5

During a study of Residence time distribution in a Packed Bed Reactor following data has been obtained by operating an experimental set up -

Time(min)	Abs @ 20 LPH
0.25	0.013
0.50	0.012
0.75	0.008
1.00	0.009
1.25	0.001
1.50	0.001
1.75	0.012
2.00	0.006
2.25	0.008
2.50	0.008
2.75	0.007
3.00	0.018
3.25	0.033
3.50	0.069
3.75	0.105
4.00	0.143
4.25	0.177
4.50	0.192
4.75	0.186
5.00	0.178
5.25	0.146
5.50	0.119
5.75	0.101
6.00	0.084
6.25	0.066
6.50	0.058
6.75	0.047
7.00	0.039
7.25	0.018
7.50	0.016
7.75	0.016
8.00	0.016
8.25	0.016
8.50	0.016

8.75	0.017
9.00	0.019
9.25	0.01
9.50	0.01
9.75	0.01
10.00	0.01

➢ Construct C curve for pulse input

➢ Plot age-distribution curve (E vs t)

➢ Calculate average residence time

➢ Calculate the vessel dispersion number (D/uL)

➢ Write theory involved and discussion on the obtained result.