

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY DHARWAD

QUIZ-I

DS101 MATHEMATICS FOR DATA SCIENCE

Date: 21-01-2021

Duration: 45 minutes

Max. Marks: 10

Reg. No.:

Note:

- *Clearly mention the assumptions made (if any) in derivations or solving problems.*
 - *Answer all questions, briefly to the point. All questions carry equal marks.*
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1. Define the various definitions of probability. When a single die is rolled, find the probability of getting a 9. **(2M)**
2. If a family has three children, find the probability that two of the three children are girls. **(2M)**
3. In a sample of 50 people, 21 had type O blood, 22 had type A blood, 5 had type B blood, and 2 had type AB blood. Set up a frequency distribution and find the following probabilities. (i) A person has type O blood (ii) A person has type A or type B blood (iii) A person has neither type A nor type O blood and (iv) A person does not have type AB blood. **(2M)**
4. A coin is flipped and a die is rolled. Find the probability of getting a head on the coin and a 4 on the die. **(2M)**
5. State and prove the bayes theorem. **(2M)**