No. of years : 0-2, 3-6, 6-9, 9-12, 12-15, 15-18

No. of Persons : 190 70 25 10 4 1

Fit an exponential distribution.

GROUP-C

18. Viva Voce. 10

19. Practical Notebook. 10

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PG Even Semester Examination, September, 2023

STATISTICS

(2nd Semester)

Course No: STA-556
(Pyhton Programming)

FM: 70
Pass Marks : 28
Time: 3 Hours

The figures in the right margin indicate full marks for the question.

GROUP-A

Answer any 5 questions from this Group-A. 2x5=10

1. Write two features of Python prgramming language.
2. Define Python identifiers.
3. How to declare a function in Python, explain giving an example.
4. Write the steps for installing different packages in Python.
5. What are 'comments' in Python used for?
6. How to define a 'variable in Python'?
7. Define the types of variables in Python.
8. What are the different data types in Python?

9. Define the 'return' statement in Python.

10. How to add two number using the Python 'return statement'?

GROUP-B

Answer any four questions using Python programming language. 10x4=40

11. (a) Given the data below :

22, 16, 35, 26, 14, 17, 28, 29, 21, 17, 20

Find the (i) mean

(ii) median

(iii) mode

(iv) range

of the given numbers. 5

(b) Create and label a Box and Whisker plot.

10 20 22 36 42 46 53 54 71 88 89

12. Calculate the correlation coefficient for the following heights (in inches) of father(X) and their daughthers (Y).

X : 65 66 67 67 68 69 70

Y : 67 68 65 68 72 72 69

13. Fit binomial distribution to the following data set.

x : 0 1 2 3 4

f : 28 62 46 10 4

14. A study has shown that males in India have steadily grown in height from the 1800s to 1980. Based on the data below, find the mean height for each 60 year period. Then choose an appropriate chart or plot to visualize this data.

Year : 1810 1820 1830 1840 1850 1860 1870 1880 1890 1900 1910 1920 1930 1940 1950 1960 1970 1980

Height (in cm) : 169.7, 169.1, 166.7, 166.5, 165.6, 166.6, 167.2, 168, 167.4, 169.4, 170.9, 171, 173.9, 174.9, 176, 176.9, 177.1, 176.8

15. Fit a Poisson distribution to the following data which give the number of doddens in a sample of clover seeds.

No. of doddens : 0 1 2 3 4 5 6 7 8

Observed frequency (f) : 56 156 132 92 37 22 4 0 1

16. A company wants to analyse the relationship between the number of advertising dollars spent (X) and the corresponding number of product units sold (Y) per day. They collected data for 10 days and obtained the following results :

X (Advertising Dollars) : 20 25 30 35 40 45 50 55 60 65

Y (Product units sold) : 60 70 80 75 90 85 95 100 105 110

17. From the study of divorced cases in the western countries, the following distribution is obtained for the time interval (in years) between the day for their marriage and day of their divorce.