Seat No. : —

NC-147

November-2019

M.Com. (HPP), Sem.-I

CC-3 : Accountancy (Research in Accounting)

Time : 2:30 Hours] [Max. Marks : 70

1. (A) (i) What is research ? Explain in detail different types of research. 7

(ii) Explain steps of Research process. 7

OR

(i) Write short note on structuring the research proposal.

(ii) Discuss various types of research designs.

(B) Answer any **Four** : 4

(1) Give one key feature of a good research design.

(2) What is statistical hypothesis ?

(3) Define Latin square design.

(4) State one key difference between Pure and Applied research.

(5) What are objectives of research ?

(6) What is experimental design ?

2. (A) (i) Give the difference between primary data and secondary data. 7

(ii) The information of weekly expenditure (in ₹) of 30 students is given below : 7

260, 425, 300, 175, 240, 330, 420, 235, 550, 310, 310, 550, 130, 479, 395, 505, 200, 205, 475, 530, 440, 305, 325, 400, 310, 485, 56, 195, 250, 375.

Prepare a frequency distribution of expenditure starting with class 0-100, 100-200 and so on. Also find the percentage of students having their expenditure less than ₹ 30.

OR

(i) Write the characteristics of an ideal questionnaire. 7

(ii) Draw the cumulative curves of "less than" and "more than" from the following data : 7

Marks	0-5	5-10	10-15	15-20	20-25	25-30
No. of students	2	3	10	9	4	2

(B) Answer any **Four** : 4

(1) The number of times an observation is repeated in the data is called

(a) class-interval (b) frequency

(c) mid-point (d) upper limit

(2) The age of students is a _____ variable

(a) discrete (b) continuous

(c) both (d) none

(3) Which of the following is an example of attribute ?

(a) no. of accidents (b) marks in a subject

(c) skill (d) height

(4) What is the lower boundary point of the third class ?

Class	10-18	20-28	30-38	40-48
Frequency	2	5	4	3

(a) 28.5 (b) 30.5

(c) 29 (d) 19

(5) The stratified random sampling is used when population is _____

(a) homogeneous (b) heterogeneous

(c) continuous (d) discrete

(6) If out of 720000 people there are 180000 females, the degrees of females while drawing the pie-chart is _____

(a) 25 (b) 540000

(c) 90 (d) 180

3. (A) (i) Write the merits and demerits of median and mode. 7

(ii) Find the mean and median from the following data and using empirical formula. Obtain the value of mode : 7

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	4	16	60	100	40	6	4

OR

(i) What is skewness ? Explain the types of skewness by drawing figures.

(ii) Estimate y for x = 19.

X	10	11	13	13	15	17	20
y	60	75	80	85	90	95	100

(B) Answer any three :

(1) The mean age of 4 persons is 32 years. What should be the age of fifth person so that mean age of five persons become 35 years.

(a) 47 (b) 32

(c) 35 (d) None of the above

(2) Find Harmonic mean of two observations $\frac{1}{2}$ and $\frac{1}{3}$.

(a) 5 (b) 0.4

(c) $\frac{5}{12}$ (d) $\frac{12}{5}$

(3) For open-ended frequency distribution, _____ is a suitable measure of dispersion.

(a) Range (b) Mean deviation

(c) Quartile deviation (d) Variance

(4) If $\bar{x} = 10$ and $z = 12$, what is the type of skewness ?

(a) Negative (b) Positive

(c) Zero (d) None of the above

(5) For perfectly correlated variables if one regression coefficient is 0.5 then the value of another regression coefficient is ____

(a) 0.5 (b) 1

(c) 2 (d) 0.25

4. (A) (i) In a certain factory there are two machines for manufacturing the same item. The average weight in a sample of 250 items produced by machine A is found to be 120 gms. with a standard deviation of 12 gms. While the corresponding figures in a sample of 400 items from machine B are 124 and 14 respectively. Is the difference between mean weights significant at 1% level of significance ? 7

(ii) Explain paired t test for difference of two means. 7

OR

(i) In a college there are 800 students of which 25 % are i-phone users. Of i-phone users, 120 had Vodafone network. 320 students of the college have network other than Vodafone. Test at 5 % level of significance whether there is any relation between Phone Company and network they use ?

(ii) The production of 3 operators and 4 machines is given below. Check whether there is any significant difference in production of operators.

Operator	Machine A	Machine B	Machine C	Machine D
I	1540	1560	1560	1540
II	1550	1590	1580	1600
III	1560	1590	1570	1560

(B) Answer any **three** : 3

(1) Define Null hypothesis.

(2) Define level of significance.

(3) Give one assumption of t distribution.

(4) A random sample of 5 observations gave variance of 4.8 and another sample of 7 observations gave variance of 3.14. Calculate F - ratio.

(5) What is Yate's correction ?

TABLE VALUES

	d.f.	5 % level	1 % level
t	9	2.262	3.250
t	10	2.228	3.169
F	(2,6)	5.14	10.92
F	(3,6)	4.76	9.78
F	(6,2)	19.33	99.33
F	(6,3)	8.94	27.91
χ^2	1	3.84	6.64
χ^2	2	5.99	9.21
χ^2	4	9.49	13.28
χ^2	5	11.07	15.09
χ^2	6	12.59	16.81