

M.Com. (HPP) Semester-I Examination
(Finance and Financial Services/AAA)
CC 3 : Research in Finance

Time : 2-00 Hours]

March 2021

[Max. Marks : 50

Instructions: All Questions in **Section I** carry equal marks
 Attempt any **TWO** questions in **Section I**

Section I

- Q.1(a) Explain different types of research. (04)
 Q.1(b) Explain the structure of research proposal. (06)
 Q.1(c) Explain basic principles of experimental designs. (10)

Q.2 (a) What is meant by primary and secondary data? Write its methods for collecting such data. (10)

Q.2 (b) (10)

(i) For the following data, a pie chart is to be drawn. Obtain the angles (degree) for each of the following sources of revenue.

Source	Customs	Excise	I.T.	Corporate Tax	Others
Revenue (in crore ₹)	80	190	165	72	33

(ii) Following are the weights in kgs. of 36 M.Com students of a college.

65, 70, 65, 62, 64, 73, 67, 60, 50,
 59, 68, 45, 55, 65, 68, 56, 68, 55,
 70, 73, 49, 61, 61, 47, 57, 50, 59,
 70, 70, 57, 44, 69, 73, 64, 49, 63

Construct a frequency distribution consisting of one of the class as 54 – 58. Also find cumulative frequency of “less than” and “more than” types.

Q.3(a) Find C.V. and check the consistency.

(10)

Salary (in ₹)	100 - 200	200 - 300	300 - 400	400 - 500	500 - 600	600 - 700
No. of workers in Firm A	8	12	17	10	2	1
No. of workers in Firm B	6	18	25	12	2	2

Q.3 (b) Obtain multiple regression equation of x_1 on x_2 and x_3 .

(10)

X_1	9	16	6	9	11
X_2	3	8	2	4	5
X_3	5	4	2	2	3

Q.4(a) A net provider claims that the net speed of the new plan has a mean speed of 100 Mbps with a standard deviation of 10Mbps. Consumer Protection department selects a sample of 100 connections and found the mean speed of 90 Mbps. Should the Consumer Protection department reject the manufacturer's claim at 5 % level of significance?

(04)

Q.4(b) Suppose we suspected an unusual distribution of blood groups in patients undergoing one type of surgical procedure. It is a medically established fact that the expected distribution for the population which performs a particular surgery is 44% group O, 45% group A, 8% group B and 3% group AB.

A random sample of 187 patients of that particular surgery gave blood grouping results as below.

Blood Group	O	A	B	AB
Patients	67	83	29	8

Do this data match with the medically expected distribution. (Table value: 7.815)

(06)

Q.4(c) The following table gives the sales (in Lakh ₹) of four salesmen S1, S2, S3 & S4 in four regions North, South, East and West.

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Regions	Salesman			
	S1	S2	S3	S4
North	36	36	21	35
South	28	29	31	32
East	26	28	29	29
West	30	25	37	30

Test at 1 % level of significance whether there is significant difference among salesmen and also among regions as regard to the sales. [$F(9,3) = 27.35$, $F(3,9) = 3.86$]

(Use coding method subtracting 30 from each value of the data.) (10)

Section II

Choose the correct option (attempt any five) (10)

- Ranking of the players in a game is _____ type of data.
(a) Nominal (b) Ordinal
(c) Interval (d) Ratio
- 0 - 8; 10 - 18; 20 - 28; 30 - 38; For such classification, what is the lower boundary point for the third class?
(a) 18 (b) 19.5 (c) 19 (d) 18.5
- If $\bar{x} = 10$ and $S_x = 3$, find the coefficient of variation of $y = 2x + 1$.
(a) 28.57% (b) 30%
(c) 33.33% (d) None of the above
- If $r(x, y) = 0.6$, then $r(x + 0.1, y + 0.3) =$ _____.
(a) 1 (b) 0.6 (c) 0.4 (d) None

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5. If the multiple regression equation is $y = 1.5 + 2x_1 + 3x_2$, what is the change in y due to unit change in x_1 by keeping x_2 as constant?
- (a) 1.5 (b) 2 (c) 3 (d)
6. If $r = 0.8$ and P.E. = 0.06, then the probable limits for the population correlation coefficient are _____ to _____.
- (a) 0.2 ; 1.4 (b) 0.8 ; 0.06
(c) 0.74 ; 0.86 (d) -1 ; 1
7. Which of the following is formal experimental design?
- (a) Completely Randomised design only
(b) Randomised Block design only
(c) Latin Square design only
(d) All of the above
8. The mean weight of a random sample of size 100 from a standard population is 65.8 kgs. And the standard deviation is 4 kgs. What is the upper limit for 95 % confidence interval for the mean weight?
- (a) 66.58 (b) 65.02 (c) 76.12 (d) 55.48
9. The type I error is
- (a) Null hypothesis is true and accepted
(b) Null hypothesis is true and rejected
(c) Null hypothesis is false and rejected
(d) Null hypothesis is false and accepted
10. In a table of 3 rows and 4 columns for testing independence of attributes using Chi-square test, the degrees of freedom will
- (a) 12 (b) 5 (c) 6 (d) 7
11. 750 men out of a random sample of 1000 men of a City A were found to be smokers. And 1000 men out of a random sample of 1200 men of a City B were found to be smokers. Find the standard error of difference between proportion of smokers of two cities.

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- (a) 0.0173 (b) 0.000299 (c) 0.019 (d) 0.0003633

12. The following figure relate to the price of a commodity in four different cities.

City	Prices				
A	12	16	16		
B	15	14	14	15	
C	17	16	15	14	
D	15	12	15	16	16

What will the degrees of freedom for error in the ANOVA table?

- (a) 3 (b) 12 (c) 15 (d) 17
