

B. Com 3rd Sem

2019/TDC/ODD/SEM/COMHGE-301T/255

TDC (CBCS) Odd Semester Exam., 2019

COMMERCE

(3rd Semester)

Course No. : COMHGE-301T

(Business Statistics)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer all questions

UNIT—I

1. Answer the following in short (any three) :
1×3=3

- (a) Define the term 'variable'.
- (b) Mention two types of absolute measures of dispersion.
- (c) State one advantage of standard deviation.
- (d) Write the formula of harmonic mean.

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(Turn Over)

(2)

2. What is dispersion?

OR

3. Write a short note on 'kurtosis'.

4. From the following table, calculate (a) mean, (b) standard deviation and (c) coefficient of variation : 2+2+1

<i>Monthly wages</i>	<i>No. of workers</i>
0-10	1
10-20	4
20-30	10
30-40	22
40-50	30
50-60	10
60-70	3

OR

5. From the following set of numbers, calculate the first four moments about (a) the mean and (b) the origin 4 :

1, 3, 7, 9, 10

UNIT—II

6. Define the following in one sentence (any three) : 1×3

(a) Mutually exclusive events

(3)

- (b) Equally likely events
- (c) Events
- (d) Outcomes

One card is drawn from a standard pack of 52. What is the chance that it is either a king or a queen? 2

OR

Write two properties of Poisson distribution. 2

Briefly explain the 'Bayes theorem'. 5

OR

A coin is tossed thrice. What is the chance of getting (a) all heads and (b) at least one head? $2\frac{1}{2}+2\frac{1}{2}=5$

UNIT—III

Answer the following (any *three*) : $1 \times 3 = 3$

- (a) When are the variables said to be correlated?
- (b) Write the formula for rank correlation.
- (c) Write one utility of study of correlation.
- (d) Write one advantage of regression.

(4)

12. Mention various types of correlation. 2

OR 1

13. What is graphic method? 2

14. What is scatter diagram? 5

OR

15. Calculate Karl Pearson's correlation coefficient of the following paired data : 5

X : 28 37 40 38 35 33 40 32 34 33

Y : 23 32 33 34 30 26 29 31 34 38

UNIT—IV

16. Answer the following (any three) : 1×3=3

(a) What is index number? 2

(b) Write one limitation of index number.

(c) Write the formula for Laspeyres' index number.

(d) Write two components of time series.

17. Write two uses of index number. 2

OR 2

18. Write two importances of time series analysis. 2 2

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(Continued) 2

(5)

19. From the following data, calculate
(a) Laspeyres' index and (b) Paasche's index :

$$2\frac{1}{2} + 2\frac{1}{2} = 5$$

Item	Base year		Current year	
	Qty (units)	Rate per unit (₹)	Qty (units)	Rate per unit (₹)
Bread	6	40	7	30
Meat	4	45	5	50
Tea	1	90	2	40

OR

20. Distinguish between the regular and irregular fluctuations in time series. 5

UNIT—V

21. Answer the following (any three) : $1 \times 3 = 3$

- (a) Write one advantage of census method.
- (b) Write one demerit of sampling method.
- (c) What is lottery method?
- (d) Name two types of sampling errors.

22. What is type I error? 2

OR

23. What is type II error? 2

24. Write notes on the following (any two) :

$$2^{1/2 \times 2} = 5$$

- (a) Null hypothesis
- (b) F-test
- (c) Level of significance
- (d) Confidence interval
