

B. A. DEGREE (C.B.C.S.) EXAMINATION, MARCH 2023
(2020 Admission Regular, 2019, 2018 Admissions Supplementary)
SEMESTER VI - CORE COURSE (ECONOMICS)
EC6B11B18 - QUANTITATIVE ECONOMICS

Time : 3 Hours

Maximum Marks : 80

Part A**I. Answer any Ten questions. Each question carries 2 marks****(10x2=20)**

1. What are sure events in random experiments?
2. Define random experiment.
3. What are the conditions under which binomial distribution tends to be Normal distribution?
4. What are the uses t- test?
5. What are uses of Z-test ?
6. What is spurious correlation?
7. Write the properties of regression lines.
8. Distinguish between Positive correlation and Negative correlation.
9. What is a line of best fit?
10. Explain cyclical and irregular variations.
11. Fisher's Index number is called 'Ideal'.why?
12. Give the methods for construction of index numbers.

Part B**II. Answer any Six questions. Each question carries 5 marks****(6x5=30)**

13. The variable X follows a normal distribution with a mean 45 and S.D =10. Find the probability for an item to fall (1) beyond 60 (2) between 40 and 56.
14. The per acre yield of a crop in a particular area is observed to follow a normal distribution with mean of 15 quintals and S.D of 5 quintals. Find (1) the proportion of the area yielding at least 25 quintals and (2) What extent of the land under the crop can yield between 10 and 20 quintals if the total land under crops is 782 acre?
15. Explain the criteria for a good estimator.
16. What is statistical hypothesis?
17. From the following data of values of x and y , find the regression equation of Y on X.

X	2	3	4	5	6
Y	3	5	4	8	9

18. Explain the merits and demerits of moving average method.
19. How is time series analysis useful for forecasting in economics and business.
20. For the data given below Calculate Simple Index Number:

Commodities	Price(1995)	Price (2000)
A	5	7

B	8	9
C	12	15
D	25	24
E	3	4

21. Find the Weighted index number by Average Relative method:

Commodities	price 1999	Price 2002	Quantity 1999
A	5	12	2
B	8	10	1
C	4	5	3
D	9	18	4
E	3	4	2

Part C

III. Answer any Two questions. Each question carries 15 marks

(2x15=30)

22. The following data shows the number of seeds germinating out of 5 lb damp filter for 80 sets of seeds. Fit a binomial distribution of this data and find the expected frequencies.

x	y
0	6
1	20
2	28
3	12
4	8
5	6

23. Test whether son's eye colour and father's eye colour are associated with the help of the data given below.

	Eye colour of a son	
Father's eye colour	Not light	Light
Not light	230	148
Light	151	471

24. Briefly discuss various method of computing coefficient of correlation. Find out Karl Pearson's correlation coefficient between x and y from the following data.

$$n=10, \sum x=35, \sum x^2=203, \sum y=28, \sum y^2=140, \sum xy=168.$$

25. An enquiry into the budgets of middle class families in cochin city gave the following information

Expenses on	food	Rent	Clothing	Fuel	Miscellaneous
Weightage	35%	15%	20%	10%	20%
Price(2000)	150	30	75	25	40
Price(2002)	145	30	65	23	45

What changes in the cost of living of 2002 as compared with 2000 are seen?