

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FOURTH SEMESTER EXAMINATION, SEPTEMBER 2020

SECOND YEAR (BATCH 2018-21)

MICROBIOLOGY (General)

Date : 01/10/2020

Time : 11.00 am – 3.00 pm

Paper : IV

Full Marks : 50

All questions are compulsory

GROUP-A

1. a) Define 'mutation rate' and mutation 'frequency'.
b) What is 'point mutation'? Explain with example.
c) Why is SOS repair system considered as an error prone repair system?
d) Briefly describe the Ames test to assess the mutagenicity of compounds. [(1+1)+2+3+3]

2. a) Mention the important features of any ideal cloning vector.
b) What is MCS?
c) Explain the few important features of PBR322.
d) Write down the principle of blue-white screening method.
e) What is shuttle vector? [3+2+4+4+2]

GROUP-B

3. a) What do you mean by primary and secondary immune response?
b) 'All immunogens are antigens but all antigens are not immunogens'- explain.
c) What is the role of macrophage in immune system?
d) Write down the role of T-helper cell in humoral and cell mediated immunity?
e) What are epitope, paratope and aggretope? [2+2+2+2+2]

4. a) Normal flora is opportunistic pathogens — justify.
b) What are the different steps of pathogenesis?
c) What are the antimicrobial barriers in urogenital tract?
d) Name two indigenous microorganisms present in skin.
e) What is vulvovaginitis?
f) How does normal flora benefit human host? [2+4+2+2+2+3]

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