



"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

BRIDGE COURSE

For B.Sc. III

2024-2025

22nd July to 27th July 2024



Department of Statistics
Vivekanand College, Kolhapur
(Empowered Autonomous)

Date: 18/07/2024

To,
The Principal,
Vivekanand College,
Kolhapur (Empowered Autonomous)


Sub: Regarding Permission to organize Bridge Course.....

Respected Sir,

With reference to the above subject, our department has decided to organize a Bridge Course for the students of B.Sc. III Statistics who have been recently admitted to Vivekanand College from other institutions. The course will be conducted from 22nd July 2024 to 27th July 2024 between 10:00 a.m. and 11:30 a.m. in the Department of Statistics. We kindly request you to grant permission for the same.

Thanking You.

Yours faithfully,


Mrs. V. C. Shinde

HEAD
DEPARTMENT OF STATISTICS
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Allowed
PR
18-7-2024

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VIVEKANAND COLLEGE KOLHAPUR
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Department of Statistics

Notice


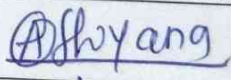
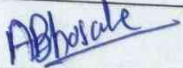
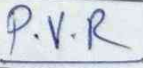

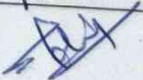
Date: 18/07/2024

All the students of B.Sc. III Statistics who have been **newly admitted to Vivekanand College from other colleges** are hereby informed that a **Bridge Course** will be conducted from 22nd July to 27th July 2024 in the **Department of Statistics at 10:00 a.m.**, as per the following timetable.


TIMETABLE

Date: 22/07/2024 to 27/07/2024. (06 Days)

Time: 10.00 am to 11.30 am

Sr. No.	Date	Name of Teacher	Sign
1.	22/07/2024	Mrs. V. C. Shinde	
2.	23/07/2024	Ms. A. M. Makandar	
3.	24/07/2024	Mr. Ashok B. Bhosale	
4.	25/07/2024	Ms. P. V. Ransubhe	
5.	26/07/2024	Mr. A. P. Patil	
6.	27/07/2024	Mr. D. D. Patil	




Mrs. V. C. Shinde
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DEPARTMENT OF STATISTICS

BRIDGE COURSE SYLLABUS

Sr. No.	Name of the Topic	Name of the Teacher
1	Official Statistics-I	Mrs. V. C. Shinde
2	Official Statistics-II	Ms. A. M. Makandar
3	Introduction to R	Mr. A. B. Bhosale
4	Statistical Analysis using R	Ms. P. V. Ransubhe
5	Reliability of System	Mr. A. P. Patil
6	Ageing properties	Mr. D. D. Patil




Mrs. V. C. Shinde
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DEPARTMENT OF STATISTICS

Report on Bridge Course

Aim: To reinforce foundational concepts in Statistics and bridge the gaps in the syllabus covered across different institutions.

Objectives: To review and strengthen fundamental concepts in Statistics.

Dates: 22nd July 2024 to 27th July 2024

Time: 10:00 a.m. to 11:30 a.m.

Venue: Department of Statistics

Resource Persons: Faculty members

Number of Beneficiaries: 05


Brief Description:

A Bridge Course was conducted for newly admitted B.Sc. III Statistics students from 22nd July 2024 to 27th July 2024. The objective of the bridge course was to bridge the academic gap between different stages of learning and to help students transition smoothly into a new curriculum. A total of 5 students participated in the course to strengthen their subject knowledge in Statistics. The sessions included revision of core concepts, problem-solving exercises, and interactive discussions to enhance understanding. This initiative not only helped students improve their basic concepts but also built confidence and prepared them for advanced topics in the upcoming academic year.

Output:

Enhanced subject knowledge, improved conceptual clarity in core statistical and mathematical topics, better problem-solving ability, and increased confidence among students to cope with the B.Sc. III curriculum.




