V P & R P T P Science College
B.Sc. FIRST SEMESTER
Core Course Biology
CELL BIOLOGY AND BIODIVERSITY US01CBIO21 (T)
UNIT 1
Cell and cell organelles

Multiple Choice Questions:

1. **What type of cell are bacteria?**
   A, plant cell B, plant cell C, Eukaryotic cell D, Prokaryotic cell
2. **Gram +ve and –ve bacteria are identify by their**
   A, Cell wall B, plasma membrane C, flagella D cilia
3. **Generally the Golgi body in plant cells are known as**
   A, Microsomes B, Dictyosomes C, Ribosome D, Paroxysomes
4. **Which of the following not found in plant cell generally?**
   A, Nucleus B, Cell wall C, centriole D, vacuole
5. **Phospholipids found in the membrane of**
   A, Plasma B, Mitochondria C, ER D, All
6. **E R which related with Protein Synthesis**
   A, Smooth B, Rough C, Free D, Attached
7. **Thylakoid is a part of**
   A, Granum B, Clorophill C, Vacoule D, Starch
8. **Spermatozoa are formed through**
   A, Mitosis B, Fission C, Meiosis D, budding
9. **Cell cycle having phases like**
   A. G1 B, S C, G2 D, All
10. **Normally Giant chromosomes found in**
    A, pituitary B, Muscle C, Salivary D, Heart

Short Questions:

1. **Differentiate Prokaryotic and Eukaryotic cells**
2. **Draw and write about cell wall of bacteria**
3. **Labeled diagram of animal cell**
4. **Differentiate Animal and Plant cell**
5. **Write about membrane Lipids**
6. **Write about Nucleolus**
7. **Types of Ribosome including Organelles ribosome**
8. **Functions of Lysosome**
9. **Write about Transport vesicle**
10. **What is carbon fixation in plant?**
11. **Write the event takes place in G1 Phase of cell cycle**

Long Questions:

1. **Explain Giant Chromosomes**
2. **Describe ER and its functions**
3. **Describe Nucleus**
4. **Structure and functions of Golgi complex**
5. **Singer Nicholson Model of Plasma membrane and its functions**

6. **Explain cell cycle in detail**
7. **The Starch synthetic organelle of plant and its working**
8. **Describe the types of Ribosome and protein synthesis**
9. **Describe mitochondria ant its functions**

V.P.&R.P.T.P.Science College(Unit-2-Biomolecules)

(1)Which one of the following is a malt sugar?

(a)Lactose(ii)Maltose(iii)Dihydroxy acetone(iv)None of these

(2)Which one of the following is a reducing sugar?

(a)Lactose(ii)Maltose(iii)Glucose(iv)All of these

(3)Which one of the following is a MUFA?

(i)Oleic acid(ii)Linoleic acid(iii)Acetic acid(iv)None of these

(4)How many double bond are present in Oleic acid?

(a)1(ii)2(iii)3(iv)4

(5)Wax is a :

(a) Lipid (ii)Protein (iii)Hormone (iv)All of these

(6)Protein is a polymer of :

(a)Aminoacids(ii)Fattyacids (iii)Nucleotides (iv)All of thes

(7)What is incorrect with reference to monosaccharides?

(i)Sweet in taste (ii)Soluble in water(iii)Can pass through cell membrane(iv)Can be hydrolysed

(8)The .....sugar occurs as part of the structure of DNA.

(i)Deoxyribose (ii)Ribose (iii)Ribulose (iv)More than one option

(9)In animals, the extra glucose is stored in the form of:

(i)Fat (ii)Starch (iii)Glycogen (iv)Innulin

(10)Main constituents of protein are:

(i)C,H,O,N (ii) C,H,O,N,S (iii)C,H,O,N,S,P(iii)C,H,O,N,S,K

(11)Haemoglobin is an example of .....protein in which .....polypeptide chains are present.

(i)Primary,one (ii) secondary,two (iii) Tertiary,three (iv) Quaternary,four

(12)Which one of the followings involved in the journey of DNA?

(i)Erwin Chargaff (ii)Rosalind Franklin(iii)Watson and crick (iv) All of these

Que-2

1. **What is ennantiomer?Give examples.**
2. **Write in brief on chargaff's rule.**
3. **What is essential aminoacids?**
4. **What is PUFA?**
5. **Write structure of oleic acid.**
6. **Write structure of a sugar found In milk.**
7. **Give examples of N-bases.**
8. **Give example of aromatic aminoacids.**
9. **Write in brief about types of RNA.**

Que-3Write in detail about classification of carbohydrates/lipids.

Que-4Classify aminoacids on the basis of R group.

