

KATHMANDU UNIVERSITY
End Semester Examination
February/March, 2018

Marks scored:

Level : B. Pharm.
Year : II

Course : PHAR 201
Semester: I

Exam.Roll No.:

Time: 30 mins.

F.M. : 20

Registration No.:

Date MAR 04 2018

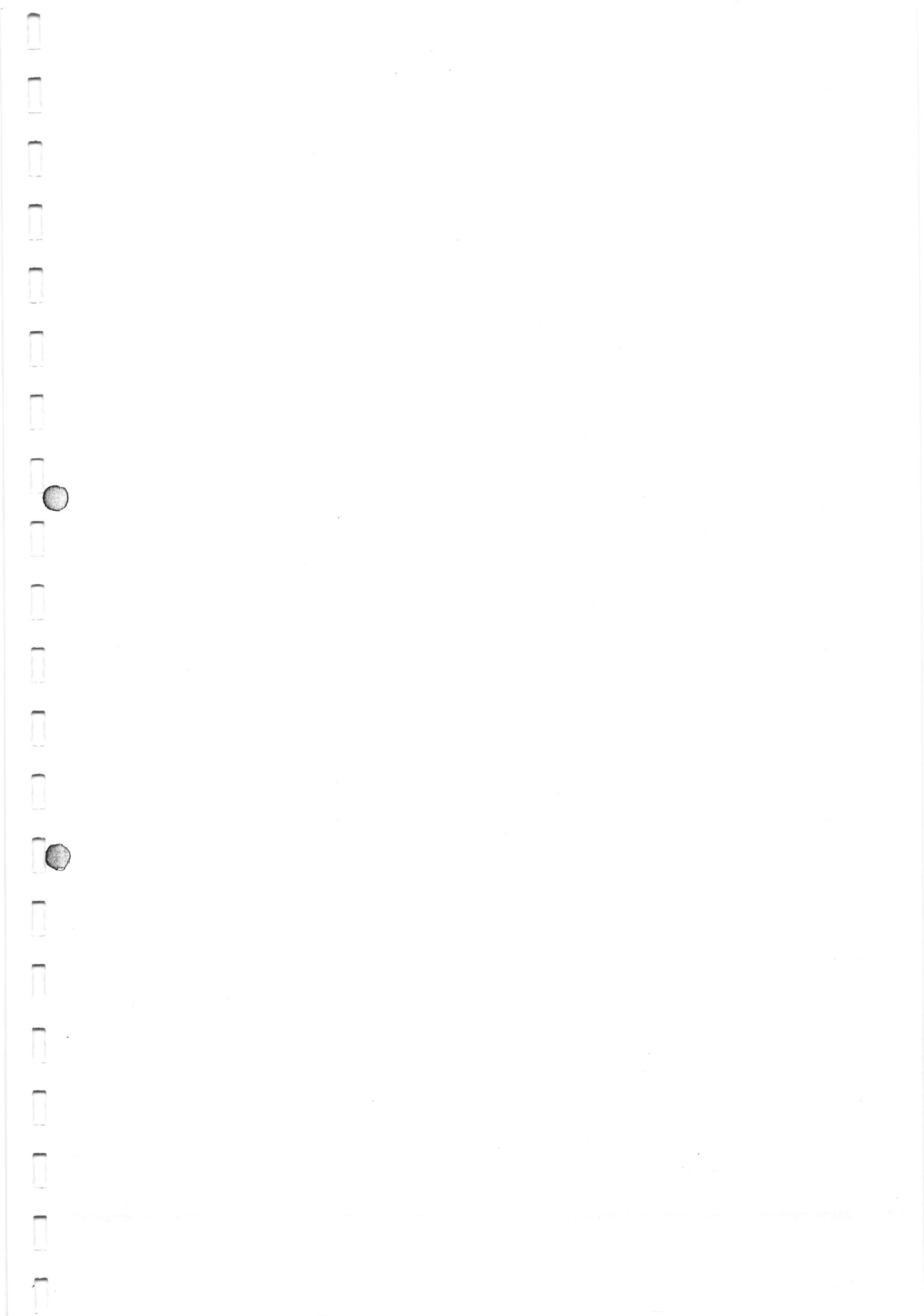
SECTION "A"

