

Ref. No. : Ex/PHARM/T/415A/2023

Name of the Examinations: B. PHARMACY FOURTH YEAR FIRST SEMESTER – 2023

Subject : INDUSTRIAL PHARMACY I

Full Marks: 100 Time: 3hrs

Answer any 05 questions:

Q1.(a) What are the different types of air pollutants? Give some examples of air pollution control equipments applied to industrial applications. (5)

(b) Write in detail on construction, mechanism and operation of HEPA filter. (15)

Q2. Write on any two of the following: (10*2)

(a) Thermocouple

(b) pH meter

(c) Principles of different types of similarity for scale up study, and significance of exponent (n) in Power Law equation.

Q3. Write the sources and uses of starch of natural origin. How will you isolate the starch from Potato? How will you measure the starch by using the micrometry? (20)

Q4. Define extraction. Name the various procedure of extractions are generally adopted to extract the medicinal and aromatic plants. How will you extract the crude by using Soxhlet apparatus? Mention the advantages and disadvantages of Soxhlet extraction. (20)

Q5. Write Noyes-Whitney equation. Discuss how Noyes-Whitney equation can be used to determine the various physicochemical and physiological factors affecting drug dissolution in GIT. Discuss, with a neat diagram, the various factors which determine the bioavailability of drugs from hard capsules. (2+10+8)

Q6. a) Discuss how various excipients used in solid and liquid oral dosage forms influences the rate and/or extent of absorption of drugs from dosage forms. (8)

b) Define absolute bioavailability, bioequivalence and pharmaceutical equivalent. Discuss the various parameters of bioavailability-bioequivalence studies. (3+3+3+3)