Que-5What are nucleotides?Write nucleotides of DNA and RNA.

Que-6Write a note on essential fattyacids.

Que-6 Write in detail about biological importance of biomolecules or carbohydrates/proteins/lipids/Nucleicacids.

US01CBIO21 UNIT-3

Q-1 Multiple Choice Questions.

(1)Which of the following is true of viruses?
(a)multiply only in the host-tissue (b)behave as if they are plants
(c)are made up of proteins only (d)occur only inside the bacteria

(2)Organisms without specific shape are_____.
(a)mycoplasmas (b)bacteria (c)viruses (d)cyanobacteria

(3)Circular DNA is seen in_____.
(a)blue-green algae (b)fungus (c)bacteria (d)viruses

(4)Iodine is obtained from_____.
(a)Laminaria (b)Polysiphonia (c)Porphyra (d)Chlorella

(5)Rhizopus is_____.
(a)autotrophic (b)symbiotic (c)saprophytic (d)parasitic

(6)Yeast is an important source of_____.
(a)vitamin-c (b)riboflavin (c)sugars (d)proteins

(7)Venter is the part of_____.
(a)sporogonium (b)sporangium (c)antheridium (d)archegonium

(8)Rachis of ferns is covered by_____.
(a)hairs (b)scales (c)ramenta (d)trichomes

(9)Transfusion tissue helps in_____.
(a)photosynthesis (b)lateral conduction
(c)mechanical support (d) none of these

(10)Dimorphic roots are found in_____.
(a)Cycas (b)Pinus (c)Gnetum (d)Ephedra

Q-2 Short answer questions.
(i)Write non-living properties of viruses.
(ii)Describe-mycoplasma structure.
(iii)Write about the thallus structure of Volvox.
(iv)Describe asexual reproduction in fungi.
(v)What is alternation of generation?
(vi)Explain-Role of algae as food.
(vii)Describe the structure of fern sporangium.

Q-3Long answer questions.
(i)Describe the lytic cycle in viruses.
(ii)Describe Bacteriophage.
(iii)Write on:Transformation in Bacteria.
(iv)Describe male and female strobilus of Cycas.
(v)Write a note on:Economic importance of algae.

QUESTION BANK FOR SEMESTER – I, US01CBIO21, JUNE 2018

UNIT: 4, GENERAL ACCOUNT OF INVERTEBRATES.

MULTIPLE CHOICE QUESTIONS:

1. Mode of nutrition in Amoeba is

(a) Holophytic (b) Holozoic (c) Mixotrophic (d) Saprophytic

2. When the prey is very active, Amoeba ingest it by

(a) Invagination (b) Import (c) circumfluence (d) Circumvallation

3. At binary fission, the Euglena is divided by which plane?

(a) Transverse (b) Longitudinal (c) Oblique (d) Any plane

4. Malaria is transmitted by the

(a) Female Anopheles (b) Male Anopheles (c) Male Culex (d) Female Culex

5. Elephantasis is caused by

(a) Tape-worm (b) Plasmodium(c) Filarial worm (d) E. hystolytica

6. Saliva of Leeches contain an anticoagulant called

(a) Heparin (b) Hirudin (c) Histamine (d) Haemoglobin

7. Which one of the followings, highly consumed as food by Man?

(a) Chilopodes (b) Arachnids (c) Insects (d) Crustaceans

8. Gradual metamorphosis occurs in

(a) Silver fish (b) Dragon fly (c) Grasshoppers (d) Mosquito

9. Which molluscan animal secret brown pigment from ink-sac?

(a) Nautilus (b) Sepia (c) Murex (d) Unio

10. Water vascular system is found in which of the following animals?

(a) Earthworm (b) Prawn (c) Pila (d) Star fish

ANSWER IN SHORT:

1. Write about general characters of phylum Coelentrata.

2. Name the types of nutrition in Protozoa.

3. Write about prevention and control of Entamoeba histolytica.

4. Draw and labeled the diagram of Taenia solium.

5. Write about economic importance of Earthworm.

6. Comment upon the parental care among social insects.

7. **Name the productive insects with their products.**

DISCRIPTIVE QUESTIONS:

1. **Describe the Holozoic nutrition in Protozoa.**
2. **Write a note on asexual reproduction in Protozoa.**
3. **Describe the life cycle of Plasmodium.**
4. **Explain the life cycle of Filarial worm.**
5. **Explain the polymorphism in Insects.**
6. **Write an essay on economic importance Insecta.**
7. **Write a note on economic importance of Molluscs.**
8. **Describe the water vascular system in Asteroidea.**
9. **Describe the types of metamorphosis and hormonal control in Insects.**