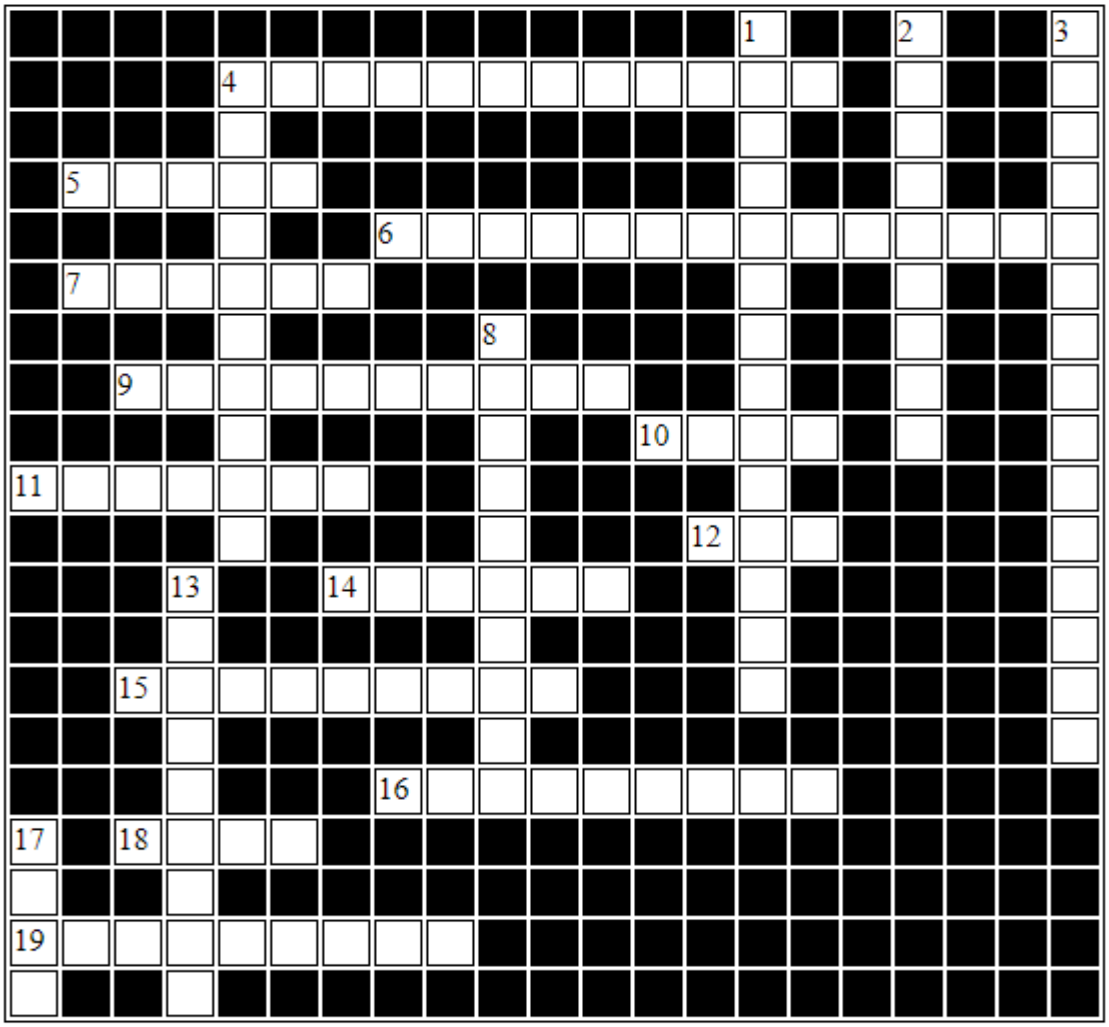
15CH403J Process Modeling and Simulation Laboratory – Quiz

Register Number: _____ Date: _____ Duration: 25 min



Across

4. The build-up of undesired material in an e operation is said to exist equipment is termed as!
5. A process in which a liquid is feed at a high pressure is suddenly exposed to a lower pressure, causing some vaporization to occur. The vapor product is rich in the more volatile components of the feed and the residual liquid is rich in the less volatile components.
6. A process unit through which two fluid streams at different temperatures flow on opposite sides of a metal barrier. Heat is transferred from the stream at the higher temperature through the barrier to the other stream.
7. The one which is transferred between a system and its surroundings as a consequence of a temperature difference is!
9. A process in which a liquid mixture of two species (the solute and the feed carrier) is contacted in a mixer with a third liquid (the solvent) that is immiscible or nearly immiscible with the feed carrier. When the liquids are contacted, solute transfers from the feed carrier to the solvent. The combined mixture is then allowed to settle into two phases that are then separated by gravity in a decanter.
10. Energy transferred between a system and its surroundings as a consequence of a motion against a restraining force, or any other driving force except temperature difference.
11. The term that refers to a particular instant in time where the dependent variable is not a function of position is!
12. In modelling a reactor, we assume that concentration varies continuously in the axial direction through the reactor as a result; the reaction rate which is a function of concentration for all but zero-order reactions, will also varies axially. Hence the type of reactor is!
14. If the values of all the variables in a process remains unchanged with time, except possibly for minor fluctuations about constant mean values, then the process is said to be operating at!
15. A term applied to a process in which no heat is transferred between the process system and its surroundings.
16. A quantity is one that can be transformed. However, transformation does not alter the total amount of the quantity
18. The flow rate with respect to area is defined as!
19. If any of the process variables change with time, then the type of operation that exist is!

Down

1. The flow rate with respect to area arising from potential gradients or driving forces are called!
2. One of the steady-state simulators widely used for process design in chemical/petrochemical industries is!
3. The total energy possessed by the individual molecules in a system refers to!
4. A process in which a gas mixture contacts a liquid solvent and a component (or several components) of the gas dissolves in the liquid.
8. A process of finding solution for a complex process represented in mathematical relationship is called as!
13. A process of representing a physical phenomenon in terms of mathematical relationship is called as!
17. A reactor in which the temperature and concentration in the exit stream are modelled as being the same as those inside the reactor is!