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Reg. No. :

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M.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2019.

Second Semester

Zoology— Core

MICROBIOLOGY

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The first person who extensively described microorganism
- (a) Antony Van Leeuwenhock
 - (b) Steven Jay Gould
 - (c) Alexander Fleming
 - (d) Edward Jenner

2. Lipopolysaccharide is a major component of cell wall in
- (a) Gram positive bacteria
 - (b) Fungi
 - (c) Gram negative bacteria
 - (d) Parasites
3. The process by which a medium is made free of all organisms either in Vegetative or spore form is known as
- (a) Sterilization
 - (b) Asepsis
 - (c) Disinfection
 - (d) None of the above
4. Low temperature and time period used in holder method of pasteurization
- (a) 63°C for 30 minutes
 - (b) 63°C for 50 minutes
 - (c) 72°C for 20 seconds
 - (d) 72°C for 40 seconds
5. Fungus which produced aflatoxins
- (a) Fusarium moniliforme
 - (b) Aspergillus flavus
 - (c) Aspergillus conicus
 - (d) Aspergillus echinulatus



6. Acute bacterial gastroenteritis in human is caused by
- (a) *Listeria monocystogenes*
 - (b) *Arcobacter butzleri*
 - (c) *Escherichia coli*
 - (d) *Campylobacter jejuni*
7. whooping cough is caused by the gram negative bacterium
- (a) *Mycobacterium bovis*
 - (b) *Mycobacterium africanum*
 - (c) *Bordetella pertussis*
 - (d) *Mycoplasma pneumoniae*
8. *Treponema pallidum* which causes a contagious sexually transmitted disease known as
- (a) Gonorrhea
 - (b) Syphilis
 - (c) Anthrax
 - (d) Leprosy
9. The amino acid glutamic acid is produced by the microorganism
- (a) *Corynebacterium glutamicum*
 - (b) *Microbacterium salicinovorum*
 - (c) *Brevibacterium amino genes*
 - (d) All the above

10. The small scale sewage treatment is

- (a) Oxidation pond
- (b) Cesspools
- (c) The trickling filter
- (d) Anaerobic digester

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

(Draw diagram wherever necessary)

11. (a) Enumerate the classification of fungi.

Or

- (b) Differentiate between gram negative and gram positive bacteria

12. (a) Write short notes on enriched media and enrichment media.

Or

- (b) Explain briefly on growth curve.

13. (a) Give briefly the fermentation of milk.

Or

- (b) Explain the industrial production of penicillin



14. (a) What is diphtheria? Explain its causative organism and control measures.

Or

- (b) Explain the causative agent and control measures of dengue fever
15. (a) Discuss briefly biodegradation of xenobiotics

Or

- (b) Discuss the biology and economic importance of cauliflower mosaic virus.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

(Draw diagram wherever necessary)

16. (a) Discuss in detail the major characteristics used in classification.

Or

- (b) Classify microorganism Write in detail about the three kingdom classification.

17. (a) Explain in detail the pure culture techniques.

Or

- (b) Enumerate the methods of preservation and maintenance of culture.

18. (a) Describe the intrinsic factor involved in food spoilage.

Or

- (b) Discuss in detail the preservation of food.

19. (a) Discuss briefly on air borne bacterial diseases.

Or

- (b) Discuss briefly the sexually transmitted diseases.

20. (a) What is biogeochemical cycle? Discuss phosphorus cycle.

Or

- (b) Describe in detail the secondary treatment of sewage.

