

# DAYANANDA SAGAR COLLEGE OF ENGINEERING

Date: 7/4/2018

Marks: 50

Marks LL CO

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|---|----|---|---|
| 1. The sale per day in a shop is exponentially distributed with an average sale amounting to Rs.100 and net profit is 8%. Find the probability that the net profit exceeds Rs. 30 on a day.   | 10 | 5 | 2 |
| 2. The Random Variable X has the following probability mass function, find variance and (i) k (ii) $P(X < 3)$ (iii) $P(3)$  | 10 | 6 | 5 |
| 3. In examination 7% of students score less than 35% marks and 89% of students score less than 60% marks, Find the mean and standard deviation, if the marks are normally distributed. It is given that if $p(z) = \frac{1}{\sqrt{2\pi}} e^{-z^2/2}$ then $p(1.2263) = 0.39$ $p(1.4757) = 0.43$ .   | 10 | 5 | 3 |
| 4. A sample of 100 dry battery cells tested to find the length of life produced by a company and following results are recorded: mean life is 12 hrs, SD is 3 hrs. Assuming data to be normally distributed, find the expected life of a dry cell. (i) have more than 15 hrs (ii) between 10 and 14 hrs. [ $P(0.667) = 0.2486$ , $P(1) = 0.3413$ ]. | 11 | 6 | 4 |
| 5. Write and explain the sequence of system calls for copying a file to another (new) file  | 9  | 5 | 2 |

CO	Statement
1	Use the core python scripting concepts like control statements, string manipulation functions and the built-in data structures like list and dictionary.
2	Be able to design, code and test small python programs that make use of functions.
3	Demonstrate usage of file handling and pattern matching using regular expressions.
4	Build GUI for applications using python libraries.
5	Demonstrate MySQL database connectivity using python scripting.
6	Apply the knowledge of python and use the language scripting elements and constructs, data structures, and repository of standard library, to develop real world applications.