Mrs. V. C. Shinde

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(EMPOWERED AUTONOMOUS)

Department of Statistics

Bridge Course 2024-25

Time: 10.00 am to 11.30 am

Attendance

Sr. No.	Name of Student	22-07-24	23-07-24	24-07-24	25-07-24	26-07-24	27-07-24
1	Chavan Pooja Pandurang	<u>CPP</u>	<u>CPP</u>	<u>CPP</u>	<u>CPP</u>	<u>CPP</u>	<u>CPP</u>
2	Disale Sanika Balwant	<u>Disale</u>	<u>Disale</u>	<u>Disale</u>	<u>Disale</u>	<u>Disale</u>	<u>Disale</u>
3	Ekal Samiksha Rajaram	<u>Ekal</u>	<u>Ekal</u>	<u>Ekal</u>	<u>Ekal</u>	<u>Ekal</u>	<u>Ekal</u>
4	Pandav Gautami Dashrath	<u>Pandav</u>	<u>Pandav</u>	<u>Pandav</u>	<u>Pandav</u>	AB	<u>Pandav</u>
5	Salokhe Tanuja B.	<u>Tanjayal</u>	<u>Tanjayal</u>	<u>Tanjayal</u>	<u>Tanjayal</u>	<u>Tanjayal</u>	<u>Tanjayal</u>



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Department of Statistics
BRIDGE COURSE

“Notice: Bridge Course Examination”

Date: 26/08/2024

All the students of B.Sc. III, who have attended the coaching sessions are informed that the **Bridge Course** 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.




Mrs. V. C. Shinde
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DEPARTMENT OF STATISTICS
VIVEKANAND COLLEGE, KOLHAPUR
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Department of Statistics
BRIDGE COURSE

Mark List

Date: 04/09/2024

Sr. No.	Name of Student	Marks
1.	Chavan Pooja Pandurang	44
2.	Disale Sanika Balwant	42
3.	Ekal Samiksha Rajaram	44
4.	Pandav Gautami Dashrath	44
5.	Salokhe Tanuja B.	42



[Signature]
Mrs. V. C. Shinde

HEAD
DEPARTMENT OF STATISTICS
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS)
Department of Statistics
Bridge Course

Date: 9/08/2024

Time: 11.30-12.30

Marks: 50

Name of the Student: Chavan Puja Pandurang Class: B.Sc. III

44
50

1. Which of the following option is correct for reliability function or survival function at time t ?
A) $P[T > t]$ B) $1 - F(t)$ C) $1 - P[T \leq t]$ D) All the above
2. The reliability of 2 out of 3 system having reliability of each component 0.5 is _____.
A) 0.88 B) 0.62 C) 0.5 D) 0.784
3. National income estimation is the responsible of
A) CSO (Central Statistics Office)
B) National Sample Survey Organization (NSSO)
C) Finance Ministry
D) National Income Committee
4. Which of the following are principles of Official Statistics?
A) Relevance B) Impartiality C) Transparency D) All the above
5. _____ is used to skip an iteration of a loop.
A) Next B) Skip C) Group D) None
6. Nodal ministry of Statistical System in India is
A) Ministry of Human Resource Development
B) Ministry of Statistics and Programme Implementation
C) Directorate of Economics and Statistics, Ministry of Agriculture
D) None of the Above
7. Structure function for Parallel system of 2 independent components is.....
A) $X_1 X_2$ B) $1 - (1 - X_1 X_2)$
C) $X_1 + X_2 - X_1 X_2$ D) $X_1 X_2 X_3$
8. For a parallel system of two components having 0.6 reliability each the reliability of a system is.....
A) 0.16 B) 0.6 C) 0.84 D) 0.4
9. An R function is created by using the keyword?
A) fun B) function C) declare D) extends
10. A lifetime distribution of r.v. is said to be decreasing failure rate (DFR) distribution if _____.
A) Hazard rate function is decreasing function of time
B) Ageing function is increasing function of time
C) Hazard rate function is increasing function of time
D) Both A & B
11. Structure function is random variable.
A) Binary B) Bernoulli C) Binomial D) Both A and B
12. Which loop executes a sequence of statements multiple times and abbreviates the code that manages the loop variable?
A) for B) while C) do-while D) repeat

