

# Preliminary Examination (2021-2022)

Std. - XII

Time - 3 hrs.

Sub. - Biology

Marks - 70

## Instructions:

- 1) Question paper consists of 31 questions divided into 4 sections, namely A, B, C, D  
Section A : Que. 1 contains 10 multiple choice type questions carrying one mark each. Que. 2 contains 8 very short answer type questions carrying one mark each  
Section B : Que. no. 3 to 14 are short answer type I questions carrying two marks each. Attempt any eight questions.  
Section C : Que. 15 to 26 are short answer type II questions carrying three marks each. Attempt any eight questions.  
Section D : Que. 27 to 31 are long answer type questions carrying four marks each. Attempt any three questions
- 2) Figures to the right indicates full marks
- 3) Start writing answer of each section on new page
- 4) For each MCQ correct answer must be written along with its alphabet
- 5) Evaluation of each MCQ would be done for the first attempt only

## Section A

Q.1 Select and write correct answer along with its alphabet. (10)

- 1) In ovule meiosis occurs in .....  
a) Integument                      b) nucellus  
c) megaspore                      d) megaspore mother cell
- 2) Capacitation of sperm occur in.....  
a) Vas deferens                      b) vas efferens  
c) vagina                      d) ejaculatory duct
- 3) Which of the following is not X linked disorder ?  
a) haemophilia                      b) night blindness  
c) hypertrichosis                      d) myopia
- 4) Lemur and tarsiers belongs to.....  
a) prosimi    b) hyalobatidae    c) pongidae    d) homonidae
- 5) Water absorption takes place through.....  
a) lateral root    b) root cap    c) root hair    d) primary root
- 6) Which of the following hormone replaces vernalization ?  
a) auxin    b) cytokinin    c) gibberellin    d) ethylene

(2) XII Biology

- 7) Decrease in the number of RBCs is called as....  
a) leucopoiesis b) leucopenia c) leucocytosis d) leukemia
- 8) ..... is in direct contact of human brain  
a) cranium b) duramatter c) arachnoid d) pia matter
- 9) The molecular scissors of DNA are .....  
a) ligase b) polymerase c) endonuclease d) transcriptase
- 10) Sunken stomata is the characteristic feature of.....  
a) hydrophyte b) merophyte c) xerophytes d) halophyte

Q.2 Answer the following questions.

(8)

- 1) Give the functions of acrosome
- 2) What is bacteriophage?
- 3) What is peculiarity of epiphytic plant?
- 4) What is denitrification?
- 5) What are the effects of hypertension?
- 6) Which cells stimulate B cells to form antibodies?
- 7) What are euryhaline organisms?
- 8) What are ecological pyramids?

Section B

Attempt any eight of the following questions

(16)

- Q.3 Sketch and label V.S. of anatropous ovule
- Q.4 Write adaptations in desert animals
- Q.5 Explain : Law of segregation is universally acceptable
- Q.6 Sketch and label semi conservative replication of DNA
- Q.7 Give salient features of Homo erectus
- Q.8 Give reason water is best transporting medium
- Q.9 Why human heart is called myogenic and autorhythmic
- Q.10 Give the functions of testosterone
- Q.11 Give preventive measures for HIV infection
- Q.12 Enlist applications of tissue culture
- Q.13 Match the following

Group A	Group B	Answer
Mechanical means	Saheli	
Physiological means	Jellies	
Chemical device	Vasectomy	
Permanent method	Diaphragm	

Q.14 What are the different components of ecosystem

## (3) XII Biology

Section C

Attempt any eight of the following questions

(24)

Q.15 What is colostrum ?

Q.16 Describe co-dominance with suitable example

Q.17 Write note on HGP

Q.18 Explain mechanism of sugar transport through phloem

Q.19 Sketch and label ventral view of human heart

Q.20 Describe defense mechanism in plant against herbivores

Q.21 Describe structure of antibody

Q.22 Write in brief production process of biogas

Q.23 Fill in the blanks

Substance	Benefit	Crop
Provitamin A	.....	Rice
Fructans	Low calories	.....
.....	Antioxidants	Canola
Flavonoids	.....	Tomato
.....	Iron fortification	.....

Q.24 Sketch and label sectional view of human eye

Q.25 Give an account of primary productivity

Q.26 Why global warming is called green house effect?

Section D

Attempt any three of the following questions

(12)

Que 27 Complete the table

Chemical	Category	Effect	Example
NAA	.....	Flowering	.....
.....	Gibberellin	.....	Tomato
Kinetin	.....	Callus formation	.....
ABA	Abscisic acid	.....	.....

Q.28 Explain Darwin's theory of natural selection

Q.29 What is hydroponics? Give its significance

Q.30 Explain gene therapy

Q.31 What are the effects of air pollution?