

Higher Secondary Second Year

BIOLOGY

Model Question Paper – 1

Time : 2.30 Hrs

Marks : 70

Bio-Botany

Section- I

I Answer all the questions

8x1 = 8

Choose the most suitable answer :

1	<p>The standard size of a herbarium sheet</p> <p>a) 41m x 29cm b) 42cm x 31cm</p> <p>c) 42cm x 29cm d) 42cm x 29cm</p>
2	<p>Bracteoles are not present in</p> <p>a) Malva sylvestris b) Pavonia odorata</p> <p>c) Abutilon d) Sida cordifolia</p>
3	<p>Primary vascular tissues arise from</p> <p>a) Protoderm b) Procambium</p> <p>c) Ground meristem d) Cortex</p>
4	<p>Lampbrush chromosomes are observed at the following stage of meiotic of in cyctes of salamander</p> <p>a) Zygotene b) Pachytene</p> <p>c) Diplotene d) Diakinensis</p>
5	<p>The two protoplasts are fused with a fusogen called</p> <p>a) Polyethylene glycol (PEG) b) Polyvinyl chloride(PVC)</p> <p>c) Polyethane glycol (PEG) d) Phosphoric ethane</p>
6	<p>The following enzyme unwinds the DNA strands during replication</p> <p>a) Polymerase b) Ligase</p> <p>c) Helicase d) Permease</p>
7	<p>Which of the following is not a C₄ plant?</p> <p>a) Maize b) Tribulus</p> <p>c) Amaranthus d) Wheat</p>
8	<p>Certain angiosperms lack chlorophyll and have mycorhizal roots</p>

a) Cuscuta	b) Drosera
c) Nepenthes	d) Monotropa

Section- II

Answer any four of the following

4 X 2 = 8

9	What is atropine?
10	What is callose?
11	Differentiate gene and genome
12	Name any four organisms used for scp production?
13	What is Photolysis of Water?
14	What is carbondioxide compensation point?

Section- III

3 X 3 = 9

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

15	Bring out the economic importance of teak
16	Differentiate Dicot root and monocot root
17	Write about the physiological effects of cytokinn?
18	Draw the structure of t-RNA?
19	Explain the significance of herbarium

Section- IV

2 X 5 = 10

Give the answer for the following questions

20	Explain hibiscus rosa-sinensis in technical terms Or Explain vascular tissue system
21	Explain calvin cycle (Flow Chart or Explanation) Or Write any essay on recombinant DNA technology

Bio Zoology

Section- I

I Answer all the questions

8x1=8

Choose the most suitable answer from the given four alternatives

1	In adults vitamin D and calcium deficiency leads to a) Rickets b) Osteomalcia d) Nyctalopia d) Keratomalacia
2	Demineralization of the bones is due to b) Less secretion of paratharmone c) Excess secretion of partharmone d) Excess secretion of calcitonin e) Lack of adrenalin
3	Transfer of genetic material from one bacterium to another bacterium through bacterio phage is known as b) Conjugation b) transduction c) Translation d) Transformation
4	The mucosa is endowed with b) IgA b) IgG c) IgM d) IgE
5	Renal stone is made up of b) Calcium carbonate b) Potassium oxalate c) Calcium oxalate d) Sodium carbonate
6	Human egg belongs to b) Mesolecithal b) Microlecithal c) Alecithal d) Macrolecithal
7	Enlargement of liver is called as b) Spleenomegaly b) Thalassemia c) Hepatomegaly d) Anaemia
8	The battery in the artificial pacemaker can last for b) 6-7 years b) 5-6 years c) 3-4 years d) 7-8 years

Section- II

Write any four of the following

4x2=8

9	How does obesity assessed?
10	A patient who is over 40 years of age having refractive defects and who does not want to wear glass or contact lens. Suggest an alternate option
11	What is molecular cloning?
12	What are attenuated strains? State their use
13	What is Bubble boy syndrome?
14	Name few exotic breeds of cattle

