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RI-21041 Seat No._____

Second Year B. Sc. (Sem. IV) Examination

April / May – 2011

Microbiology : Paper - 401

Microbial Chemistry & Physiology - II

Time : **3** Hours] [Total Marks : **75**

Instructions : (1) All questions are compulsory.
(2) Right side figure indicates mark of the question.

1 (a) Answer in short. **5**
(i) What is an atom ?
(ii) What is high energy rich compound ?
(iii) Define reduction.
(iv) What is an isotope ?
(v) What is hydrolysis ?

(b) Describe chemical reaction. **10**

OR

1 Write notes. **15**
(i) Hydrogen bond formation
(ii) $_{P}H$ and buffer
(iii) Oxidation - Reduction reaction.

2 (a) Answer in short. **5**
(i) What is epimerization ?
(ii) What is inulin & it's importance in human body?
(iii) How disulfide bond is formed ?
(iv) What is isoelectric PH ?
(v) Give two examples of aeromatic amino acids.

(b) Describe in detail "secondary stracture of protein." **10**

OR

2 Write notes. **15**
(i) Non standard amino acids.
(ii) Glycoproteins
(iii) Functions of carbohydrates.

3 (a) Answer in short. **5**

(i) What is matting temperature ?

(ii) Give two examples of minor bases found in nuclic acid.

(iii) What is phrymoderma ?

(iv) Give two examples of steroids.

(v) Who discovered stracture of DNA ?

(b) Explain different types of RNA. **10**

OR

3 Write notes. **15**

(i) Functions of phospholipids

(ii) Functions of nucliotides

(iii) Various test to check purity of fat and oil.

4 (a) Answer in short. **5**

(i) What is feed back inhibition ?

(ii) What is growing culture technique ?

(iii) What are constitutive enzymes ?

(iv) What is active site of an enzyme ?

(v) What are "isomerases".

(b) Discuss in detail regulation of enzyme activity. **10**

OR

4 Write notes. **15**

(i) Inducible enzymes.

(ii) Classification of enzymes.

(iii) Physicochemical properties of enzymes.

5 (a) Answer specifically. **5**

(i) What are lithotrophs ?

(ii) What is the use of semi solid media ?

(iii) What is oxigen toxicity.

(iv) Give example of obligate paracitic bacteria.

(v) Give the use of roll-tube technique.

(b) Discuss various methods used for quantitative measurement of bacterial growth. **10**

OR

5 Write notes. **15**

(i) Synchronous growth.

(ii) Cultivation of anaerobic bacteria

(iii) Different types of media and it's uses in microbiology.