## MODEL QUESTION PAPER

#### **BIOLOGY**

### XII – STANDARD (STATE BOARD)

Candidate should answer Part-I (Bio Botany) and Part II (Bio zoology) in separate answer books

PART-I (Bio-Botany)

Maximum Marks: 35

#### **Section I**

## All Questions are compulsory.

 $8 \times 1 = 8$ 

1	The ratio of recessive epistasis is	1
	a) 9:3:4 b) 9:3:3:1 c) 9:6:1 d) 12:3:1	
2	Ethidium bromide is used in which technique	1
	a) Polymerised chain reaction b) southern bloating technique	
	c) Agarose gel electrophoresis d) western bloating technique	
3	Family of Nilavembu	1
	(a) Acanthaceae (b) Euphorbiaceae (c) Lamiaceae (d) Vitaceae	
4	Parthenocarpic fruits lack	1
	(a) Mesocarp (b) Seed (c) Endocarp (d) Epicarp	
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5	The first scientist who used the term heterosis	1
	(a) Muller and stadler (b) Cotton Mather (c) G.H.Shull (d) William S Gaud	
6	Virus free plants produced from	1
	(a) Meristem culture (b) Cell suspension culture (c)Organ culture (d) Protoplast culture	
7	In agroforestry, the major species cultivated for commercial use is	1
	(a) Erythirina, Albizzia (b)Malaivembu, Kadambu (c) Sesbania, Acacia	
	(b) (d) Acacia, Azardirachta indica	
8	Ozone layer present in	1
	(a)Troposphere (b)Stratosphere (c) Thermosphere (d) Exosphere	
	(a) Proposphere (b) Sumosphere (c) Thermosphere (d) Exosphere	

#### Section-II

#### Answer any four questions. $4 \times 2 = 8$ Define Melitophily 9 2 2 10 What is the basic concept of Organic farming? What are all the chemicals used in gene transfer? 2 11 Define Co-evolution 2 12 13 Distinguish primary and secondary introduction 2 What is Cybrid? 2 14 Section-III Answer any three questions. Question No. 19 is compulsory $3 \times 3 = 9$ Write few points about the functions of tapetum 15 3 Differentiate between niche and habitat 16 17 Draw and label the structure of ovule 3 Mention the name of man-made cereal and how it is formed? 3 18 Write a brief note on Cryopreservation 19 3 Section-IV Answer all the questions: $2 \times 5 = 10$ a.) Describe about parthenocarpy and write their significance 20 5 Or b.) Brief about dominant epistasis with example a) Explain different types of succession 21 5

Or

b) Define gene mapping and write its uses

# PART II ( BIO - ZOOLOGY) Maximum Marks: 35

## SECTION I

# All Questions are compulsory.

 $8 \times 1 = 8$ 

1	Which one of the following groups includes sexually transmitted diseases caused by bacteria	
	only?	
	(a) Syphilis, gonorrhoea and candidiasis (b) Syphilis, chlamydiasis and gonorrhoea	
	(c) Syphilis, gonorrhoea and trichomoniasis (d) Syphilis, trichomoniasis and pediculosis	
2	ABO blood group in man is controlled by	1
	(a) Multiple alleles (b) Lethal genes	
	(c) Sex linked genes (d) Y-linked genes	
3	Hershey and Chase experiment with bacteriophage showed that	1
	(a) Protein gets into the bacterial cells (b) DNA is the genetic material	
	(c) DNA contains radioactive sulphur (d) Viruses undergo transformation	
4	Modern man belongs to which period?	1
	(a) Quaternary (b) Cretaceous	
	(c) Silurian (d) Cambrian	
5	Allergy involves	1
	(a) IgE (b) IgG	
	(c) IgA (d) IgM	
6	Recombinant Factor VIII is produced in the of the Chinese Hamster.	1
	(a) Liver cells (b) blood cells	
	(c) ovarian cells (d) brain cells	
7	Fusion of young individuals produced immediately after the mitotic division of adult parent cell	1
	is called	
	(a) Merogamy (b) Anisogamy	
	(c) Hologamy (d) Paedogamy	

8	Assertion (A): Snake is a stenotherm.		1
Reason (R): Organism can tolerate narrow temperature fluctuations.			
	(a) Both A and R are correct R explain A (b) A is con	rrect R is incorrect	
	(c) A and R are correct, R doesn't explains A (d) Both A and	d R are incorrect.	
	SECTION-II		
	Answer any four questions.	$4 \times 2 = 8$	
9	Mention the differences between spermiogenesis and spermatogenesis.	<b>A</b>	2
10	Draw and label a gemmule of sponge.		2
11	State Wiener's Hypothesis on Rh-factor.	<b>3</b>	2
12	Why t-RNA is called an adapter molecule?		2
13	Write notes on (a) Eutrophication (b) Algal Bloom.		2
14	Why Red list is prepared periodically?		2
	SECTION-III		
	Answer any three questions	$3 \times 3 = 9$	
15	Explain Foetal-ejection reflex.		3
16	Role of Y- chromosome is crucial for maleness – Justify.		3
17	State immunological surveillance theory.		3
18	Write a short note on Pathaneer.		3
19	Elucidate the methodology of ELISA test.		3
	SECTION -IV		
	Answer all the <b>questions</b> .	$2 \times 5 = 10$	
20	(a) What are IUD's? Explain its way of functioning. Also describe their types.		5
	(b)Explain how Urey – Miller's experiment supports the origin of life?		
21	(a) Discuss any two Allosomal abnormalities in human beings.		5
	(b) Explain in detail about various types of extinctions.		