BBA DEGREE (CBCS) EXAMINATION, NOVEMBER 2020

Second Semester

Bachelor of Business Administration

Complementary Course - BA2CMT09 - STATISTICS FOR MANAGEMENT

2017 ADMISSION ONWARDS

423AD4D0

Time: 3 Hours   Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. What do you mean by statistical regularity?

2. State addition theorem for two events and state its conditions.

3. What are the properties of probability distribution?

4. Define continous random variable.

5. Define binomial distribution.

6. What do you mean by expected value of X?

7. Define mulitistage sampling.

8. Distinguish between statistic and parameter.

9. Define standard error with example

10. What are parametric hypothesis?

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. Probabilities that a husband and wife will be alive 20 years from now is given by 0.8 and 0.9 respectively. Find the probability that in 20 years (1) both will alive (2) neither will alive and (3) at least one will alive.

14. State Baye's theorem and state its importance.

15. What do you mean by random variable? Illustrate with an example.

16. What are the properties of Normal distibution?

17. X is a random variable with Mean = 10 and Variance = 2 . Find mean and variance of 2x + 3

18. Define chi-square distribution and its properties.

19. What is the importance of central limit theorm in statistics?

20. In a survey of 70 business firms it was found that 45 were planning to expand their capacities next year. Does the sample information contradict the hypothesis that 70% of the firms in general are planning to expand next year?

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 consisting 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. If a random variable X follows Poisson distribution such that P (1) = P (2). Find 1. P (0) 2. P (atleast one)

24. Point out the difference between (a) one tailed and two tailed tests (b)Type 1 and Type 2 errors.

25. (a) What is chi-square test and what are its conditions?
(b) A sample analysis of an examination result of 200 students were made. It was found that 46 students had failed, 68 secured III class, 62 scored II class, and the rest were placed in the first division. Are these figures are in agrrement with the general examination results which is in the ratio 2: 3: 3 : 2. for various categoris respectively.(significance level α =0.01)

(2×15=30)