



NCD-003-036201 Seat No. _____

M. Sc. (Pharma.) (Sem. II) (CBCS) Examination

April / May - 2017

Organic Chemistry : POC-201

(Pharmaceutical Engineering - II)

Faculty Code : 003

Subject Code : 036201

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :**
- (1) All Questions are compulsory.
 - (2) Each question carries 14 marks.
 - (3) Assume suitable data wherever necessary.

1 Answer any seven out of the following : **14**

- (1) State :
 - (a) Henry's law
 - (b) Dalton's law.
- (2) Define :
 - (a) Tie line
 - (b) Plait point.
- (3) What do you mean by screen aperture and mesh.
- (4) Draw a diagram of Rachig ring and Intalox saddle.
- (5) Enlist factors affecting size reduction operation?
- (6) Define centrifugation and classify centrifuges.
- (7) Differentiate surface filtration and depth filtration.
- (8) Give reason in brief why boiling point of pure solution is less than solution containing non-volatile solute.
- (9) What is meant by undersize and oversize product in screen analysis?
- (10) Enlist the mechanisms of filtration and explain any one.

- 2** Answer any two from the following : **14**
- (1) Explain and derive an equation for multistage cross current extraction.
 - (2) Explain with the help of neat diagram construction and working of flash distillation column.
 - (3) Give application of centrifugation.
- 3** Answer the following : **14**
- (1) Give principle, construction and working of a Ball Mill.
 - (2) Explain with the help of a neat diagram Steam Distillation.
- OR**
- 3** Answer the following : **14**
- (1) Give principle, construction and working of a Roll Crusher.
 - (2) Explain in detail construction and working of packed column.
- 4** Answer any two from the following : **14**
- (1) Discuss Principle, construction and working of Sand filter.
 - (2) Enlist various factors affecting selection of a solvent for liquid-liquid extraction operation.
 - (3) Explain in detail Plate and Frame filter press.
- 5** Answer any two from the following : **14**
- (1) Explain in detail construction and working of Single effect evaporator.
 - (2) Explain the Theory of Filtration with factor affecting filtration.
 - (3) What is centrifugation? Discuss perforated basket centrifuge.
 - (4) Give principle, construction and working of a Jaw crusher.