13. Which among the following is not an activity of CSO?

- A) Compilation
- B) Conducting Economic Census
- C) Conducting Consumer Expenditure Survey
- D) Training of Statistical Personnel

14. Which of the following division of CSO deals with Environmental Statistics?

- A) National Account Division
- B) Social Statistics Division
- C) Economics Statistics Division
- D) Price Statistics Division

15. What will be output for the following code?
`> sqrt(-17)`

- A) -4.02
- B) 4.02
- C) 3.67
- D) NAN

16. A component has hazard rate 2 then value of distribution function is

- A) e^{-2t}
- B) $2e^{-2t}$
- C) $1 - e^{-2t}$
- D) None of these

17. If T is lifetime of component having exponential distribution with parameter θ then value of survival function is

- A) $e^{-\theta t}$
- B) $\theta e^{-\theta t}$
- C) $1 - e^{-\theta t}$
- D) None of these

18. In 2 out of 3 system number of minimal path sets and minimal cut sets are

- A) (3,3)
- B) (4,3)
- C) (3,4)
- D) (4,4)

19. A state vector \underline{X} is called Cut vector if $\phi(\underline{X}) = \dots$

- A) 0
- B) 1
- C) Both A and B
- D) Neither A nor B

20. Structure function for Parallel system of 2 independent components is

- A) $X_1 X_2$
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- C) $X_1 + X_2 - X_1 X_2$
- D) $X_1 X_2 X_3$

21. In R programming, the very basic data types are the R-objects called?

- A) Lists
- B) Matrices
- C) Vector
- D) Arrays

22. Which of the following is the assignment operator in R?

- A) =
- B) <-
- C) ==
- D) ==>

23. Which function is used to combine values into a vector in R?

- A) c()
- B) vector()
- C) combine()
- D) join()

24. What is the output of `length(c(2, 4, 6, 8, 10))` in R?

- A) 4
- B) 5
- C) 10
- D) Error

25. Which function in R is used to display the first few rows of a dataset?

- A) start()
- B) head()
- C) top()
- D) view()

VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS)

Department of Statistics
Bridge Course

42/50

Date: 9/08/2024

Time: 11.30-12.30

Marks: 50

Name of the Student: Desale Sanika B

Class: B.Sc. III

1. Which of the following option is correct for reliability function or survival function at time t ?
A) $P[T > t]$ B) $1 - F(t)$ C) $1 - P[T \leq t]$ D) All the above
2. The reliability of 2 out of 3 system having reliability of each component 0.5 is _____.
A) 0.88 B) 0.62 C) 0.5 D) 0.784
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VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS)
Department of Statistics
Bridge Course

44
50

Date: 9/08/2024

Time: 11.30-12.30

Marks: 50

Name of the Student: Ekal Samiksha R.

Class: B.Sc. III

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Department of Statistics
Bridge Course

