

Ref. No. : Ex/PG/PHAR/T/128D/2018

Name of the Examinations: M. PHARMACY FIRST YEAR SECOND SEMESTER - 2018

Subject : INDUSTRIAL PHARMACY - III Time : 3 hr Full Marks : 100

Answer any 5 questions from 3 groups and answer at least one question from each group.

Group A

Q1.(i)What is the role of packaging for pharmaceutical products? (ii)Mention various Pharmaceutical packaging components. (iii)What is the difference between primary and secondary packaging components? (iv)Discuss on various types of containers used in pharmaceutical industry with examples. (v)Write a short note on glass material used to make container.

Marks 3+3+3+5+6

Q2.(i)What are the objectives and advantages of efficient and effective conveying? Describe the construction, operation, advantages and disadvantages of screw conveyor.

(ii)Illustrate the concept of solid transport by fluidization.

Marks (4+10)+6

Q3. What are the objectives of efficient Warehousing operation? Discuss on various types of warehouse. Give a layout design of pharmaceutical warehouse. What types of activities are involved in a Pharmaceutical warehouse?

Marks 3+5+6+6

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GROUP - B

Answer any five questions taking at least one question from each group

Q.4.a) Explain value added production process. What are the long term and short term decisions in production management. 5+5

b) What are the characteristics of batch production system and mass production system? 5

c) What is ERP? What are the areas of material management that are efficiently supervised by ERP? 5

Q.5.a) What are the components of quality management system? 10

b) Define the following: i) Quality Circle ii) Sampling plan for API, excipients and packaging materials iii) AQL iv) Producer's risk v) Consumer's risk 10

Q.6. What is capacity planning? What are the steps for capacity planning? How the capacity plans are generated in an organization? 4+8+8

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INDUSTRIAL PHARMACY-III

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ANSWER ANY FIVE QUESTIONS TAKING ATLEAST ONE FROM EACH GROUP

GROUP-C

7.

- a. Write short note on ferrous-metals and non-ferrous-metals.
- b. What are the factors effecting corrosion? Write a short note on the protection of corrosion.
- c. Write a short on metallic and non-metallic coatings. What are the different types of organic coatings being available.
- d. Write a note on Annealing techniques, Quenching and Tempering
- e. What are the corrosivity evaluations in hydrocarbon systems.
- f. Write a note on HSLA and stainless steel, Cast Iron. Explain briefly the fabrication of metals and alloys.

[4+4+4+3+1+4=20 marks]

8.

- a. What are the objectives of Pilot Plant?
- b. Draw an algorithm that are required in scale up of a pilot plant.
- c. Write briefly on any five of the following: i. Master Manufacturing Procedures, ii. GMP consideration, iii. Stages of Production of tablets, iv. Granulation, v. drying, vi. Blending, vii. Tablet coating, viii. Formulation aspects of oral liquids ix. Role of in vitro release testing, x. contract manufacturing
- d. A model in a concrete channel of a plant is constructed in a scale of 1:64. The Manning's n of the channel is 0.02, find the value of n of the model.

[2+4+10+4 = 20 marks]

9.

- a. What are the various types of accident causes?
- b. What is an industrial accident? Write a brief overview of the type of the accidents.
- c. What are the main hazards? Describe briefly each of the types.
- d. What is process safety management system? Explain the 14 elements of process safety briefly with the help of schematic diagram.
- e. How many members constitute the central board and state board according to water pollution control act 1974. What are the advantages of Common Treatment? Draw a schematic diagram for steps in audit of water pollution.
- f. What are the objectives and applicability of factory act, 1984? Write short notes on the following fourteen sections: i. section-16, ii. Section-19, iii. Section-23, iv. Section-26, v. section-29, vi. Section-33, vii. Section-36A, viii. Section-38, ix. Section-40B, x. section-44. xi. Section-44, xii. Section- 48, xiii. Section-56, xiv. Section-67, xv. Section-73, xvi. Section-80, xvii. Section-105.
- g. How will you control fire and explosion? Write the various aspects in a paragraph format.
- h. What are the control measures taken for waste water management?

[1+2+2+2+3+7+2+1=20 marks]
