

NAIPUNNYA BUSINESS SCHOOL (NBS)
FIRST SEMESTER MBA I INTERNAL EXAMINATION OCTOBER 2024
QUANTITATIVE TECHNIQUES(BUS1C07)

Time:1 hour 30 min

Maximum:30 marks

Part A

Answer all questions
Each question carries 2 marks

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| 1. What is an events? | L1; CO1 |
| 2. State the importance of exponential distribution | L2; CO2 |

Part B

Answer any two questions
Each question carries 4 marks

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| 3. A bag contains 5 yellow and 2 green and 3 red colour dice. If one dice from the bag are choosen at random, what is the probability that dice is either yellow or red colour? | L4; CO3 |
| 4. Bring out the business applications of probability with examples. | L2; CO2 |
| 5. Define Binomial distribution and state the condition under which the distribution holds. | L2; CO1 |
| 6. According to a Gallup poll, 60% of American adults prefer saving over spending. Let X = the number of American adults out of a random sample of 50 who prefer saving to spending.What is the probability distribution for X? Also calculate the (i) mean and (ii) standard deviation of X. | L4; CO3 |

Part C

Answer any one question
Each question carries 8 marks

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| 7. The final exam scores in a statistics class were normally distributed with a mean of 63 and a standard deviation of five. a. Find the probability that a randomly selected student scored more than 65 on the exam. | L4; CO3 |
| 8. There are 50 students in a class. 40% of the students like Orange and 50% of the students like Mango. If 10 students like both of them, then how many students like either Orange or Mango or both of them? | L4; CO2 |

Part D

Compulsory question
10 Marks

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| 9. Cretan Airlines services which arrive late to Athens Airport on a typical week with mean of 4.5 .
a) Determine the probability that on a given week there will be ...
i) four late arrivals.
ii) less than four late arrivals.
iii) at least seven late arrivals.
b) Determine the probability that on a given two week period there will be between eight and thirteen (inclusive) late arrivals. | L4; CO3 |
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