

## EXEMPLAR PROBLEMS IN BIOLOGY - CLASS XII

(Corrections in the questions)

### Chapter 1

#### Reproduction in Organisms

##### Multiple Choice Questions

3. Asexual method of reproduction by binary fission is common to which of the following?
- Some eukaryotes
  - All eukaryotes
  - Some prokaryotes
  - All prokaryotes

##### Options

- i and ii
- ii and iii
- i and iii
- iii and iv

11.

Choose the correct answer from the options given below:

- |                   |                   |
|-------------------|-------------------|
| a. i, ii and iii; | b. i, iii and iv  |
| c. i, ii and iv   | d. ii, iii and iv |

### Chapter 3

#### Human Reproduction

##### Multiple Choice Questions

1.

- c. Polyspermy in mammals is prevented by the chemical changes in the egg surface

2. Identify the correct statement from the following:

- High levels of estrogen triggers the ovulatory surge.
- Oogonial cells start to proliferate and give rise to functional ova in regular cycles from puberty onwards.
- Sperms released from seminiferous tubules are highly motile.
- Progesterone level is high during the post ovulatory phase of menstrual cycle.

### Chapter 5

#### Principle of Inheritance and Variation

##### Multiple Choice Questions

15. It is said that Mendel proposed that the factor controlling any character is discrete and independent. His proposition was based on the
- results of  $F_3$  generation of a cross.
  - observations that the offspring of a cross made between the plants having two contrasting characters shows only one character without any blending.
  - self pollination of  $F_1$  offsprings.
  - cross pollination of  $F_1$  generation with recessive parent.

## Chapter 6

### Molecular Basis of Inheritance

#### Multiple Choice Questions

24. The RNA polymerase holoenzyme transcribes
- the promoter, structural gene and the terminator region.
  - the promoter and the terminator region.
  - the structural gene and the terminator region.
  - the structural gene only.

## Chapter 7

### Evolution

#### Multiple Choice Questions

- 15.
- Chimpanzee

## Chapter 8

### Human Health and Diseases

#### Multiple Choice Questions

5. The sporozoites that cause infection, when a female *Anopheles* mosquito bites a person, are formed in
- liver of the person
  - RBCs of mosquito
  - salivary glands of mosquito
  - intestine of mosquito
- 11.
- the ability to differentiate pathogens or foreign molecules from self cells increases.
19. Which of the following is not a lymphoid tissue?
- Spleen
  - Tonsils
  - Pancreas
  - Thymus
21. Haemozoin is a
- precursor of hemoglobin
  - toxin released from *Streptococcus* infected cells
  - toxin released from *Plasmodium* infected cells
  - toxin released from *Haemophilus* infected cells

## Chapter 9

### Strategies for Enhancement in Food

#### Production

#### Multiple Choice Questions

- 1.
- Relation of heterogenous populations to its environment.

- 13.
- |              |               |
|--------------|---------------|
| a. i and iii | b. i and ii   |
| c. i and iv  | d. ii and iii |
- 16.
- d. aromatic amino acids
- 20.
- a. Bamboo
23. The agriculture sector of India employs about
- |                                  |
|----------------------------------|
| a. 50 per cent of the population |
| b. 70 per cent of the population |
| c. 30 per cent of the population |
| d. 60 per cent of the population |

## Chapter 10

### Microbes in Human Welfare

#### Multiple Choice Questions

- 2.
- |                        |
|------------------------|
| a. anaerobic digesters |
| b. floc                |
19. Delete the question

## Chapter 11

### Biotechnology: Principles and Processes

#### Multiple Choice Questions

6. Which of the following is not required in the preparation of a recombinant DNA molecules?
- |                             |
|-----------------------------|
| a. Restriction endonuclease |
| b. DNA ligase               |
| c. DNA fragments            |
| d. <i>E. coli</i>           |
14. Which of the following is not a source of restriction endonuclease?
- |                                      |
|--------------------------------------|
| a. <i>Haemophilus influenza</i>      |
| b. <i>Escherichia coli</i>           |
| c. <i>Entamoeba coli</i>             |
| d. <i>Bacillus amyloliquifaciens</i> |

## Chapter 12

### Biotechnology and its Applications

#### Multiple Choice Questions

7. The site of production of ADA in the body is
- |                 |
|-----------------|
| a. Erythrocytes |
| b. Lymphocytes  |

- c. Blood plasma
- d. Osteocytes

15. Silencing of a gene could be achieved through the use of
- a. RNAi only
  - b. antisense RNA only
  - c. both RNAi and antisense RNA
  - d. none of the above

## **Chapter 15**

### **Biodiversity and Conservation**

#### **Multiple Choice Questions**

5. Which of the following is not a feature of biodiversity hotspots?
- a. Large number of species
  - b. Abundance of endemic species
  - c. Mostly located in the polar regions
  - d. Mostly located in the tropics
17. Which of the following group exhibit more species diversity?
- a. Gymnosperms
  - b. Algae
  - c. Bryophytes
  - d. Fungi

## **Chapter 17**

### **Answers to Multiple-choice Questions (Corrections in the answers)**

#### **Chapter 3: Human Reproduction**

2-d

#### **Chapter 5: Principle of Inheritance and Variation**

3-a; 16-d

#### **Chapter 8: Human Health and Diseases**

5-d

#### **Chapter 9: Strategies in Enhancement of Food Production**

15-a

#### **Chapter 10: Microbes in Human Welfare**

2-a

#### **Chapter 13: Organisms and Populations**

5-d; 17-b; 20-a

**Chapter 15: Biodiversity and Conservation**

13-c

**Chapter 16: Environmental Issues**

10-a

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