P-1612020701020200 Seat No. _____

Masters of Pharmacy Management
(Sem. II) (CBCS) Examination
July – 2018
Pharmaceutical Engineering

Time : **3** Hours] [Total Marks : **80**

Instructions :

(1) Answer any **three** question from each section.
(2) Question **one** and question **five** are compulsory.
(3) Figure to the right indicates marks.
(4) Draw neat and clean diagrams when required.

SECTION – I

1 Answer any SEVEN out of TEN : **14**

(a) Write down the difference between Compressor and Blower.
(b) Write down the difference between orifice meter and venture meter.
(c) How is the rate of reaction expressed ?
(d) Define steady state and non-steady state.
(e) Define dimensionless equation with example.
(f) Define the principle of stoichiometry with a suitable example.
(g) Write down the difference between chemical corrosion and electrochemical corrosion.
(h) What is Reynolds number ? Describe its importance.
(i) Define radiation and explain Stefan Boltzmann's law.
(j) Define conductivity with example.

2 Answer the following questions : **13**

(a) Enlist different energy loss that occurs when a fluid flows through pipe and explain any two in detail. **7**
(b) With a neat diagram write down the principle, construction, working, advantages and disadvantages of Rotameter. **6**

3 Answer the following questions : **13**

(a) Write a short note on Bernoulli's theorem. **7**

(b) Describe steam as an ideal heating medium. **6**

4 Answer the following questions : **13**

(a) With a neat diagram write down the principle, construction, working, advantages and disadvantages of centrifugal blower. **7**

(b) Explain in detail Material balance and tie substance with examples. **6**

SECTION – II

5 Answer any TWO out of THREE : **14**

(a) With a neat diagram write down the principle, construction, working, advantages and disadvantages of Tubular heater.

(b) Write a short note on solid/fluid mass transfer.

(c) Enlist different types of conveyors explain any one in detail.

6 Answer the following questions : **13**

(a) Describe in detail Unit Operation and Unit Process with examples. **7**

(b) Explain in detail the influence of mass transfer on unit operations. **6**

7 Answer the following questions : **13**

(a) Explain in detail various factors affecting corrosion. **7**

(b) With a neat diagram write down the construction, working, advantages and disadvantages of Diaphragm pumps. **6**

8 Answer the following questions : **13**

(a) Explain in detail various factors affecting selection of material of plant construction. **7**

(b) Define heat transfer and explain in detail various mechanism of heat transfer. **6**