

KATHMANDU UNIVERSITY  
End Semester Examination  
February/March, 2018

Marks Scored:

Level : B. Sc.

Year : II

Exam Roll No.:

Time: 30 mins.

Course : HBIO 201

Semester: I

F. M. : 20

Registration No.:

Date MAR 04 2018

SECTION "A"

[10 Q.×0.5=5 marks]

Choose and tick [ ✓ ] the most appropriate answer.

1. Which of the following did not support spontaneous generation?  
 Aristotle       Louis Pasteur       John Needham       Felix Pouchet
2. Which of the following is asexual spore?  
 Ascospore       oospore       Chlamydozoospores       Zygozoospore
3. Spherical bacteria in chains called:  
 Staphylococcus       Streptococcus       Tetrad       Diplococcus
4. Psychrotrophs grow in temperature range of:  
 0°C to 20°C       25°C to 45°C       20°C to 30°C       45°C to 60°C
5. Blood Agar is an example of:  
 Basal media       Enriched media  
 Selective media       Enrichment media
6. Which of the following is not a non-sense codon?  
 UGA       UAA       UAG       UGG
7. Estimated number of microorganism in soil is:  
 1,000,000,000/kg       1,000,000/g       1,000,000/kg       1,000,000,000/g
8. Which of the following is not spread by inhalation?  
 Typhoid       mumps       Influenza       measles
9. Total ATP production from 1 molecule of glucose through aerobic respiration is:  
 32       34       36       38
10. Dettol falls under which group?  
 Halogens       Heavy metal       Phenol       Aldehyde

SECTION "B"

[5 Q.×1=5 marks]

Fill in the blanks:

11. \_\_\_\_\_ a method that can be used to suspend the metabolism of bacterial and fungal cultures and to stabilize them for long-term storage.
12. Condition where infection at localized sites produces general effects is called \_\_\_\_\_ infection.
13. Endotoxins are produced by Gram \_\_\_\_\_ bacteria.
14. Ebola virus is \_\_\_\_\_ in shape.
15. Sabouraud dextrose agar has Ph of \_\_\_\_\_

SECTION "C"

[10 Q.×1=10 marks]

Define in one sentence:

16. Virulence:
17. Phycologists:
18. Mesosome:
19. Viroids:
20. Mycology:
21. Pure Cultur:
22. Window period:
23. Secondary Infection:
24. Humus:
25. Capnophilic organism:

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F. M. : 55

SECTION "D"

(Long answer questions)

[3 Q.×7=21 marks]

Answer ANY *THREE* questions.

1. Define mutation and explain the process of genetic transmission.
2. Describe the physical method of microbial control.
3. Describe virulence factors of pathogens for infection.
4. Give Baltimore classification of viruses and briefly describe the replication process of genetic material of each.

SECTION "E"

(Short answer questions)

[6 Q.×4=24 marks]

Write short notes on *ANY SIX*:

5. Prions
6. Bacterial Growth Curve
7. General Structure of Bacteria
8. Anaerobic respiration and Fermentation
9. Sewage water treatment
10. Normal Flora
11. Application of microorganism in food industry
12. Different methods of bacterial count

Differentiate between:

13. a. Capsule and Slime layer [2Q.×2=4]  
b. Viral and Fungal Culture
14. Explain Why/how. [3Q.×2=6]
  - a. Obligate anaerobes cannot live in presence of oxygen.
  - b. Pentose phosphate pathway is important in biological system.
  - c. Batch culture is used mostly in industrial setting.

