

1. All the questions are compulsory.  
2. Draw diagram wherever necessary.

I. Fill in the blanks (ANY TWO)

1. The coloured plastids are said to be \_\_\_\_\_ (2)
2. \_\_\_\_\_ polypeptide is required for the development of sympathetic neurons.
3. Leucoplast is \_\_\_\_\_ plastid.

II. Match the columns (ANY THREE)

- | (A)   | (B)              |
|---|------------------|
| 1. ATP formation.                                     | a. Chloroplast.  |
| 2. Nucleosome.  | b. Mitochondria. |
| 3. Thylakoids.  | c. Interphase.   |
| 4. G <sub>1</sub> , S <sub>1</sub> and G <sub>2</sub> | d. Linker DNA.   |

B) Explain (ANY TWO)

1. Cell cycle in brief. (10)
2. Molecular organisation of Thylakoids.
3. Biological significance of DNA in a cell.

2. A) I. Explain the term (ANY TWO)

1. Triacylglycerol. (5)
2. Myoglobin.
3. Active site.

II. Glycerol  $\xrightarrow{E}$  Glycerol 3-phosphate - Identify E ?

B) Answer the following (ANY TWO)

1. Write a short note on storage lipids and steroids. (10)
2. Give the classification of enzymes.
3. Describe phospholipids and complex lipids ?

3. A) Name the following (ANY FIVE)

1. Two examples of diseases which can be prevented by Natural active acquired immunity. (5)
2. Sera that contain high level of specific Antibody taken from a patient recovered from infectious diseases.
3. Two examples of diseases which can be prevented by Artificial Active acquired immunity.
4. Immunity that is for infections which are localised or operative at the site of primary entry of Pathogen.
5. Immunity that is overall at community level and is relevant in the control of epidemic diseases.
6. A substance that is basically nonimmunogenic but become immunogenic on combining with a larger carries molecule.
7. A substance that stimulate the production of antibody.

VCD-070312 - F.Y. B.Sc.

Q.3  
(B)

Explain (ANY TWO)

1. Size, chemical nature, foreignness and Antigenic specificity which determines Antigenicity of Antigen.
2. Local Immunity and Herd Immunity with examples.
3. Classification of antigens depending on their ability to induce antibody formation.

Q.4.

Write a short note on (ANY THREE)

1. Nucleosome.
2. Biological Significance of DNA.
3. Enzymes.
4. Bacterial and Viral Vaccines.
5. Structure of Antibody.

-X-X-X-X-