IIITB COMET FOUNDATION

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SECTION – A

Question numbers 1 to 6 carry 1 mark each.

Question 2

2.1 A bag contains 5 red balls and some blue balls. If the probability of drawing a blue ball from the bag is three times that of drawing a red ball, find the number of blue balls in the bag.

2.2 The 5^{th} and 15^{th} terms of an A.P. are 13 and -17 respectively. Find the sum of the first 21 terms of the A.P.

2.3 Using Euclid's Division Algorithm, find the HCF of 225 and 867.

2.4 If the point $(0, 2)$ is equidistant from the points $(3, 4)$ and $(4, k)$, find the value of k.

2.5 Find the value of a for which the pair of linear equations $4x+ay = 14 \quad \text{and} \quad 2x+3y = 7$ has infinitely many solutions.

2.6 A card is drawn at random from a well-shuffled pack of 52 playing cards. Find the probability of getting:

(a) a red king

(b) a queen or a jack