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BP 303 T

BINA CHOWDHURY CENTRAL LIBRARY,
(GIMT & GIPS)
Azara, Hatkhowapara,
Guwahati - 781017

Roll No. of candidate

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2019

B.Pharm 3rd Semester End-Term Examination

PHARMACEUTICAL MICROBIOLOGY (THEORY)

(New Regulations)

(w.e.f 2017-2018)

Full Marks – 75

Time – Three hours

The figures in the margin indicate full marks
for the questions.

GROUP - A

1. Short answer type questions. answer the following
questions : (1 × 20 = 20)

(i) Which one is an acidic Stain?

- (a) Congo Red
- (b) Crystal Violet
- (c) Safranin
- (d) Malachite green

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- (ii) L-Cystine is used for
- (a) Fluid Thioglycolate media
 - (b) N Agar Media
 - (c) Soyabain Casein Media
 - (d) None of this
- (iii) pH range of diluting fluid used in sterility testing is
- (a) 6.8 ± 0.2
 - (b) 7.1 ± 0.2
 - (c) 7.2 ± 0.2
 - (d) 7.4 ± 0.2
- (iv) Prescribed quantity for suspension containing 20 ml for sterility testing should be
- (a) 50%
 - (b) 10%
 - (c) 2 ml
 - (d) 5 ml
- (v) What is the ideal flow rate of membrane filter
- (a) 55-75 ml
 - (b) 45-50 ml
 - (c) 30-35 ml
 - (d) None of this
- (vi) *Micrococcus luteus* used for assay of
- (a) Chloramphenicol
 - (b) Ampicillin
 - (c) Rifampicin
 - (d) None of this

- (vii) IMViC stands for how many tests
- (a) 2
 - (b) 4
 - (c) 5
 - (d) 1
- (viii) Bacteria having two or more flagella at both poles
- (a) Monotrichous
 - (b) Lopotrichous
 - (c) Amphitrichous
 - (d) Peritrichous
- (ix) Bacteria with branching filamentous known as
- (a) Actinomycetes
 - (b) Spirochetes
 - (c) Vibriyo
 - (d) All of the above
- (x) Which of the below present in Procaryotes
- (a) Nucleolus
 - (b) Lysosomes
 - (c) Golgi Apparatus
 - (d) Mesosome
- (xi) Which was not present in Gram positive bacteria?
- (a) Teichoic acid
 - (b) Polysaccharide
 - (c) Peptidoglycan
 - (d) Periplasmic space

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- (xii) Coagulation is principle of
- (a) Dry heat sterilization
 - (b) Radiation sterilization
 - (c) Moist heat sterilization
 - (d) All of the above
- (xiii) Agar is
- (a) Complex Polysaccharide
 - (b) Solidifying agent
 - (c) Seaweeds algae
 - (d) All of the above
- (xiv) The pore size must often use for sterilization in membrane filtration is
- (a) $0.45 \mu\text{m} \pm 0.02 \mu\text{m}$
 - (b) $0.02 \mu\text{m} \pm 0.02 \mu\text{m}$
 - (c) $0.03 \mu\text{m} \pm 0.02 \mu\text{m}$
 - (d) $0.97 \mu\text{m} \pm 0.02 \mu\text{m}$
- (xv) Formaldehyde gas is generated to sterilizing 1000 cu.ft room by adding
- (a) 100 gm KMnO_4 to 250 ml formalin
 - (b) 150 gm KMnO_4 to 150 ml formalin
 - (c) 280 gm KMnO_4 to 350 ml formalin
 - (d) 150 gm KMnO_4 to 250 ml formalin

- (xvi) Time in minutes at any defined temperature to destroy 90% viable micro-organism is called as
- (a) F Value
 - (b) M Value
 - (c) D Value
 - (d) None of this
- (xvii) Gloves can be sterilized by
- (a) Dry heat sterilization
 - (b) Incineration
 - (c) Moist heat sterilization
 - (d) Pasteurization
- (xviii) Which of the following organism is acid fast
- (a) M. tuberculosis
 - (b) E. coli
 - (c) B. Subtilis
 - (d) Ps. aeuroginosa
- (xix) Brill-Zinsser disease is caused by
- (a) Bacteria
 - (b) Virus
 - (c) Rickettsia
 - (d) Fungi
- (xx) Bacteria which can grow at 0°C is known as
- (a) Psychrophiles
 - (b) Mesophiles
 - (c) Acidophiles
 - (d) Neutrophiles

GROUP - B

Answer the following questions (any seven)

(7 × 5 = 35)

2. Differentiate the following questions (2.5 + 2.5)
 - (a) Prokaryotic cell and Eukaryotic cell
 - (b) Aerobic and Anaerobic bacteria
3. Write down the importance of (2.5 + 2.5)
 - (a) Pharmaceutical Microbiology
 - (b) Medical Microbiology.
4. Write the construction and principle of (2.5 + 2.5)
 - (a) Dark field microscopy
 - (b) Scanning Electron Microscopy
5. What do you mean by IMViC? Explain briefly about Voges Proskauer test? (5)
6. Explain morphology and reproduction of virus. (5)
7. Briefly explain about Rideal-walker coefficient test with respect to *Salmonella typhi*. (5)
8. What are the different source of contamination in an aseptic area? Briefly explain about laminar air flow equipment with diagram? (2.5 + 2.5)
9. Write notes on : (2.5 + 2.5)
 - (a) Application of cell culture in Industries
 - (b) Preservation of pharmaceutical products
10. Explain briefly with assessment of new antibiotic with respect to disc - diffusion method. (5)

GROUP – C

Answer any TWO questions.

(2 × 10 =20)

11. Briefly explain the principle, procedure, merits demerits and application of

- (a) Dry heat sterilization
- (b) Moist heat sterilization
- (c) Radiation sterilization
- (d) Membrane filtration method

Note : Draw the diagram where ever necessary.

12. Draw the ultra-structure of Bacteria and explain briefly about

- (a) Morphological classification
- (b) Nutritional requirement
- (c) Growth factors
- (d) Preservation techniques

13. Define staining. Classify staining explain briefly about the principle and procedure of

- (a) Gram Staining
 - (b) Acid fast staining.
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