# **Question Paper**

Exam Date & Time: 07-May-2018 (02:00 PM - 05:00 PM)



#### MANIPAL ACADEMY OF HIGHER EDUCATION

## MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES **END SEMESTER THEORY EXAMINATIONS - MAY 2018** PROGRAM: MPHARM SEMESTER 2 (INDUSTRIAL PHARMACY)

DATE: 07/05/2018 TIME: 02:00 PM - 5:00 PM

#### Pharmaceutical Production Technology [PCE-MIP203T]

Marks: 50 Duration: 180 mins.

a

### Answer all the questions.

Answer the following (5 marks $\times$ 8 = 40 marks)		
1)	Explain the principle of microfluidizer technology with the help of diagram.	(5)
2)	Explain any two microencapsulation techniques.	(5)
3)	Explain the working of fluidized bed spray granulator.	(5)
4)	Explain the principle involved in super critical fluid processor.	(5)
5)	Discuss the different types of glass used in pharmaceutical industries.	(5)
6)	Define hard gelatin capsule. Write the steps involved in manufacturing of empty capsules.	(5)
7)	Discuss environmental control zone grouping in parenteral production.	(5)
8)	Define and enlist different dust collectors. Explain the working principle of single cyclone separator.	(5)
b		

#### Answer all the questions.

Answer the following with specific answers (2 marks  $\times$  5 = 10 marks)

9) (2)Write any four applications of lyophilisation process.

A)

B) What are the causes of blistering in tablets? (2)

- <sup>C)</sup> Enlist any two advantages and disadvantages of spray drying process. (2)
- D) Give the difficulties associated with filling of capsules with pellets. (2)
- E) Why antiscalant and coagulant are used in water treatment? (2)

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