|  |  |
| --- | --- |
| 1075717_549909255068252_805887821_n.jpg | **http://upload.wikimedia.org/wikipedia/commons/9/9c/Inu_peshawar_logo.gifIqra National University, Peshawar****Department of Electrical Engineering****Mid – Term ExaminationFall 2020****Date:4/12/2019** |
| **Course Code:** | MTH 203 |  | **Course Title:** | Differential equation |
| **Prerequisite:** | CALCULUS |  | **Instructor:** | HIMAYATULLAH |
| **Module:** | 3 | **Program:** | BEE | **Total Marks:** | 30 | **Time Allowed:** | 3 hr |

Note: Attempt all questions.PLO: program learning outcome C:Cognitive

|  |  |  |  |
| --- | --- | --- | --- |
| Q1. | (a) | . Carry out the particular solution of $L \frac{dI}{dt}+RI=0, I\left(0\right)=I\_{0} $.  | Marks 5 |
| CLO1 C2 |
|  | (b) |  Carry out the general solution of $ y^{/}=\frac{(4x^{2}+y^{2})}{xy}$  | Marks 5  |
| CLO1 C2 |
|  |  |  |  |
|  |
| Q2 | (a) | . Carry out the general solution of $e^{x}\left(cos y dx-\sin(y) dy\right).=0$  | Marks 5 |
| CLO1C2 |
|  | (b) | Carry out the general solution of $y^{/}+ky= e^{2kx} $ | Marks 5  |
| CLO1C2 |
|  |  |  |   |
|  |
| Q3 | (a) | … Carry out the general solution of $y^{/}=5.7y-6.5y^{2}$ | Marks 5 |
| CLO1C2 |
|  | (b) |  Analyze the orthogonal trajectories. Of $4x^{2}+y^{2}=c$.  | Marks 5 |
| CLO2C4 |