

KATHMANDU UNIVERSITY
End-Semester Examination
August, 2018

Marks scored:

Level : B.Pharm.
Year : III

Course : PHAR 313
Semester: II

Exam Roll No. :

Time: 30 mins.

F.M. : 20

Registration No.:

Date **AUG 15 2018**

SECTION "A"

[20 Q. × 1 = 20 marks]

Circle the best answer of the following multiple choice questions.

1. In which phase of microbial growth, secondary metabolites are produced?
a) Lag phase b) Log phase c) Stationary phase d) Decline phase
2. Which of the following is not included in downstream processing?
a) Solid-liquid separation b) Disintegration of cells
c) Purification d) Inoculum development
3. Which of the following fermentation process is not aerated?
a) Dextran b) Vitamin B12 c) Streptomycin d) Penicillin
4. Haemophilia B is caused by deficiency of
a) Factor VIIa b) Factor VIII c) Factor IX d) Factor XIII
5. Which of the following is not the blood derived products?
a) Albumin b) Gelatin c) Immunoglobulins d) Prothrombin
6. Calcitonin is responsible for
a) Lowering blood calcium level
b) Increasing blood calcium level
c) Acts on bone and kidney to increase blood calcium level
d) None of the above
7. Which of the following is polypeptide hormone?
a) Adrenaline b) Estrogen
c) Progesterone d) Growth hormone
8. Human insulin is similar to porcine insulin except for:
a) Single amino acid at 30th position of B chain
b) Two amino acids at 8th and 10th position of B chain
c) Single amino acid at 30th position of A chain
d) Two amino acids at 8th and 10th position of A chain
9. acts by disrupting microbial membranes?
a) Cationic detergents b) Halogens
c) Heavy metals d) Aldehydes

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Year : III
Time : 2 hrs. 30 mins.

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Semester: II
F. M. : 55

SECTION "B"

[5 Q. × 3 = 15]

Answer *ANY FIVE* questions.

1. What are the properties of ideal plasma substitutes?
2. What is glandular therapy?
3. Explain about liver extract.
4. Define batch process, fed batch process and continuous process of fermentation.
5. What are preservatives? Why is it important to include it in pharmaceutical preparations?
6. What are sterilization indicators? Why is it important to use it during sterilization process?
7. What are conjugated vaccines? Mention their advantages.

SECTION "C"

[5 Q. × 5 = 25]

Answer *ANY FIVE* questions.

8. Write short notes on:
 - a) Whole blood
 - b) Human albumin
9. Write about dextran production by fermentation.
10. Explain in detail about insulin production by rDNA technology?
11. Explain 'Use dilution test' method for evaluation of antimicrobial chemical agents.
12. How fluids used in pharmaceutical industries are sterilized? Explain with suitable examples.
13. Write short note on the factors that influences sterilization efficiency of ethylene oxide.
14. When would you choose membrane filtration method over direct inoculation method for sterility testing? Explain why?

SECTION "D"

[2 Q. × 7.5 = 15]

Answer *ANY TWO* questions.

15. Explain in detail about the steps involved in penicillin production by fermentation.
16. What are antisera? Write about its types. How antisera are prepared?
17. What are the different types of controls that are used in sterility test? How is it used? Explain the importance of use of controls for interpretation of sterility test results.

