**IT24102304**

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**PS Lab Sheet 06**

**Exercise**

1. An IT company claims that their newly developed learning platform improves stu dent performance in online tests. According to previous data, 85% of students who used the platform passed their online tests. A batch of 50 students is selected at random who have completed the course using this platform. Let X denote the number of students who passed the test out of 50 students.
   * 1. What is the distribution of X?
     2. A screenshot of a computer program

        AI-generated content may be incorrect.A computer screen shot of a computer code

        AI-generated content may be incorrect.What is the probability that at least 47 students passed the test?
2. A call center receives an average of 12 customer calls per hour.
   * 1. What is the random variable (X) for the problem?
     2. What is the distribution of X?
     3. A white background with black text

        AI-generated content may be incorrect.A close-up of a white background

        AI-generated content may be incorrect.What is the probability that exactly 15 calls are received in an hour?