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FACULTY OF PHARMACY

DEPARTMENT OF PHARMACEUTICAL MICROBIOLOGY
2017/2018 HARMATTAN SEMESTER EXAMINATIONS

PCM 301: STERILIZATION AND DISINFECTION

SECTION A

1. Five of the properties of an ideal disinfectant are

- i. _____
- ii. _____
- iii. _____
- iv. _____
- v. _____

2. Three advantages of solid dilution techniques for the bacteriostatic evaluation of disinfectants are

while three disadvantages are _____

3. Two laboratory media used for culture of microorganisms after membrane filtration in sterility testing are _____ and _____

4. Five(5) of the many factors affecting the dynamics of disinfection are

pH
temperature
formulation

5. _____ and _____ are qualifying tests for sterility testing

6. Five (5) Classes of disinfectants are as follows

- i. _____
- ii. _____
- iii. _____
- iv. _____
- v. _____

7. The 'rabbit test' is a method of testing for _____ in a pharmaceutical product

8. _____ is a method used for testing sterility of medical devices.

9. The activity of disinfectants generally ----- as temperature -----
10. Chlorine belongs to the class of disinfectants called -----

Part 2: Answer only ONE question

1. a). Define the following terms: i. Minimum inhibitory concentration; ii. Minimum bactericidal concentration; iii. Disinfection; iv. Antisepsis; v. Pyrogens

b). Differentiate between sterile and non-sterile pharmaceutical products. Give one example of each type of product.

2. a) Explain fully how pH can affect the activity of a disinfectant.

b). Briefly describe the broth dilution method of determining MIC (minimum inhibitory concentration)

c). What is MDT; MSST

SECTION B: ANSWER ANY TWO QUESTIONS

1. Which of the sterilization methods is most suitable for insulin? List any three (3) types of the named sterilization methods.

2. (a) Using a well annotated diagram, briefly describe the operation of the portable autoclave.
(b) How would you monitor the sterilization efficiency of a portable autoclave?

3. Define the following: (i) Z-value (ii) Decimal reduction time (iii) Thermal death time.

3b) 10 number 1

c) Write short notes on 2 of the named sterilization methods.

Just 3. a) for 3. a) and why