

V.P. & R. P. T. P. SCIENCE COLLEGE  
INDUSTRIAL CHEMISTRY VOCATIONAL  
B. Sc. - Semester - V



COURSE NO: US05CICV06

Date & Day: 19/10/19 Wednesday *Thursday*

TIME: 11.00 A.M TO 12.15 P.M

TOTAL MARKS - 25

Q.1 Answer the following MCQs

(05)

1) Separation by distillation is not possible when relative volatility is \_\_\_\_\_ one.

- (a)  $> 1$       (b)  $< 1$       (c)  $= 1$       (d)  $\geq 1$

2) \_\_\_\_\_ is the temperature at which a liquid mixture of given composition start to vaporize as temperature increases.

- (a) Bubble point    (b) Dew point      (c) Enthalpy      (d) None of these.

3) What is the tower diameter to packing size ratio for minimizing the channeling?

- (a)  $> 8$       (b)  $< 8$       (c)  $= 8$       (d) None of these

4) The solubility of solute in a given solvent is \_\_\_\_\_ at different temperature and it forms the basics of crystallization by cooling.

- (a) Same      (b) Low      (c) Different      (d) Both (b) & (c)

5) Rotary dryer may be design to have flow pattern of of solid & gas in \_\_\_\_\_.

- (a) Counter current flow      (b) Co-current flow      (c) Both (a) & (b)      (d) None

Q.2 Write in brief on Flash or equilibrium distillation & draw its sketch.

(05)

OR

Q.2 Write note on Azeotropic distillation.

(05)

Q.3 Write in brief on rotating-disk contactors.

(05)

OR

Q.3 Write a short note on different packings used in gas absorption & packing columns in Chemical industries.

(05)

Q.4 Explain the construction and working of Swenson-walker crystallizer with suitable diagram. (05)

OR

Q.4 Write a short note on roto-cell extractor.

(05)

Q.5 Explain the construction & working of Rotary Drum dryer with neat diagram.

(05)

OR

Q.5. Explain the construction & working of Spray dryer with neat diagram.

(05)