**Process Mining Exam Simulation 18th December 2017**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1) Play-in and Play-out of the following traces (Do it by hand). The result model should be a Petri-Net (2pt).

|  |  |
| --- | --- |
| 1 | BCEFA |
| 2 | BCDBCDFE |
| 3 | BCBCFEA |
| 4 | BCBCBCBCEF |

2) Use the Petri-Net generated in 1) try to Replay with the following logs (1pt) and use the “Conformance Checking Algorithm (p, c, m, r)” to do the same work (3pt).

|  |  |
| --- | --- |
| 1 | BCFE |
| 2 | BCDBCDFE |
| 3 | FE |
| 4 | BCBCDEFA |

3) Use the following logs to mine a BPMN 2.0 model by hand (4pt).

|  |  |
| --- | --- |
| 1 | BCDBCDBCD |
| 2 | ABCBCBC |
| 3 | BCD |
| 4 | ABC |
| 5 | ABCBCBCBC |

4) Use the following logs to mine a Petri-NET by hand (4pt).

|  |  |
| --- | --- |
| 1 | ABCD |
| 2 | ABD |
| 3 | EBCF |
| 4 | EBF |

5) Use the Alpha Algorithm to mine the following logs and generate a WF-Net (7pt).

|  |  |
| --- | --- |
| 1 | BCDDE |
| 2 | ABBBBCDDDE |
| 3 | ABBCE |
| 4 | BCDDE |
| 5 | ABBBBCDDDE |

6) Use the BPMN2Petri-Net mapping rule to map the following Petri-Net in BPMN (4pt).

