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Reg No   :   ....

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BBA DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, DECEMBER 2021

Second Semester

Bachelor of Business Administration

Complementary Course - BA2CMT09 - STATISTICS FOR MANAGEMENT

2017 ADMISSION ONWARDS

BF2F634D

Time: 3 Hours   Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. What is the chance that a leap year would contain 53 Sundays?

2. Define conditional probability.

3. Check whether the following is a probability distribution.

x	0	1	3	4
p(x)	0.2	0.3	0.15	0.35

4. What do you mean by continous random variable?

5. For a Binomial distribution with n = 10 , p =1/2 ,find P(2).

6. Define normal distribution .

7. Distinguish between small sample and large sample.

8. Define mulitistage sampling.

9. Distinguish between statistic and parameter.

10. State the relation between significance level and Type 1 error.

11. What are the conditions for applying chi-square test?

12. Give any two use of chi-square test.

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. If P(A) = 0.3 P(B) =0.2, P(A $\cap$ B) = 0.1 find the probabilities of

    1. At least one of the events occurs.
    2. Exactly one of the events occurs.
    3. None of the events occur

14. Three persons A, B, and C are simultaneously shooting target. Probability of A hitting a target is ¼ that of B is ½ and that of C is 2/3.

    Find the probability of (1) exactly one of them will hit the target.
    (2) at least one of them will hit the target.

15. Define random variable. Give an example.

16. If 5 % of articies are found to be defective in a factory. What is the probability of 2 or more article are defective in a sample of 120? Use Poisson distibution.

17. If X and Y are independent variate with V (X) =2 and V (Y) =3. Find V (2 X + 3Y) and V (5X)

18. What are the main sampling distributions used in the statistical inference?

19. Define standard error with examples.

20. What are parametric and non parametric tests? Explain.

21. What are the limitations of chi-square test?

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. State Baye's theorem.

    Three identical boxes contain two balls each. One has both red, one has one red and one black, and the third has two black balls. A person chooses a box at random and takes out a ball. If the ball is red find the probability that the other ball is also red.

23. 1) What do you mean by Mean and Variance of a discrete random variable?
    2) Find mean and variance of the followig probability distribution

x	0	1	2	3	4
P (x)	1/4	1/5	2/5	1/8	1/40

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) Write the procedure for chi square test of independence of two attributes.

(b) The following table gives data regarding election of candidate to an office.

Economic Status

Attitude towards election	Rich	Poor	Total
Favourable	50	155	205
Not Favourable	90	110	200
Total	140	265	405.

Is attitude towards election influenced by economic status of workers.

(2×15=30)