

05/05/2015

[Additional Exam]

VCD- / / BIOTECHNOLOGY-I, S.Y.B.SC. SEM IV EXAM MARKS 75 2^{1/2} HRS (70)

- All questions are compulsory.
- Draw diagram wherever necessary

Q.I (A) Explain the following terms (any two)

(04)

1. Latent period
2. Capsid
3. Plus strand RNA virus
4. Protomers

Q.I (B) Fill in the blanks (any four)

(04)

1. The form of virus which remains integrated into the host chromosome is called a _____.
2. Viruses that lack envelope are called _____ viruses.
3. _____ Hormone is secreted by the islets of Langerhans of pancreas which catabolizes glucose in blood.
4. Hib vaccine is used for organism _____.
5. HIV uses RNA as template to make DNA employing a unique enzyme called _____.
6. Bacteriophages that can follow either pathway – lytic or lysogenic are called _____ phages.
7. In _____ polio vaccine in which attenuated forms of the virus are employed.
8. In case of Influenza virus genome is segmented into _____ linear single – stranded RNA molecules.

Q.I (C) Discuss (any two) of the following.

(12)

1. Preparation of TAB vaccine along with its variants.
2. Human growth hormone production with reference to application of biotechnology in medical science
3. Structure of viruses in general.
4. Methods of viral enumeration.

Q.II (A) Name the following (any two)

(04)

1. Microorganisms which fix nitrogen by living in the roots of legumes and other plants.
2. Transformation of nitrates to gaseous nitrogen accomplished by microorganisms in a series of biochemical reactions.
3. Final treatment of sewage which includes usage of different chemicals and disinfectants.
4. Sewerage system which carry off domestic and industrial water.
5. Measure of oxygen consumed during the oxidation of the oxidisable organic matter by a strong oxidizing agent.
6. A dark colored amorphous substance which improves the texture and structure of soil.
7. Enzyme complex involved in nitrogen fixation which is sensitive to oxygen.
8. Film of microorganisms formed on the filtering medium of the trickling filter tank.

Q.II (B) Explain the following terms (any two)

(04)

1. Commensalism
2. Rhizosphere
3. BOD
4. Nitrification

Q.II (C) Give an brief account on (any two) of the following

(10)

1. Physical characteristics of soil

Contd/...2