



QP CODE: 23124484



23124484

Reg No : .....

Name : .....

**BBA DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE  
EXAMINATIONS, MAY 2023**

**Second Semester**

Bachelor of Business Administration

**Complementary Course - BA2CMT09 - STATISTICS FOR MANAGEMENT**

2017 ADMISSION ONWARDS

1766589E

Time: 3 Hours

Max. Marks : 80

**Part A**

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Two unbiased dice are thrown. Find the probability that the sum of the faces is (1) not less than 10 (2) equal to 10.
2. If  $P(A) = 2/5$ ,  $P(B) = 3/5$  and  $P(A \cap B) = 1/20$ . Examine whether A and B are independent.
3. Define continuous random variable .
4. Write any two properties of Binomial distribution .
5. Define variance of a random variable X .
6. Write any two properties of  $E(X)$
7. Define convenience sampling.
8. Define sampling distribution.
9. Define standard error with example.
10. Define Type 1 error.
11. Give any two use of chi-square test.
12. Mention any two limitations of chi-square test.

(10×2=20)

**Part B**

*Answer any **six** questions.*

*Each question carries **5** marks.*





13. Explain (1) statistical regularity (2) frequency approach to probability and state two limitations of this approach.
14. State Baye's theorem and state its importance.
15. What do you mean by random variable? Illustrate with an example .
16. What do you mean by probability distribution ? What are its properties ?
17. If 5 % of articles are found to be defective in a factory. What is the probability of 2 or more articles are defective in a sample of 120 ? Use Poisson distribution.
18. What is the difference between probability sampling and non probability sampling?
19. What is the importance of central limit theorem in statistics?
20. A random sample of 200 tins of coconut oil gives an average weight of 4.95 kg. with a Sd of 0.21kg. Do we accept the hypothesis of net weight of 5 kgs. per tin at 5% level?
21. Write the procedure for testing independence of two attributes.

(6×5=30)

### Part C

Answer any **two** questions.

Each question carries **15** marks.

22. (a) Explain conditional probability .  
(b) A and B are contesting for the post of a chairman in the company. The probability for their winning is 0.6 and 0.4 respectively. If A wins, the probability of introducing a new product is 0.8 and if B wins the corresponding probability is 0.3. Find the probability that product will be introduced.
23. Scores of students in a test follow Normal distribution with mean =80 and SD =15 .A sample of 1000 students were taken from the population . Find Appropriate number of students whose score is
  - 1) Between 65 and 95
  - 2) Greater than 100
  - 3) Less than 65
24. 1000 ladies were chosen at random from the inhabitants of Bombay city and 550 were found to have dark eyes. Does this finding contradict the hypothesis that the event of a lady having dark eye has probability 1/2.
25. (a) How do you use chi-square test for testing goodness of fit?  
(b) In an experiment on pea breeding Mendel obtained the following frequencies of seeds 315 round and yellow, 101 wrinkled and yellow, 108 round and green, 36 wrinkled and green. Theory predicts that the frequencies should be in the proportion 9 : 3 : 3 : 1. Examine the correspondence between theory and experiment.

(2×15=30)