[20 Q.×1=20 marks]

- I. Tick [✓] the correct answer
- Acellular is one of the characteristics of virus. It means all *except*.....
[a] no cell [b] no metabolism
[c] can be killed with antibiotics [d] no organelles
 - Stages of viral replication includes all *except*
[a] Coating of the virus to release its core components
[b] Replication of the viral nucleic acids and translation of the genome
[c] Maturation or re-assembly of virions (i.e. progeny virus particles)
[d] Release of virions into the surrounding environment
 - Cocco bacillus responsible for common air borne epidemic disease is
[a] spherical [b] round [c] very short rod [d] rod shaped
 - Relative humidity in clean room is monitored by:
[a] Thermometer [b] Anemometer
[c] Sling Psychrometer [d] Manometer
 - The ideal properties of disinfectant include all *except*:
[a] should be non-toxic and non-corrosive [b] should be stable
[c] should be volatile [d] should be potent
 - Which one of the following options is true in relation to cell wall of gram positive bacteria?
[a] Thin [b] Carbohydrates are present
[c] Teichoic acids are absent [d] Thick
 - Microorganism produced by genetic engineering produce important medicinal substance like extracted from the pancreas of calves.
[a] Insulin [b] Enzymes
[c] Pancreatic alpha-amylase [d] Protein
 - is the pore size of filtration membrane that removes microorganism to sterilize pharmaceutical agents.
[a] 1 µm [b] 0.45 µm [c] 0.46 µm [d] 0.2 µm

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19. Diphtheria is caused by
[a] *Corynebacterium diphtheriae* [b] *Clostridium tetani*
[c] *Vibrio cholera* [d] Rhabdovirus
20. Koplik's spot is characteristic feature of
- [a] Diphtheria [b] Tetanus [c] Measles [d] Rabies



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MAR 04 2018

Level : B. Pharm.
Year : II
Time : 2 hrs. 30 mins.

Course : PHAR 201
Semester: I
F.M. : 55

SECTION "B"

[5 Q.×3=15 marks]

Indicate by checking (✓) of each question you have answered in the cover page of main answer book.

II. Answer any *FIVE* of the following questions :

1. Define
 - a. Aseptic technique
 - b. Pharmaceutical microbiology
 - c. Positive control and negative control
2. List down the stages involved in heat sterilization. Do other stages besides holding contribute to the overall biocidal activity?
3. List down the advantages and disadvantages of microbes in pharmacy.
4. Distinguish between lysogenic and lytic phase of viral cell replication.
5. Define as built, at rest and operational occupancy state.
6. Write about acid fast stain.
7. Explain on the factors affecting preservative efficacy.

SECTION "C"

[5 Q.×5=25 marks]

III. Answer any *FIVE* of the following questions.

8. What are the processes involved in heat sterilization? Discuss on them.
9. Explain the function of different parts of a compound microscope. Can we visualize viruses by it? Give reason/s for your answer.
10. List down different types of culture media and explain on anaerobic culture methods.
11. Explain in detail on procedures of pyrogen testing.

12. What is microbiological assay? Explain the advantages and limitation of microbiological assay.
13. Discuss on cholera including its causative agent, mode of transmission, pathogenesis clinical features and treatment.
14. Write short notes on:
 - a) Indole test
 - b) Urease test

SECTION "D"
[2 Q.×7.5=15 marks]

IV. Answer any *TWO* of the following questions:

15. What are the different methods that can be used to culture microorganisms in laboratory? How streak culture is performed? Mention its significances.
16. Distinguish between virus and bacteria in terms of following parameters: size, nucleic acid content, cell membrane, metabolic capabilities and reproduction. Explain the relevance of such knowledge in the field of Pharmacy.
17. What is cleanroom? What are the types of cleanroom? Explain about the different tests used for cleanroom testing.