

DAYANANDA SAGAR COLLEGE OF ENGINEERING

Date: 13/4/2018

Marks: 50

Marks LL CO

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|--|----|---|---|
| 1. Derive Mean and Variance for the Poisson Distribution | 10 | 2 | 3 |
| 2. Test the validity of the arguments i) $p \wedge q \wedge [p \rightarrow (r \wedge q)] \wedge [r \rightarrow (s \vee t)] \wedge \sim s$ concludes t ii) $p \wedge (p \rightarrow r) \wedge [p \rightarrow (q \vee r)] \wedge (\sim q \vee \sim s)$ concludes | 10 | 4 | 5 |
| 3. Using Taylor's series method, find y at $x=0.1$ and $x=0.2$ considering up to 4th degree terms. Given that $dy/dx=x^2 y-1$ and $y(0)=1$. | 10 | 5 | 2 |
| 4. Obtain a solution up to the third approximation of y for $x=0.2$ by picard's method, given that $dy/dx+y=e^x$; $y(0)=1$. | 10 | 3 | 1 |
| 5. Distinguish among following terminologies: Multiprogramming systems, multi-tasking systems or Time Sharing systems. | 10 | 5 | 2 |