

### ASSIGNMENT QUESTIONS

<b>Academic Year</b>	<b>2020-21</b>		
<b>Batch</b>	2018-2022		
<b>Year/Semester/section</b>	<b>3/6/A&amp;B</b>		
<b>Course Code-Title</b>	System Modelling and Simulation		
<b>Name of the Instructor</b>	Dr Rekha B Venkatapur	<b>Dept</b>	<b>CSE</b>

Assignment No: 1 Date of Issue: 18-5-2021		Total marks:10 Date of Submission: 22-5-2021																																								
Sl.No	Assignment Questions	K Level	CO	Marks																																						
1.	<p>Customers arrive at a checkout counter at random from 1 to 10 Mins apart with equal probabilities. The service times have the following distribution</p> <table><tr><td>Service Time</td><td>3</td><td>5</td><td>6</td><td>8</td></tr><tr><td>Probability</td><td>0.2</td><td>0.35</td><td>0.2</td><td>0.25</td></tr></table> <p>S imulate the checkout counter for 10 customers using the following data Random Digits for Inter Arrival Time</p> <table><tr><td>91</td><td>72</td><td>15</td><td>9</td><td>30</td><td>92</td><td>75</td><td>2</td><td>3</td></tr><tr><td></td><td></td><td></td><td>4</td><td></td><td></td><td></td><td>3</td><td>0</td></tr></table> <p>Random Digits for Service Time are given below</p> <table><tr><td>84</td><td>10</td><td>74</td><td>53</td><td>17</td><td>79</td><td>91</td><td>67</td><td>89</td><td>38</td></tr></table>	Service Time	3	5	6	8	Probability	0.2	0.35	0.2	0.25	91	72	15	9	30	92	75	2	3				4				3	0	84	10	74	53	17	79	91	67	89	38	K3	1	2
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2	Organize the situations when simulation is appropriate and when it is not	K3	1	2																																						
3	Identify the categories of systems with examples	K3	1	2																																						
4	a. Construct Event Scheduling Time Advance algorithm with relevant snap shots b. Develop different methods to generate events.	K3	2	2																																						
5.	Develop a cumulative distribution function to measure the probability of a random variable	K3	2	2																																						

Course in charge

HOD