	
	$(k) = 1$ and $P(X \neq k) = 0$, then variance of X is
(a) k b)1 e)0	d) None of these
17. Deciles divide the data into equal p	parts.
a)9 b) 4 c) T0	d) 100
18. If $X\rightarrow b(n,1/4)$, then the probability distribu	ation of Y=n-X is
a) b(= 1/4) 131/4	d) b(2n,1/4)
19. The second central moment of Poisson distr	ibution with moon with
(a) m b)2m c) m ²	d) m/2
20. Geometric distribution is a particular case o	
a) Binomial Distribution	
b) Negative binomial Distribution	b) Poisson Distribution
21. If X→NB (k, p) then	d) Hypergeometric Distribution
a) mean <variance b)="" mean="">v</variance>	variance
1)	Geometric Distribution
22.Mode of the binomial distribution is	Distribution
a) not unique b) unique c) np	d)npq
23.A random variable $X \rightarrow H$ (N, M,n) when $N \rightarrow$ a) $b(n,q)$ b) $b(m,p)$ c) $b(m,q)$	mand M d
a) b(n,q) b) b(m,p) c)b(m,q) d	$\frac{\partial}{\partial x} = p$, the distribution of X is
24.If a random variable X→H (10,6,3) then the m	nean of X is
a) 10 b) 1.8 c) 6 d)2	
25. The recurrence between the probabilities of Po	Disson(m) is P(V-11)
a) $m/(x+2)$ b) m/x c) $x/(m+1)$	P(X=x) d)m/(x+1)
	- Jul (A 1 1)

Shri Swami Vivekanand Shikshan Sanstha's VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS) Department of Statistics REMEDIAL COACHING

Marklist

Date: 04/09/2024

Sr. No.	Name of Student	Marks 40	
1.	Patil Shreya Pravin		
2.	Ajagekar Maithili Sunil	42	
3.	Fadtare Divya Ananda	42	
4.	Sankpal Kajal Baliram	44	
5.	Bharankar Sumita Sandip	44	
6.	Patil Shital Shivaji	38	
7.	Gorade Vishal Karyappa	46	
8.	Kamble Shrirang Bhagwan	40	



Mrs. V.C. Shinde
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DEPARTMENT OF STATISTICS
VEKANAND COLLEGE, KOLHAPUR
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Shri Swami Vivekanand Shikshan Sanstha's VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS) Department of Statistics REMEDIAL COACHING

Progress Report

Date:04/09/2024

Sr. No.	Name of Student	Previous Marks	Remedial Class Marks	Progress
1.	Patil Shreya Pravin	26	40	28%
2.	Ajagekar Maithili Sunil	20	42	447.
3.	Fadtare Divya Ananda	22	42	40%
4.	Sankpal Kajal Baliram	16	44	56%
5.	Bharankar Sumita Sandip	18	44	52%
6.	Patil Shital Shivaji	20	38	36%
7.	Gorade Vishal Karyappa	18	46	56%
8.	Kamble Shrirang Bhagwan	22	40	36%



Mrs. V. C. Shinde
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JEPARTMENT OF STATISTICS
VEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE KOLHAPUR
(EMPOWERED AUTONOMOUS)
Department of Statistics
REMEDIAL COACHING
2024-2025

19 August, 2024 to 29 August, 2024

Report

The Department of Statistics organized Remedial Coaching Classes for B.Sc. II students from 19th August 2024 to 29th August 2024 (10:00 a.m. – 11:00 a.m.) to improve understanding and build a strong base in statistics.

"The main objectives of this program were to assess students' strengths and weaknesses, improve their learning abilities, and provide academic support for their overall development."

A total of 08 students participated actively in the coaching. The sessions included lectures, problem-solving exercises, and interactive discussions. Attachments such as the Syllabus, Time Table, Attendance Records, Photographs, and Question Papers are enclosed.

The classes were planned and conducted by Ms. A. M. Makandar, Mr. A. B. Bhosale, Ms. M. A. Mulik, Ms. P. V. Ransubhe, Mr. A. S. Tangawade, and Mr. D. D. Patil, with the valuable support of the Principal, Dr. R. R. Kumbhar, and the Head of Department, Mrs. V. C. Shinde.

The program was successful in improving students' conceptual clarity, confidence, and academic performance. It is recommended that such initiatives continue in the future for the benefit of students.

ESTD JUNE 1964

Mrs. V.C. Shinde
HEAD
HARIMENT OF STATISTICS
KEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)