

19. Explain the structure of a flagella, Write a note on types of flagella.
20. Write a detailed note on chemicals used in sterilization.
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APRIL/MAY 2018

**BMB11 — FUNDAMENTALS OF
MICROBIOLOGY**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

Each answer not to exceed 50 words.

Define/Short notes of the following :

1. Spontaneous generation theory.
2. Pasteurization.
3. Numerical aperture.
4. Abbe condenser.
5. Microbial evolution.
6. Classification.
7. Cyst.
8. Capsule.

9. Incineration.

10. HEPA filter.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

Each answer not to exceed 200 words.

11. (a) Write the contributions of Sergei N. Winogradsky, S.A. Waksman and Emil Christian Hasen.

Or

(b) Discuss about the impact of microbiology and the future.

12. (a) Explain the principle, mode of operation and applications of phase contrast microscope.

Or

(b) Define staining. Explain the principle and procedure of Endospore staining.

13. (a) Write an account on binomial nomenclature of microbes.

Or

(b) Comment on Whittaker's five kingdom concept.

14. (a) Write an essay on cell wall of bacteria.

Or

(b) Comment on structure of endospore.

15. (a) What is sterilization? Write an account on radiation used in sterilization.

Or

(b) Comment on disc diffusion method of antibiotic sensitivity test.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

Each answer not to exceed 500 words.

16. Describe the contributions of Louis Pasteur, John Tyndall, Joseph Lister and William Beijerinck.

17. Differentiate between simple and differential staining. Explain the principle, procedure and applications of Gram staining.

18. Write a detailed note on :

(a) Endosymbiotic theory

(b) Eight kingdom concept.