



SOMAIYA
VIDYAVIHAR UNIVERSITY

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| Semester: July 2024-October 2024 | | |
| Maximum Marks: 30 | Examination: In-Semester Examination | Duration :1hr 15 min |
| Programme code: | Class: TY | Semester: V (SVU 2020) |
| Programme: | | |
| Name of the Constituent College: | | Name of the department: COMP |
| K. J. Somaiya College of Engineering | | |
| Course Code: 116U01C501 | Name of the Course: Software Engineering | |

| Question No. | | Max. Marks |
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| Q1 | Draw a state chart diagram to graphically represent the following system Consider a bulb with a push down switch. The bulb initially remains off. When the switch is pushed down, the bulb is on. Again when the switch is pushed up, the bulb turns off. The lifecycle of the bulb continues in this way until it gets damaged. | 10 Marks |
| | OR | |
| Q1 | Explain Pattern based Software Design with respect to a safe home systems application. | 10 Marks |
| Q2 | You are appointed as a developer for designing and implementing online airline ticket booking website not mobile application, estimate the effort and cost of development using Function point estimation technique with necessary diagram. | 10 Marks |
| | OR | |
| Q2 | Draw an activity diagram to graphically represent the following workflow Let us consider the development activities of SE Virtual Labs. The process begins by checking out the code from Subversion repository. Necessary modifications are then made to the checked out code (local copy). Once the developer is done with his changes, the application has to be tested to verify whether the new functionality is working fine. This test has to be performed with two of the more popular web browsers: Firefox and Internet Explorer, to support cross-browser accessibility. If testing fails in at least one of the two browsers, developer goes back to his code, and fixes it. Only when all the browsers pass the test, a patch is generated from the local copy, and applied to the production code. The local copy is then committed resulting in update of the SVN repository. Note that, if the local copy is committed before generating a patch file, then local changes would get registered, and one won't be further able to generate the patch file. Note: For further clarification, at any point of time there exist three versions of the source code: Production copy, local copy, and copy in SVN repository. | 10 Marks |
| Q3 | Explain the Scrum framework, outline the key roles in Scrum and provide a detailed explanation of the specific responsibilities associated with each role in Scrum project management? | 10 Marks |