



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF **MEDICAL SCIENCES**
DIPLOMA IN PHARMACEUTICAL TECHNOLOGY
(DPT 11M)

APM 2264 : PHARMACEUTICS I

SPECIAL/SUPPLEMENTARY: EXAMINATIONS

SERIES: February 2013

TIME: 2 HOURS

INSTRUCTIONS:

You should have the following for this examination

- *Answer booklet*

This paper consists of **THREE sections A, B and C.**

Answer all questions in section **A** and **B** and choose **THREE** out of **FIVE** questions in section **C.**

This paper consists of **6 PRINTED** pages

SECTION A (40MARKS)

1. Which one of the following equipments used in size reduction is used for a continuous process?
 - a) Roller mill
 - b) Hammer mill
 - c) Convection mill
 - d) Chopping mill

2. The degree of mixing can be determined by _____
 - a) A measure of particle interaction
 - b) A measures of variation of composition
 - c) A measure of quality of raw materials
 - d) Volume of the equipment used

3. Which of the following mechanisms can be used to achieve mixing of fluids
 - a) Convective mixing
 - b) Molecular diffusion
 - c) Shear mixing
 - d) Diffusive mixing

4. Dilute solutions and suspensions are best dried using
 - a) Film evaporators
 - b) Forced circulation evaporators
 - c) Evaporation stills
 - d) Short tube evaporators

5. Overall coefficient of heat transfer is poor in the following evaporators
 - a) Evaporating stills
 - b) Forced circulation evaporators
 - c) Long tube evaporators
 - d) Wiped film evaporators

6. A roller will work by one of the following principles
 - a) Impact
 - b) Attrition
 - c) Compression
 - d) Cutting

7. Antibiotics can be comunuted by the following equipment
 - a) Agitator mill
 - b) Roller mill
 - c) Balla mill
 - d) Final energy mill

8. An example of an equipment whose mechanism of size reduction involves hitting of raw materials is
 - a) Hammer mill
 - b) Ball mill
 - c) Fluid energy mill
 - d) Cylindrical mill
9. The latin term “nocte” means
 - a) To be given before meals
 - b) To be given after meals
 - c) To be given a right
 - d) To be given with milk
10. The component parts of a prescription include the following except
 - a) Prescribe office information
 - b) Subscription
 - c) Date of expire drugs
 - d) Direction for patients
11. The following mechanisms are used to achieve mixing of powders except
 - a) Conrective mixing
 - b) Shear mixing
 - c) Diffusive mixing
 - d) Turbulent floor
12. Which of the following is a source of medication error
 - a) Medication application
 - b) High number of patients in a facility
 - c) Competing medical representatives
 - d) Overstocked pharmacy
13. Identify one of the factors affecting evaporation
 - a) Effect of concentration
 - b) The experience of personnel operating the equipment
 - c) Industry regulation
 - d) Quality of power supply
14. Common prescription pricing include the following except
 - a) Percentage markup
 - b) Percentage Markup + facility fee
 - c) Percentage Markup + minimum fee
 - d) Professional fee
15. The following personnel are allowed by law to prescribe except
 - a) Pharmacist
 - b) Medical Officer
 - c) Dental Officer
 - d) Veterinary Officer

16. According to _____ the energy required for size reduction is inversely proportional to the square root of the diameter of the product
- Rittingers theory
 - Kicks theory
 - Bonds theory
 - Vick's theory
17. According to _____ the energy required for size reduction is directly proportional to the reduction ratio
- Rihuigers theory
 - Kicks theory
 - Bonds theory
 - Vicks theory
18. At what speed is a ball mill more effective
- High speed
 - Low speed
 - Medium speed
 - Optimum speed
19. The choice of a mill is based on the following except
- Product specification
 - Country of origin
 - Versatility of operation
 - Sanitation
20. The initials t.i.d means
- To be given three time a day
 - To be given after every three hours
 - Three tabs/cap to be given a day
 - To be given three times a month

SECTION B (Answer ALL questions)

- Write notes on pricing of a prescription (4marks)
- Discuss labeling with regard to prescription writing (4marks)
- Elaborate some guidelines for the prevention of medication errors (4marks)
- Describe the types of mixtures (4marks)
- Mixing can be measured using two qualities explain them (4marks)
- Define the terms:-

- Comminution (2marks)
 - Evaporation (2marks)
7. Write note about the disadvantages of milling (4marks)
 8. Write a note on Rittingers' theory on energy requirements in size reduction (4marks)
 9. What are the disadvantages of evaporating Pons (4marks)
 10. Discuss how dilute suspensions are dried with reference to film dryers (4marks)

SECTION C

1. Describe in detail the process of "processing the prescription order" (20marks)
2.
 - a) Explain the mechanisms of mixing of fluids (10marks)
 - b) Explain the mechanism of mixing of powders. (10marks)
3. Discuss the factors influencing size reduction (20marks)
4. Describe TWO evaporations (20marks)
5.
 - a) What are the factors influencing mixing (10marks)
 - b) What are the factors influencing evaporation (10marks)