PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

14 MBQQ2

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BSc DEGREE EXAMINATION MAY 2017 (First Semester)

Branch- MICROBIOLOGY

PRINCIPLES OF MICROBIOLOGICAL METHODS

Time: Three Hours. Maximum: 75 Marks •

SECTION-A (20 Marks)

Answer ALL questions

. ALL questions carry EQUAL marks (10x2 = 20)

- 1 Numerical aperture.
- 2 Type of objective lens.
- 3 AFB.
- 4 CVI Complex.
- 5 Antiseptics.
- 6 Disinfectant. .*
- 7 Gamma rays.
- 8 Tynadallisation.
- 9 Differential media.
- Transport media.

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks $(5 \times 5 = .25)$

11 a Briefly comment the structure and functional feature of phase contrast microscope.

OR

b Define: (i) Resolving power (ii) Magnifications.

12 a Write the details about motility observing methods.

OR

b What is differential staining? Explain with suitable example.

13 a Explain about pasteurization.

 $\cap R$

b Write the detail about filtration.

14 a Comment on fumigation process.

OR

b Explain the roll of alcohol and phenol in microbial growth control.

15 a Explain about the microbial culture media preparation.

 $\cap R$

b ■ Write about any one method for cultivation of anaerobic microorganism.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks $(3 \times 10 = 30)$

- 16 * Compare and contrast the principle, methods of operation and utilities of SEM and TEM.
- 17 * How does the growth pattern differ when it is measured by total' counter by viable count? Explain...
- Explain the principle and application of heat in sterilization/
- Write the detail about mode of action of chemical agent in sterilization.
- 20 Explain about pure culture technique.

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BSc DEGREE EXAMINATION MAY 2017

(First Semester)

Branch - MICROIOLOGY

BIOCHEMISTRY

Time: Three Hours Maximum: 75 Marks

SECTION-A (20 Marks!

Answer ALL questions

ALL questions carry EQUAL marks $(10 \times 2 = 20)$

- 1 What are biological macro molecules? Give example.
- Write about pH of various body fluids.
- What is the difference between reducing and non reducing sugar.
- 4 Define mutarotation.
- 5 Write about the essential fatty acids.
- 6 What is emulsification?
- Write about the ampholytes.
- 8 Write about the symptoms and complications of kwashiorkor.
- 9 Define biocatalyst. Give example.
- Write about allosteric enzymes.

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks $(5 \times 5 = 25)$

11 a. Explain about the biochemistry of water.

OF

b Give a brief account on osmosis and its role in biology.

12 a Explain in detail about chemical properties of glucose.

OR

- b Explain about the structure and biochemical functions of lactose.
- 13 a Write an account on the channel proteins and its functions.

OR

- b Describe about biological functions of fat soluble vitamins.
- 14 a Write a short note on composition and biological functions of proteins.

OR

- b Discuss about insulin and its functions.
- 15 a Write about the active site of enzyme and its mechanism.

OR

b Explain in detail about multi enzyme systems.

SECTION - C (30 Marks!

Answer any THREE Questions

ALL Questions Carry EQUAL Marks $(3 \times 10 = 30)$

- Explain in detail about laws of thermodynamics.
- Give a brief account on the classification of carbohydrates with examples.
- Write about the structure and functions of cholesterol.
- 19 Give an account on primary and secondary structure of protein.
- Write an account on competitive, non-competitive and uncompetitive enzyme inhibition.

Z-Z-Z END

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BSc DEGREE EXAMINATION MAY 2017

(First Semester)

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