

## MODEL QUESTIONS

### Unit – I

- Q.1. Which of the following is the fusion product of isogametangialcopulation?
- (a) Oospore (c) Zygosporangium  
(b) Ascus (d) Endospore
2. Which one is used to obtain single cell protein?
- (a) *Nostoc* (c) *Chlamydomonas*  
(b) *Spirogyra* (d) *Spirulina*
3. Name the organism that becomes associated with *Anabaena* for nitrogen fixation -
- (a) *Selaginella* (c) *Nostoc*  
(b) *Azolla* (d) *Pinus*
4. Which one of the following has always a parasitic mode of life?
- (a) Bacteria (c) Virus  
(b) Algae (d) Lichen
5. Diplobiontic life cycle is found in
- (a) *Saccharomyces cerevisiae*  
(b) *Candida utilis*  
(c) *Schizosaccharomyces octosporus*  
(d) *Saccharomyces ludwigii*.
6. Which part of the mushroom is edible?
- (a) Mycelium  
(b) Basidiocarp  
(c) Basidiospore  
(d) Hyphae
7. *Phytophthora infestans* parasitizes potato and causes a disease called
- (a) Early blight  
(b) Mosaic disease  
(c) Late blight  
(d) Rot disease
8. The time interval between incorporation of pathogen and appearance of the disease is known as
- (a) Latent phase

- (b) Incubation period
  - (c) Lytic phase
  - (d) Virulent phase
9. Name the bacterium used as Bioweapon :
- (a) *Escherichia coli*
  - (b) *Bacillus subtilis*
  - (c) *Pseudomonas putida*
  - (d) *Bacillus anthracis*
10. In which process does genetic recombination of bacteria occur?
- (a) Fission
  - (b) Conjugation
  - (c) Budding
  - (d) Fragmentation

## Unit – II

- Q.1. Which of the following has only capsule in its sporophyte?
- (a) *Riccia*
  - (b) *Marchantia*
  - (c) *Anthoceros*
  - (d) *Funaria*
2. In *Anthoceros*, the archesporium is formed from
- (a) Outer layer of amphithecium
  - (b) Endothecium
  - (c) Inner eayer of amphithecium
  - (d) Amphithecium and endothecium
3. Which one is always unicellular in Bryophytes?
- (a) Rhizoids
  - (b) Scale
  - (c) Gemma
  - (d) Prothallus
4. In *selaginella*, which one is a descending organ?
- (a) Trabeculae
  - (b) Rhizophore
  - (c) Sporopyll
  - (d) Pendant branches

5. Which is not an example of aquatic fern ?  
(a) *Marsilea*  
(b) *Azolla*  
(c) *Polypodium*  
(d) *Salvinia*
6. Which one of the following is an unrelated pair ?  
(a) *Psilotum* – protostele  
(b) *Marsilea* – sporocarp  
(c) *Selaginella* – homosporous  
(d) *Equisetum* – cone
7. What is absent in the xylem of Gymnosperms ?  
(a) Tracheids  
(b) Xylem parenchyma  
(c) Xylem fibre  
(d) Vessels
8. Which one does show circinate vernation ?  
(a) *Cycas*  
(b) *Pinus*  
(c) *Gnetum*  
(d) *Ginkgo*
9. In which of the following multiciliate sperms are observed ?  
(a) Pteridophyte  
(b) Gymnosperms  
(c) Angiosperms  
(d) Bryophytes
10. The ovule of *cycas* is  
(a) Anatropous  
(b) Orthotropous  
(c) Amphitropous  
(d) Campylotropous

### Unit-III

- Q.1. Which one of the following reproduces by modified roots ?  
(a) Potato  
(b) Banyan

- (c) Screw pine  
(d) *Asparagus*
2. Modified stem with fleshy and scaly leaves are called  
(a) Tuber  
(b) Bulb  
(c) Corm  
(d) Rhizome
3. Which one has monadelphous stamens that encloses the style ?  
(a) Cruciferae  
(b) Fabaceae  
(c) Malvaceae  
(d) Poaceae
4. Which one does have marginal placentation ?  
(a) Malvaceae  
(b) Fabaceae  
(c) Cruciferae  
(d) Poaceae
5. Which one of the following is the edible part of Poaceae ?  
(a) Cotyledon  
(b) Husk  
(c) Embryo  
(d) Endosperm
6. In which type of inflorescence the fleshy receptacle is seen ?  
(a) Verticillaster  
(b) Hypanthodium  
(c) Spikelet  
(d) Umbel
7. Secondary cortex is also known as  
(a) Phelloderm  
(b) Phellem  
(c) Phellogen  
(d) Bark
8. Interfascicular cambium develops from  
(a) Endodermis  
(b) Xylem Parenchyma

