LGS GROUP OF COLLEGES

Stats ICS – (XI) CODE= 7865 **2nd monthly**

Class: I.C.S Part I Session: 2024 - 2025

Subject: STATISTICS	**Name:**	**Roll No:**
Time: 1 Hours	**Objective Type**	**Marks = 35**

SECTION-I OBJECTIVE TYPE

Q# 1 Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct; fill that circle in front of that question within the answer-book. Cutting or filling two or more circles will result in zero mark in that question. (7 x 1 = 7)

(i) If we toss three fair coins, the probability of getting at least one head is

(A) $\frac{1}{8}$ (B) $\frac{7}{8}$ (C) $\frac{1}{2}$ (D) $\frac{3}{8}$

(ii) The probability of getting an even number when a balanced die is rolled

(A) $\frac{1}{2}$ (B) $\frac{1}{6}$ (C) $\frac{1}{36}$ (D) $\frac{3}{4}$

(iii) If P (A∪ B) = $P(A) + P(B) - P(A \cap B)$, then A and B are said to be ____ events

(A) Mutually exclusive (B) Not mutually exclusive (C) Dependent (D) none

(iv) The term sample space is used for

(A) Probability (B) All possible outcomes (C) Sample (D) None of these

(v) Arrangement of things without regard to order is called

(A) Combination (B) Permutation (C) Array data (D) Raw data

(vi) The probability of drawing any one spade card is from well shuffled pack of 52 cards

(A) $\frac{1}{52}$ (B) $\frac{1}{4}$ (C) $\frac{4}{13}$ (D) $\frac{1}{2}$

(vii) The probability of drawing a white ball from a bag containing 4 red, 8 black and 3 white balls is:

(A) $\frac{1}{52}$ (B) $\frac{4}{52}$ (C) $\frac{13}{52}$ (D) None

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Section-II: SUBJECTIVE TYPE (PART – I)

Q2. Attempt any eight questions. **(8 x 2 = 16)**

(i) What is meant by sample space? Also give example.

(ii) An urn contains 5 red and 4 black balls, if we draw 4 balls find probability of that all are black balls

(iii) Define the term event.

(vi) Define mutually exclusive events?

(v) Evaluate $\frac{16!}{8!}$

(vi) What is the probability of vowels letters in the word STATISTICS?

(vii) What is probability of getting total of 8 when two fair dice rolled?

(viii) A bag contains 4 red and 2 white balls, if we draw 3 balls find probability of that all are red balls.

(ix) Determine the probability if a sum 7 or 11 comes up in a single toss of a pair of fair dice.

(x) Two dices are rolled. If A and B are respectively the events that the sum of points is 8 and both dices should give odd numbers, then find $P(AUB)$.

SECTION – II (3X 4 = 12)

Attempt all questions

Q.3 Two cards are drawn at random from a well-shuffled pack of 52 cards. Find the probability that

(i) One is king and other is queen.

(ii) Both are of the same colour.

(iii) Both are of the different colour.

Q.4 Show that in a single throw with two dice, the chance of throwing more than 7 is equal to that of throwing less than 7?

Q.5 A class contains 10 men 20 women out of which half men and half women have brown eyes. Find the probability that a person chosen at random is a man or has brown eyes.