44
50

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Marks: 50

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Class: B.Sc. III

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- ```
> sqrt(-17)
```
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  - ☐ C) Both A and B
  - ☐ D) Neither A nor B
20. Structure function for Parallel system of 2 independent components is.....
- ☒ A)  $X_1 X_2$
  - ☐ B)  $1 - (1 - X_1 X_2)$
  - ☒ C)  $X_1 + X_2 - X_1 X_2$
  - ☐ D)  $X_1 X_2 X_3$
21. In R programming, the very basic data types are the R-objects called?
- ☒ A) Lists
  - ☐ B) Matrices
  - ☒ C) Vector
  - ☐ D) Arrays
22. Which of the following is the assignment operator in R?
- ☒ A) =
  - ☐ B) <-
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23. Which function is used to combine values into a vector in R?
- ☒ A) c()
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  - ☒ C) combine()
  - ☐ D) join()
24. What is the output of length(c(2, 4, 6, 8, 10)) in R?
- ☒ A) 4
  - ☒ B) 5
  - ☐ C) 10
  - ☐ D) Error
25. Which function in R is used to display the first few rows of a dataset?
- ☒ A) start()
  - ☒ B) head()
  - ☐ C) top()
  - ☐ D) view()



VIVEKANAND COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS)  
Department of Statistics  
Bridge Course

42  
50

Date: 9/08/2024

Time: 11.30-12.30

Marks: 50

Name of the Student:

Salokhe Tanuja B.

Class: B.Sc. III

1. Which of the following option is correct for reliability function or survival function at time  $t$ ?  
A)  $P[T > t]$  B)  $1 - F(t)$  C)  $1 - P[T \leq t]$  D) All the above
2. The reliability of 2 out of 3 system having reliability of each component 0.5 is \_\_\_\_  
A) 0.88 B) 0.62 C) 0.5 D) 0.784
3. National income estimation is the responsible of .....  
A) CSO (Central Statistics Office)  
B) National Sample Survey Organization (NSSO)  
C) Finance Ministry  
D) National Income Committee
4. Which of the following are principles of Official Statistics?  
A) Relevance B) Impartiality C) Transparency D) All the above
5. is used to skip an iteration of a loop.  
A) Next B) Skip C) Group D) None
6. Nodal ministry of Statistical System in India is ....  
A) Ministry of Human Resource Development  
B) Ministry of Statistics and Programme Implementation  
C) Directorate of Economics and Statistics, Ministry of Agriculture  
D) None of the Above
7. Structure function for Parallel system of 2 independent components is.....  
A)  $X_1 X_2$  B)  $1 - (1 - X_1 X_2)$   
C)  $X_1 + X_2 - X_1 X_2$  D)  $X_1 X_2 X_3$
8. For a parallel system of two components having 0.6 reliability each the reliability of a system is.....  
A) 0.16 B) 0.6 C) 0.84 D) 0.4
9. An R function is created by using the keyword?  
A) fun B) function C) declare D) extends
10. A lifetime distribution of r.v. is said to be decreasing failure rate (DFR) distribution if \_\_\_\_  
A) Hazard rate function is decreasing function of time  
B) Ageing function is increasing function of time  
C) Hazard rate function is increasing function of time  
D) Both A & B
11. Structure function is ..... random variable.  
A) Binary B) Bernoulli C) Binomial D) Both A and B
12. Which loop executes a sequence of statements multiple times and abbreviates the code that manages the loop variable?  
A) for B) while C) do-while D) repeat



13. Which among the following is not an activity of CSO?

- A) Compilation
- B) Conducting Economic Census
- ☒ C) Conducting Consumer Expenditure Survey
- D) Training of Statistical Personnel

14. Which of the following division of CSO deals with Environmental Statistics?

- A) National Account Division
- ☒ B) Social Statistics Division
- C) Economics Statistics Division
- D) Price Statistics Division

15. What will be output for the following code?

> sqrt(-17)

- A) -4.02
- B) 4.02
- C) 3.67
- ☒ D) NAN

16. A component has hazard rate 2 then value of distribution function is ....

- A)  $e^{-2t}$
- B)  $2e^{-2t}$
- ☒ C)  $1 - e^{-2t}$
- D) None of these

17. If T is lifetime of component having exponential distribution with parameter  $\theta$  then value of survival function is .....

- ☒ A)  $e^{-\theta t}$
- B)  $\theta e^{-\theta t}$
- C)  $1 - e^{-\theta t}$
- D) None of these

18. In 2 out of 3 system number of minimal path sets and minimal cut sets are .....

- ☒ A) (3,3)
- B) (4,3)
- C) (3,4)
- D) (4,4)

19. A state vector  $\underline{X}$  is called Cut vector if  $\emptyset(\underline{X}) = \dots\dots\dots$

- ☒ A) 0
- B) 1
- C) Both A and B
- D) Neither A nor B

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