- (c) Pericycle
- (d) Medullary rays
- 9. Endosperm is absent in the seed of
  - (a) Orchids
  - (b) Gram
  - (c) Maize
  - (d) Castor
- 10. Seeds possess spongy aril in
  - (a) *Eichhornia*
  - (b) *Sagittaria*
  - (c) *Nymphaea*
  - (d) *Potamogeton*

#### Unit – IV

- Q.1. Sunken stomata are seen in
  - (a) C<sub>3</sub> plants
  - (b) CAM plants
  - (c) Cryptogams
  - (d) Insectivorous plants
- 2. Which one has the highest energy content ?
  - (a) Fat
  - (b) Carbohydrate
  - (c) Protein
  - (d) Creatine phosphate
- 3. What is the function of pyruvate decarboxylase ?
  - (a) Oxidation
  - (b) Decarboxylation
  - (c) Oxidation and decarboxylation
  - (d) Reduction
- 4. Which one is not optically active ?
  - (a) Alanine
  - (b) Valine
  - (c) Glycine
  - (d) Leucine

5. The site of photorespiration is  
(a) Peroxisome, Mitochondria, Chloroplast  
(b) Cytoplasm, Mitochondria  
(c) Mitochondria  
(d) Chloroplast
6. Cytochrome oxidase is a/an  
(a) Exo-enzyme  
(b) Endo-enzyme  
(c) Coenzyme  
(d) Activator
7. Treatment of seed at low temperature under moist condition to break its dormancy is called  
(a) Chelation  
(b) Scarification  
(c) Vernalization  
(d) None of the above
8. Carbon monoxide is a pollutant because it reacts with  
(a) Haemoglobin  
(b) Glucose  
(c) Protein  
(d) Nervous system
9. Ephemerals may be included in which of the following groups ?  
(a) Drought escaping  
(b) Drought enduring  
(c) Drought resisting  
(d) Drought sustaining
10. The plants which grow in dry and saline soil are called  
(a) Xerophyte  
(b) Hydrophyte  
(c) Halophyte  
(d) Heliophyte

## Unit – V

- Q.1. Ribosomal RNA (rRNA) is synthesized in  
(A)Nucleolus

- (B) Ribosome
  - (C) Cytoplasm
  - (D) Nucleosome
2. The genetic material of HIV is
- (A) ss RNA
  - (B) ds RNA
  - (C) ss DNA
  - (D) ds DNA
3. The first hormone prepared by genetic engineering is
- (A) Oxytocin
  - (B) Adrenalin
  - (C) Insulin
  - (D) Somatotropin
4. *Agrobacterium tumefaciens* produces the crown-gall disease in dicot species due to its
- (A) Reporter gene
  - (B) Ti Plasmid
  - (C) Ri Plasmid
  - (D) Cosmid
5. Which type of mutation is transmitted to progeny ?
- A. Mutation occurring in germline
  - B. Mutation occurring in somatic cells
  - C. Both germline and somatic cell mutation
  - D. None of the above
6. Restoration of the wild type phenotype in a mutant organism may occur by
- A. Somatic Mutation
  - B. Germline Mutation
  - C. Back Mutation
  - D. Both somatic and germline mutation
7. Evidence demonstrating that DNA is the genetic material in Bacteriophage T<sub>2</sub> was given by,
- A. Hershey and Chase
  - B. F. Griffith
  - C. Frankel -Conrat
  - D. Watson & Crick

8. A technology which has immense role in solving problems relating to disputed Parentage is
- A. PCR
  - B. Monoclonal antibody production
  - C. Recombinant DNA (rDNA) technology
  - D. DNA Fingerprinting
9. The DNA molecules in the chromosomes of almost all organisms from the smallest virus to the largest eukaryotic organism exhibit
- A. Positive supercoiling
  - B. Negative supercoiling
  - C. Both positive and negative supercoiling
  - D. Uncoiling
10. RNA and proteins are formed in
- A. G<sub>1</sub> Phase
  - B. G<sub>2</sub> Phase
  - C. S-Phase
  - D. M-Phase