



NCF-003-036204 Seat No. \_\_\_\_\_

**M. Sc. (Pharma Organic Chemistry)  
(Sem. II) (CBCS) Examination**

April / May - 2017

**POC - 204 : Selected Topics in  
Pharmaceutical Chemistry**

**Faculty Code : 003**

**Subject Code : 036204**

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

[Total Marks : 70

- Instructions :** (1) All questions are compulsory & carry equal marks.  
(2) Draw Diagrams & / scheme of reaction wherever necessary.

**1** Answer any **seven** of the following ten questions : **14**

- (1) Explain laws of photochemistry.
- (2) Differentiate thermal and photochemical reaction.
- (3) Briefly explain oxidation pond.
- (4) Explain the term Service Mark with example.
- (5) Discuss any one microwave assisted "green reaction".
- (6) What is geographical indication in IPR? Give few examples.
- (7) Define following terms: (a) variance, (b) Range (Spread).
- (8) Why CMC is one of the major ingredients in ice-cream preparation.
- (9) Briefly explain ferrioxalate actinometer.
- (10) What is photochemical smog?

**2** Answer any **two** of the following three questions : **14**

- (1) Write a note on i) Wet Scrubber ii) Trickling filter
- (2) Write a note on cyclone separator with schematic diagram.
- (3) Write a note on SOP of SOP.

**3** Answer the following questions : **14**

- (1) Discuss classification of errors in detail.
- (2) Each of the following sets of data appears to be an outlying result. Apply the Q test to determine whether this value should be rejected or retained. ( $Q_{tab} = 0.76$ )

Set-1	75.96	76.35	76.12	76.03
Set-2	14.41	14.64	14.46	14.14

**OR**

**3** Answer the following questions : **14**

- (1) Define the term patent. How do you explain the term "a new product or a Process"? Which types of inventions are non-patentable in India?
- (2) Find out mean, standard deviation and variance for following data.  
112.25, 112.36, 112.32, 12.21, 112.30, 112.36

**4** Answer any two of the following three questions : **14**

- (1) What are the requirements of Building & House Keeping as per schedule M?
- (2) Give an account of GLP for pharma industries.
- (3) Construct SOP for Calibration and Operation of laboratory pH meter.

**5** Answer any two of the following four questions : **14**

- (1) Give an account of Norrish type - II process for ketones.
- (2) Give the structure, introduction, properties and applications of HPMC and HPC.
- (3) Explain singlet molecular oxygen and its reaction
- (4) Discuss all green principles in detail with at least one example.