Higher Secondary Second Year

BIOLOGY

Model Question Paper – 3

Bio-Botany

Section- I

Time: 2.30 Hrs Marks: 70

I Answer all the questions

8x1 = 8

Choose the most suitable answer:

1	Origin of species had given stimulus for the creation of which type of classification	
	a) Sexual System b) Natural System	
	c) Phylogenetic System d) Artificial System	
2	The inflorescence Euphorbia is	
	a) Racemose b) Panicle	
	c) Catkin d) Cyathium	
3	Seed coat of Crotalaria contains is	
	a) Brachy sclerides b) Osteoscleriedes	
	c) Stone cells d) Macrosclerides	
4	Which radiation induce mutation in seeds?	
	a) X-rays b) Beta rays	
	c) UV rays d) Electro magnetic radiation	
5	The ability of the callus to develop into shoot or root is called as	
	a) Totipotency b) Dedifferentiation	
	c) Redifferentitation d) Differentiation	
6	Removal Of water molecule from the substrate is called	
	a) Enolation b) Phosphorylation	
	c) decarboxylation d) Oxidation	
7	Bordeaux mixture is a	
	a) Insecticide b) Bio pesticides	
	c) Fungicide d) Weedicide	
7	Bordeaux mixture is a a) Insecticide b) Bio pesticides	

8	Plants require specific period of light and darkness for flowering It is known as	
	a) Photoperiod b) Critical period	
	c) Vernalization d) Photo receptor	

Section-II

4 X 2 = 8

Write any four of the following

9	Define tautonym Give an example	
10	Draw diagram for brachy sclereids and label parts	
11	What is monocarpic perennial Give an Example?	
12	Mention any Two media of plant tissue culture	
13	What is Photolysis of Water?	
14	What is heterosis	

Section- III

 $3 \times 3 = 9$

Write any Three of the following in which question no. 18 is comppulsory

15	Name any three fibre plants of malvacea	
16	Distinguish the anatomy of dicot roots from monocot roots	
17	State the functions of DNA	
18	Write any three salient features of ICBN	
19	Write shortnotes on insectivorous plant	

Section- IV 2x5=10

Give the answer for the following questions

20	Describe Datura metal in botanical terms
	Or
	Describe the internal structure of a dicot leaf
21	Write an essay about the basic techniques of plant tissue culture
	Or
	Write about calvin cycle(Flow Chart only)

Bio Zoology

Section- I

I Answer all the questions

8x1=8

Choose the most suitable answer from the given four alternatives

1	Choose the number of correct statements from the following:	
	a) Melanin a non-haemoglobin pigment secreted by melanocytes	
	b) Melanocyte possesses a non-essential aminoacid called tyrosine	
	i) a only ii) b only iii) both a&b iv) None	
2	Choose the incorrect pair among the following	
	a) Chondrogenesis - Cartilage formation	
	b) Osteogenesis - Bone formation	
	c) Osteoblast - Bone destroying cell	
	d) Osteoclast - Bone farming cell	
	i)a ii)b iii)c iv)d	
3	An example for continuous cell line viral culture is	
	a) Bacteria b) Virus	
	c) Mycoplasma d) MAB(Mono-clonal Antibodies)	
4	The lymphoid organ that tends to atrophy after puberty is	
	a) Lymph code b) thymus c) Spleen d) Tonsil	
5	Choose the incorrect pair among the following	
	a) Plague - Yersinia	
	b) Syphilis - Treponema	
	c) Gingivitis - Trichomonad	
	d) Diarrhoea - Neisseria	
	i) a ii) b iii) c iv) d	
6	Gene bank, seed bank, Cryopreservation comes under	
	a) In-situ conservation b) Ex-situ conservation	
	c) Biosphere conservation d) Biodiversity conservation	
7	Match the fishes with their respective orders	
	<u>Fishes</u> <u>Order</u>	
	a) Catfish - i) Siluriformes	
	b) Murrels - ii) Channiformes	
	c) Tilapia - iii) Perciformers	
	d) Carps - iv) Cipriniformes	

	1) a-i, b-ii, c-iii, d-iv	2) a-iii, b-ii, c-l, d-iv
	3) a-ii, b-iii, c-l, d-iv	4) a-iv, b-ii, c-iii, d-i
8	The best example for hybrid sterility is	3
	a) Geap b) Shoat c)	Mule d) Mare

Section- II

Write any four of the following (Q.11 compulsory)

4x2=8

9	Junk food is a source of attraction among children and adults. Enumerate the reasons
	and risks associated with it.
10	What is black water fever? Why is it called so?
11	What are Hassel's corpuscles?
12	Differentiate Totipotency and pleuripotency.
13	What is Montreal protocol? What is its Significance?
14	Enumerate the parameters that can be assessed using auto analyser.

Section-III

Write any Three of the following in which question no. 18 is compulsory

3x3=9

15 Differentiate anaemia and pernicious anaemia. How is it associated with vitamin	
	deficiency?
16	Though lipids provide more energy, we rely on carbohydrate in diet-Why?
17	Enumerate the contributions of Medical Microbiology to the field of Medicine.
18 How do leucocytes react during inflammatory response?	
19	What is DNA segmenting? Why is it done?

Section- IV

20	Write an essay on the techniques associated with correcting heart-related disorder is man
	Or
	What is Renal failure? What are the reasons for renal failure? Suggest some remedial
	measures and treatments.
21	Identification of gene and its function plays an instrumental role in the field of Biology-
	Discuss
	Or
	Write a note on Neo-Lamarckism.