

VCD-260315

26/3/15

VCD - BIOCHEMISTRY- II- F.Y.B.S.c-SEM I -75 MARKS - 2 1/2 HRS 25

- Note:** 1. Figures to right indicate marks.  
2. All questions are compulsory.  
3. Draw appropriately labelled diagrams wherever necessary.

**Q I) A. Answer the following (Any Four)**

[8M]

- Abbreviation of SNURPS And its function
- What is Reverse Transcriptase? Give its function.
- What is a light year?
- Name the two people who first stepped on the moon.
- Draw a diagram a Eukaryotic cell.
- Draw a flow chart of subtypes of prokaryotes with examples.
- What is yeast?
- Name the gases present in the prebiotic environment.

**B. Explain the following (Any Two)**

[6M]

- Spontaneous Generation theory. Give detailed diagram of Louis Pasteur's experiment.
- RNA World Hypothesis.
- Big Bang theory.
- Galactic expansion.

**C. Answer in brief: (Any One)**

[6M]

- Write a note on Louis Pasteur's experiment.
- Evidences supporting Big Bang theory.

**Q II) A. Answer the following (Any Four)**

[8M]

- Name any four protein molecules of biological membranes.
- What is simple diffusion?
- Give the precise structure of phosphatidyl serine.
- What are carrier proteins?
- What is lateral diffusion?
- What are different properties of cell membranes?
- Explain any two functions of cell membrane.
- What is lipid bilayer?

**B. Explain the following (Any Two)**

[6M]

- Active transport.
- Why are biological membranes said to be asymmetric?

CONTD 2/...



- iii. Function of biological membrane in terms of - "Cell Structure."  
iv. Explain membrane proteins.

**C. Answer in brief (Any One)**

[6M]

- i. Name and explain any three mechanisms of transport across cell membrane.  
ii. Write a short note on plasma membrane and its role in transport of biomolecules.

**Q. III] A. Answer the following questions(any four)**

[8M]

- i. What is sarcosome?  
ii. What is light reaction?  
iii. How does peroxisome prevent aging?  
iv. How does lysosomal membrane prevent itself from its lysosomal protease?  
v. What do you mean by middle and trans cisternae?  
vi. Name some common enzyme present in ER?  
vii. State the structure of ER.  
viii. Write down about types of SER

**B. Answer the following questions in brief.( Any two)**

[6M]

- i. Write a note on different enzyme found in different part of mitochondria.  
ii. Write a note on leucoplastid found on plant?  
iii. Role of peroxisome in photorespiration.  
iv. Write a note on lysosomes of plant.

**C. Answer the following questions in detail (any one)**

[6M]

- i. Describe the ultrastructure of chloroplast.  
ii. Write a note on polymorphism of lysosome.

**Q. IV] 1.(A) Explain the following : (Any One)**

[2M]

- i. Define Heterotrophs and Autotrophs.  
ii. Name the compounds present in early prebiotic atmosphere.

**1. (B) Answer of the following: (Any Three)**

[3M]

i.	Time taken by light from a star to reach Earth	a.	Louis Pasture
ii.	First human to step on the Moon.	b.	Mitochondria
iii.	ATP generation	c.	2.5 billion years
iv.	Contains digestive enzymes	d.	Light year
v.	Proved Spontaneous Generation Wrong	e.	Lysosomes
vi.	Earth was formed how many years ago?	f.	N. Armstrong
		g.	5.5 years
		h.	3.5 years