Section- III

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

3 X 3 = 9

15	What are the function of corpus callosum and anterior commissure? If corpus callosum is damaged what will happen?
16	What treatment is made for coronary artery blockage? Explain
17	Distinguish between Active and passive immunity
18	What are the methods adopted to remove stones in the bladder and lower ureter?
19	Distinguish between vaccines and antibiotics

Section- IV

Give the answer for the following questions

2X 5 = 10

20	Describe the functioning of cerebral cortex Or A proper balance between insulin and glucagon production is necessary to maintain proper blood glucose level - Discuss
21	Write an essay on protozoan diseases caused to human being Or "Conservation of fresh water" - Discuss

Higher Secondary Second Year

BIOLOGY

Model Question Paper – 2

Bio-Botany

Section- I

Time : 2.30 Hrs

Marks : 70

I Answer all the questions

8x1 = 8

Choose the most suitable answer:

1	Inflorescence is a branched spadix in a) sterlizia b) Tridax c) Musa d) Ravenala
2	Which of the following statement is correct for tautonym a) Generic and specific epithet are different b) Generic name alone present c) Generic and specific epithet are same d) Only specific epithet present
3	The unicellular or multicellular appendages that origiuate from the epedumal cells are called a) Subsidiary b) trichoblasts c) Trichomes d) Guard cells
4	The gene which acts as unit of function is called a) Muton b)recon c) Cistron d) Operon
5	The terminal part of Chromosome is called a) Centromere b) kinetochore c) telomere d) Chromomere
6	Each restriction enzyme cleaves a molecule only at a) The ends of genes b) methyl groups c) nucleotide sequence d) the time of DNA replication
7	Light sensitive seeds can germinate in complete darkness by the hormone a) Auxin b) Gibberlin

	c) Cytokinin d) Ethylene
8	Emetine is obtained from a) Vinca b) Cephalis c) Solanum d) Acalypha

Section- II

$4 \times 2 = 8$

Answer any four of the following

9	Define type specimen
10	Differentiate lamellar and angular collencynia
11	Draw the structure of Chromosome and label its parts
12	What is totipotency
13	Define vernalisation
14	What is richmond lang effect?

Section- III

$3 \times 3 = 9$

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

15	List out the various types of inflorescence of euphorbiaceae with suitable examples
16	Write a note on parenchyma
17	Explain the significance of ploidy
18	Differentiate photorespiration from Dark respiration
19	Write the aims of plant breeding

Section- IV

$2 \times 5 = 10$

Give the answer for the following questions

20	Explain bentham and Hookers classification Or Describe the Different modes of nutrition in angiosperms.
21	Explain protoplasmic fusion Or Describe the primary structure of T.S of dicot root

Bio Zoology

Section- I

I Answer all the questions

8x1=8

Choose the most suitable answer from the given four alternatives

1	<p>Women who have several pregnancies may be affected by</p> <p>a) Umbilical hernia b) Inguinal hernia c) Femoral hernia d) Strangulated hernia</p>
2	<p>In the oesophagus one peristaltic wave takes about _____ to reach stomach</p> <p>e) 3 seconds b) 5 seconds c) 9 seconds d) 8 seconds</p>
3	<p>During heart beat the lubb sound is due to</p> <p>b) Closure of mitral valve b) Closure of atrio ventricular valve c) Closure semilunar valve d) Closure of Tricuspid valve</p>
4	<p>Progressive loss of memory is associated with</p> <p>b) Meningitis b) Cerebral Thrombosis c) Myasthenia gravis d) Alzheimer’s disease</p>
5	<p>Complex (or) uncertain symmetry is seen in</p> <p>b) adenovirus b) Pox virus c) blue tongued virus d) Polio virus</p>
6	<p>Many viruses, which are difficult or impossible to grow have been cultured in</p> <p>b) Primary culture b) Continuous cell line c) Pure culture d) Diploid cell strain</p>
7	<p>Certain plants such as _____ were able to break down cyanide into non-toxic form</p> <p>b) Gibberella fusarium b) Thespesia populnea c) Gibberella fujikuroi d) Solanum melongena</p>
8	<p>Which of the following fowl is noted for its pugnacity?</p> <p>b) Chittagong b) Busra c) Aseel d) Karaknath</p>

Section- II

Write any four of the following

4x2 =8

9	What is silent infarction?
10	Which hormone is called antidiuretic hormone (ADH) why?
11	Who discovered antiseptic surgery? State its use.

