Roll No.

Total No. of Questions: 10]

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B.Pharmacy (Sem. - 3rd)

PHARMACEUTICS - II

(Unit Operations - I)

SUBJECT CODE: PHM-2.3.1 (2k9 Batch)

<u>Paper ID</u>: [D0154]

[Note: Please fill subject code and paper ID on OMR]

Time: 03 Hours

Maximum Marks: 80

Instruction to Candidates:

- 1) Section A is Compulsory.
- 2) Attempt any Four questions from Section B.
- 3) Attempt any Three questions from Section C.

Section - A

Q1)

 $(15 \times 2 = 30)$

- a) Write the formula for calculating Reynold's number.
- b) What are 'eddies' in fluid flow?
- c) Define viscosity and mention its units.
- d) Define pressure and mention its unit?
- e) Give examples of filter aids.
- f) Enumerate the factors affecting supersaturation during crystallization.
- g) Write the principle of dehumidification.
- h) Define specific heat and mention its units.
- i) Differentiate between wet and dry bulb temperatures.
- j) Mention the types of glass used for packaging liquids.
- k) Mention the advantages of an inclined manometer.
- l) Mention the reasons for loss of fluid velocity.
- m) Mention the factors affecting crystal habit.
- n) What are the components of a fire extinguisher.
- o) Mention the Bernoulli's principle.

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Section - B

 $(4 \times 5 = 20)$

- Q2) Enumerate the different types of valves. Explain the working of float valve.
- Q3) Write briefly about conveying of solids by pneumatic process.
- Q4) Giving examples, explain the role of filter media and filter aids.
- Q5) Enumerate the reasons for caking during crystallization and methods for preventing it.
- **Q6)** Define dew point. Enumerate the factors affecting it and highlight its importance in pharmaceutical industry.

Section - C

 $(3 \times 10 = 30)$

- **Q7)** Enumerate the various types of chemical and fire hazards likely to be encountered in a pharmaceutical plant. Indicate the measures to prevent fire hazards.
- **Q8)** Discuss the working of a dehumidifier and mention the reasons for employing this process in pharmaceutical plants.
- **Q9)** Enumerate the types of crystallizers used for crystallizing solids. Describe the functioning of any one crystallizer.
- Q10) What are pumps? Enumerate the different types of pumps used in pharmaceutical industry. Explain the operation of any one pump.

