Sanjay Ghodawat University, Kolhapur

2018-19

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

Year and Program 2019 | **School of Commerce and Management** | **Department Commerce**

FY B .Com | **Course Title Business Mathematics And Statistics** | **Semester – Even(II)**

Course Code CBC104

Day and Date Tuesday 7/01/20 | **End Semester Examination** | **Time: 3 hrs, Max Marks: 100** 10.30am to 01.30 pm

Instructions: 1) All Questions are compulsory.

		Marks	Level	COs
Q.1				
a)	State True & False (any5) 1. A proportion is written to compare the numbers with colon. 2. 14:16 and 35:42 are equal ratios. 3. Bill discounting facility offered as Sale bill discounting or Drawee bill discounting. 4. Average due Date is used to calculate interest on drawings of partners. 5. A card is drawn from a pack of cards. The probability that it is heart or an ace card is 16/52	10	1	1
b)	Answer the questions in short (any 5) 1. Explain primary and secondary data? 2. Explain the term discrete variable with example 3. Explain graphical representation of data using histogram. 4. Discuss the term Mean with relative merits and demerits 5. Discuss requirement of good measures of dispersion. 6. What is mean deviation ?	10	1	1
Q.2	Solve the following			
a)	i. If 2A = 3B = 4C, find A : B : C ii. What must be added to each term of the ratio 2 : 3, so that it may become equal to 4 : 5?	10	2	1
	OR			
a)	i. The length of the ribbon was originally 30 cm. It was reduced in the ratio 5 : 3. What is its length now? ii. The first, second and third terms of the proportion are 42, 36, 35. Find the fourth term.	10	2	1
b)	i. Explain conjunction and disjunction with suitable example	10	2	2
	OR			

Re ESE

b) i. Explain conditional statement with example 10 2 2

ii. Write the truth value of each of the following four statements:

(a) India is in Asia or 2 + 2 = 4.

(b) India is in Asia or 2 + 2 = 5.

(c) India is in Europe or 2 + 2 = 4.

(d) India is in Europe or 2 + 2 = 5

Q.3 Solve the following

a) i. A bag contains 20 tickets marked with numbers 1 to 20. One is drawn at random. Find the probability that it will be a multiple of 2 or 5. 10 2 3

ii. The probability of two events A& B are 0.25 & 0.50 respectively. The probability of their simultaneous occurrence is 0.14. Find the probability that neither A nor B occurs.

OR

a) i. Find the probability that a card drawn will be a black or picture 10 2 3

ii. A bag contains 5 red balls, 3 black balls and 4 white balls. A ball is drawn out of the bag at random. What is the probability that the ball drawn is either red or white.

b) Represent the following data by histogram and frequency polygon 10 2 4

Class	5-15	15-25	25-35	35-45	45-55	55-65	65-75
Frequency	10	16	18	15	12	5	2

OR

b) Draw ogive curve by 'less than' and 'more than' methods for the following data. 10 2 4

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	6	12	22	37	17	8	5

Q.4 Solve any Two

a) Calculate the Mean and Median of the following data. 10 3 5

Class	**Frequency**
10-20	10
20-30	20
30-40	35
40-50	50
50-60	45
60-70	30
70-80	15

Re ESE

b) Calculate the Median & Mode from the following frequency distribution 10 3 5

class	frequency
0-20	4
20-40	26
40-60	22
60-80	10
80-100	9
100-120	6
120-140	3

c) The following table gives the daily profit(in Rs.) of shops in a town. 10 3 5

Calculate Mean and Median

Profits	No. of shops
50-60	15
60-70	20
70-80	32
80-90	35
90-100	33
100-110	22
110-120	20
120-130	10
130-140	8

Q.5 Solve/answer any Two

a) Calculate Quartile Deviation and Coefficient of Quartile Deviation from the following data. 10 4 6

Class	frequency
0-100	12
100-200	18
200-300	35
300-400	42
400-500	50
500-600	45
600-700	20
700-800	8

Re ESE

b) Calculate Mean Deviation from median and its coefficient from the given data : 10 4 6

x	frequency
0	15
1	45
2	91
3	162
4	110
5	95
6	82
7	26
8	13
9	2

c) Calculate Standard Deviation(S.D.) and Coefficient of Variation (C.V.) for the following data. 10 4 6

Class	frequency
44-46	3
46-48	24
48-50	27
50-52	21
52-54	5

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Re ESE