12	What are the clinical manifestations of thalassemia?
13	Distinguish between life span and life expectancy
14	How will you identify <i>Catla catla</i> ?

Section- III

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

3x3=9

15	Terrestrial animals are generally either ureotelic or uricotelic, not ammonotelic why?
16	Write the reasons for conductive hearing loss
17	Which type of malaria is fatal? Why?
18	Distinguish between isograft and allograft.
19	Write the uses of karyotyping.

Section- IV

Give the answer for the following questions

2X 5 = 10

20	What are the alternative options for the couples who are unable to achieve fertilization in the normal way? Explain Or Describe the mechanism of urine formation.
21	Describe about various kinds of first line defence in most animals Or Suggest the ways to protect Earth from global warming and ozone depletion

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) Osteosclerides 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) Redifferentiation 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

8	Plants require specific period of light and darkness for flowering It is known as a) Photoperiod c) Vernalization	b) Critical period 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 X 3 = 9

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

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	<p>Choose the number of correct statements from the following:</p> <p>a) Melanin a non-haemoglobin pigment secreted by melanocytes b) Melanocyte possesses a non-essential amino acid called tyrosine</p> <p>i) a only ii) b only iii) both a&b iv) None</p>															
2	<p>Choose the incorrect pair among the following</p> <p>a) Chondrogenesis - Cartilage formation b) Osteogenesis - Bone formation c) Osteoblast - Bone destroying cell d) Osteoclast - Bone forming cell</p> <p>i) a ii) b iii) c iv) d</p>															
3	<p>An example for continuous cell line viral culture is</p> <p>a) Bacteria b) Virus c) Mycoplasma d) MAB(Mono-clonal Antibodies)</p>															
4	<p>The lymphoid organ that tends to atrophy after puberty is</p> <p>a) Lymph node b) thymus c) Spleen d) Tonsil</p>															
5	<p>Choose the incorrect pair among the following</p> <p>a) Plague - Yersinia b) Syphilis - Treponema c) Gingivitis - Trichomonad d) Diarrhoea - Neisseria</p> <p>i) a ii) b iii) c iv) d</p>															
6	<p>Gene bank, seed bank, Cryopreservation comes under</p> <p>a) In-situ conservation b) Ex-situ conservation c) Biosphere conservation d) Biodiversity conservation</p>															
7	<p>Match the fishes with their respective orders</p> <table style="width: 100%; border: none;"> <thead> <tr> <th style="text-align: left;"><u>Fishes</u></th> <th style="text-align: center;">-</th> <th style="text-align: left;"><u>Order</u></th> </tr> </thead> <tbody> <tr> <td>a) Catfish</td> <td style="text-align: center;">-</td> <td>i) Siluriformes</td> </tr> <tr> <td>b) Murrels</td> <td style="text-align: center;">-</td> <td>ii) Channiformes</td> </tr> <tr> <td>c) Tilapia</td> <td style="text-align: center;">-</td> <td>iii) Perciformes</td> </tr> <tr> <td>d) Carps</td> <td style="text-align: center;">-</td> <td>iv) Cipriniformes</td> </tr> </tbody> </table>	<u>Fishes</u>	-	<u>Order</u>	a) Catfish	-	i) Siluriformes	b) Murrels	-	ii) Channiformes	c) Tilapia	-	iii) Perciformes	d) Carps	-	iv) Cipriniformes
<u>Fishes</u>	-	<u>Order</u>														
a) Catfish	-	i) Siluriformes														
b) Murrels	-	ii) Channiformes														
c) Tilapia	-	iii) Perciformes														
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 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 pluripotency.
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

Give the answer for the following questions

2X 5 = 10

20	Write an essay on the techniques associated with correcting heart-related disorder in 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.

www.Padasalai.Net