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| **National University of Computer and Emerging Sciences, Lahore Campus** | | | | |
| C:\Users\saif\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\final design.jpg | **Course:** | **Design and Analysis of Algorithms** | **Course Code:** | **CS302** |
| **Program:** | **BS(Computer Science)** | **Semester:** | **Spring 2018** |
| **Duration:** | **10 Minutes** | **Total Marks:** | **10** |
| **Paper Date:** | **26-April-18** | **Weight** | **3** |
| **Section:** | **D** | **Page(s):** | **1** |
| **Exam:** | **Quiz 5** | **Roll No:** |  |
| **Section:** |  |
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Give an O(V + E) time algorithm to compute the component graph of a directed graph G (V,E). Make sure that there is at most one edge between two vertices in the component graph your algorithm produces.