

Royal College of Arts, Science & Commerce
Semester VI - Sample Question Paper
Microbiology Paper III (USMB 603)

Note: Figures to the right indicate full marks.

Choose the correct alternative.

1 Which of the following lipids contain isoprene unit? (1)

- a Neutral fat
- b Lipid A
- c Carotenoids
- d LPS

2 *E.coli* oxidizes propionic acid to (1)

- a Pyruvic acid
- b Butyric acid
- c Lactic acid
- d Acetoacetic acid

3 Stearic acid is (1)

- a C12 fatty acid
- b C14 fatty acid
- c C16 fatty acid
- d C18 fatty acid

4 PHB is (1)

- a an energy reserve
- b a Carbon reserve
- c a carbon and energy reserve
- d a nitrogen reserve

5 The number of Acetyl CoA molecules produced by β oxidation of palmitic acid

- a Five
- b Six
- c Seven
- d Eight

6 Subtilisin is (1)

- a an acid protease
- b an alkaline protease
- c a neutral protease
- d an amphoteric protease

- 7 The product of an amino acid decarboxylase activity is (1)**
a a keto acid
b an amine
c a dicarboxylic acid
d a keto amine
- 8 Which of the following conenzymes is used by aminotransferases? (1)**
a NADH
b FAD
c Pyridoxal Phosphate
d Biotin
- 9 Amino acid racemases interconvert (1)**
a α and β anomers
b D & L isomers
c Cis and trans isomers
d Structural isomers
- 10 Non oxidative deamination is catalyzed by (2)**
a Aspartase and alanine dehydrogenase
b Aspartase and alanine oxidase
c Aspartase and serine deaminase
d Alanine dehydrogenase and alanine oxidase
- 11 Production of an enzyme only when its substrate is present is called as(1)**
a repression
b activation
c induction
d modulation
- 12 Riboswitch is a regulatory (1)**
a snRNA
b mRNA
c rRNA
d tRNA
- 13 Which of the following statements is true with respect to monocistronic mRNA?**
a It is common in prokaryotes.
b It is common in eukaryotes.
c It is transcribed from an operon.
d It encodes more than one polypeptide.

- 14 Which of the following is an alarmone? (1)**
- a ppGpp
 - b ppApp
 - c AMP
 - d GMP
- 15 Lac operon is under the control of following regulatory mechanisms. (2)**
- a Induction and attenuation
 - b Induction and catabolite repression
 - c Induction and FBI
 - d Induction and covalent modification
- 16 Photosynthesis apparatus of Green S bacteria is located in (1)**
- a Thylakoid
 - b Chlorosome
 - c ChloroplastI
 - d Membrane invagination
- 17 The following is an example of Hill reagent (1)**
- a NADP+
 - b NADH
 - c FMNH₂
 - d NADPH
- 18 Which of the following is a symbiotic Nitrogen fixing bacteria.**
- a Azotobacter
 - b Klesiella
 - c Anabena
 - d Clostridium
- 19 Which of the following is a Chemolithotroph? (1)**
- a *Clostridium perfringens*
 - b *S. aureus*
 - c *Pseudomonas facilis*
 - d *Pseudomonas aeruginosa*
- 20 Reduction of nitrate to ammonia in *Clostridium perfringens* is an example of (2)**
- a Assimilatory nitrate reduction
 - b Fermentative nitrate reduction
 - c Nitrate/ nitrite respiration
 - d Nitrate/ Ammonia respiration