VCD- 8-3-14 **BIOCHEMISTRY-II** **F.Y.B.Sc. SEM II 2 HRS 60 MARKS 35**

- All questions are compulsory.
- All questions carry equal marks.
- Draw diagram wherever necessary

Q. I) A) Answer the following in short (any two) (4M)

1) What is chromatin fiber?
2) What is sat chromosome?
3) Why mitosis is called equational division?
4) What do you mean by G_0 phase of cell cycle?

B) Answer the following in brief (any two) (6M)

1) Write short note on nucleopore?
2) Describe the characteristics of S- phase of cell cycle?
3) What is the significance of meiosis cell division?
4) Write a difference between euchromatin and heterochromatin.

C) Describe the prophase I phase of meiosis. (5M)

OR

C) Write short notes on nuclear membrane and nucleolus. (5M)

Q. II) A) Answer the following in short (any two) (4M)

1) Give two example of each group-polysaccharides and disaccharides.
2) What is endopeptidase?
3) Write down the activation mechanism of trypsin?
4) Define renal threshold.

B) Answer the following in brief (any two) (6M)

1) Write a short note on emulsification of lipid.
2) How absorption of intact protein and polypeptide does take place?
3) What are the compositions of glomerular filtrate?
4) What are the factors effecting GFR?

C) Describe carbohydrate digestion in mouth and small intestine. (5M)

OR

C) Describe the structure and function of glomerulus and Bowman's capsule with labelled diagram. (5M)

Q. III) A) Answer the following in short (any two) (4M)

1) What is the need for staining?
2) What is the main role of iodine in gram staining?
3) What is growth?
4) What would result in an unbalanced growth?

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B) Answer the following in brief (any two) (6M)

1) Write a note on senescence or death phase.
2) Explain acid fast staining.
3) Write a note on flagella staining.
4) Explain the term fixation.

C) What are dyes? Explain about simple staining. (5M)

OR

C) Give a detailed note on growth curve of bacteria. (5M)

Q. IV) A) 1) Answer the following in short (any one) (2M)

1) Write down the significance of metaphase I.
2) What is synaptonemal complex?

Q. IV) A) 2) Fill in the blanks (any three) (3M)

1) Protein present in nucleopore is known as _____.
2) Other name of meosis cell division is _____.
3) Microtubule binds at the _____ of centromere in chromosome.
4) Microtubules are made up of _____ protein.
5) _____cell always remain in G_0 phase.
6) During mitosis _____ chromatids of a chromosome moves to the opposite pole.

Q. IV) B) 1) Explain the following in short (any one) (2M)

1) Why carbohydrate cannot be digested in stomach?
2) What are the segments of Henle's loop?

Q. IV) B) 2) State whether true or false (any three) (3M)

1) Zymogen form of pepsin is _____.
2) Group of enzyme engage in carbohydrate digestion is called _____.
3) Infant can absorb intact protein by _____ process.
4) Cortical nephrons are present in _____ part of kidney.
5) Each distal convoluted tubule delivers its filtrate to _____.
6) _____hormone helps in water reabsorption.

Q. IV) C) 1) State the mathematical expressions of the following in (any one) (2M)

i) Bacteriology ii) Acidic dyes

Q. IV) C) 2) State whether true or false (any three) (3M)

1) Saffranine is used to stain the gram positive bacteria.
2) Rod shaped bacteria are known as cocci.
3) Long tail like structure of the bacteria is called as flagella.
4) Bacteria are classified under the group of protist.
5) The time taken for the bacterial cell to divide is known as population time.
6) The time taken for the bacteria to adjust itself to a particular surrounding is called log phase.