Bachelor of Science (B.Sc.) Second Semester (Old)

2SMic-T1 - Microbiology : Paper-I (Microbial Chemistry and Physiology)

P. Pages : 2 **GUG/W/18/1246**

Time : Three Hours * 0 9 5 9 * Max. Marks : 50

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1. What is polysaccharide? Explain Heteropolysaccharide with examples. **10**

OR

Describe Watson and crick model of DNA in detail.

2. Describe various classes of microorganisms on the basis of carbon and every requirement. **10**

OR

Explain various phases and characteristics of growth curve.

3. a) Explain the structure of lactose & Maltose. **2½**

b) Write short note on peptide band theory? **2½**

c) Give difference between synthetic media & Non-synthetic media with example. **2½**

d) Classify bacteria on the basis of pH requirement. **2½**

OR

e) Give classification of Lipids. **2½**

f) Write a short note on m-RNA. **2½**

g) Explain replica plating technique. **2½**

h) What is synchronous culture method? Explain. **2½**

4. a) Give biological significance of carbohydrates. **2½**

b) Write a short note on α – helix. **2½**

c) Why Macconkey agar is used as selective as well as differential media? Explain. **2½**

d) Explain working mechanism of Turbidostat. **2½**

OR

e) Write short note on compound lipid. **2½**

f) Draw well labelled structure of t-RNA. **2½**

g) Write a short note on enriched media. **2½**

h) Describe generation time with mathematical expression. **2½**

5. Attempt **any ten.**

a) Draw the structure of Raffinose. **1**

b) Name the monosaccharides participate in sucrose. **1**

c) Give any two biological significance of lipids. **1**

d) Name any two sulfur containing amino acids. **1**

e) What is nucleoside? **1**

f) What is glyosidic bond? **1**

g) Define mixotrophs. **1**

h) What is the role of peptone? **1**

i) Give any are example of selective media. **1**

j) What is continuous culture? **1**

k) Define bacterial growth. **1**

l) Give example of any two anaerobic bacteria. **1**

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