



Standard 12
BIOLOGY
Bio-Botany
Section-A

Time: 3.00 Hours

Marks: 70

Marks: 35

I. Answer all the questions:**8x1=8**

- 1) Arrange the layers of anther wall from locus to periphery?
 - a) Epidermis middle layer, tapetum, endothecium
 - b) Tapetum, middle layer, epidermis, endothecium
 - c) Endothecium, epidermis, middle layer tapetum
 - d) Tapetum, middle layer, endothecium, epidermis
- 2) An allohexaploidy contains
 - a) six different genomes
 - b) six copies of three different genomes
 - c) Two copies of three different genomes
 - d) six copies of one genome
- 3) Plasmids are
 - a) circular protein molecule
 - b) required by bacteria
 - c) tiny bacteria
 - d) confer resistance to antibiotics
- 4) Orobanche is a
 - a) saprophyte
 - b) Partial parasite
 - c) total parasite
 - d) Autotroph
- 5) Which of the following is not a sedimentary cycle?
 - a) Nitrogen cycle
 - b) phosphorous cycle
 - c) sulphur cycle
 - d) calcium cycle
- 6) plant does not grow in temperature countries like Canada and Germany
 - a) Apple
 - b) Mango
 - c) Grapes
 - d) pear
- 7) Match the list I with II

List I**List II****Biofertilizer****Organisms**

- | | |
|---------------------------|---------------------------|
| i) Free living N_2 | a) Aspergillus |
| ii) Symbiotic N_2 | b) Amanita |
| iii) P solubilizing | c) Anabaena azollae |
| iv) P mobilizing | d) Azotobacter |
| a) i-c, ii-a, iii-b, iv-d | b) i-d, ii-c, iii-a, iv-b |
| c) i-a, ii-c, iii-b, iv-d | d) i-b, ii-a, iii-d, iv-c |
- 8) Golden rice differs from its parental strain by the addition of beta carotene
 - a) 4
 - b) 2
 - c) 7
 - d) 3

Section-B**II. Answer any four questions:****4x2=8**

- 9) What is endothelium?
- 10) Write the disadvantages of Bt cotton
- 11) Write any four ecologically important days
- 12) Differentiate linkage and crossing over
- 13) What is Albedo effect and write their effects
- 14) Differentiate primary introduction from secondary introduction

Section-C**III. Answer any three questions: Q.No. 18 is compulsory.****3x3=9**

- 15) Draw the diagram PBR322 plasmid and label the parts
- 16) Write the advantages of artificial seeds
- 17) How do sacred groves help in the conservation of biodiversity?
- 18) Trichoderma - bio control agent - Justify this statement'
- 19) How is anemochory differ from zoochory

Section-D**IV. Answer all the questions:****2x5=10**

- 20) a) Enumerate the characteristic features of Entomophilous flower (OR)
- b) What is single cell protein. Mention its application
- 21) a) Write the aims of plant breeding (OR)
- b) Write the botanical name of state tree of TamilNadu
 - i) From where it is originated
 - ii) Write its three uses

V12Bio

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Bio-Zoology

Marks: 35

8x1=8

I. Answer all the questions:

- 1) In which type of parthenogenesis are only males produced.
a) Arrhenotoky b) Thelytoky c) Amphitoky d) Both a and b
- 2) The mature sperms are stored in the
a) seminiferous tubules b) vas deferens
c) epididymis d) seminal vesicle
- 3) Patau syndrome is also referred to as
a) 13-Trisomy b) 18-Trisomy c) 21-Trisomy d) None of these
- 4) **Assertion (A)** : Ovulation is the release of ovum from the Graafian follicle
Reason (R) : It occurs during the follicular phase of the menstrual cycle
a) A and R are true. R is the correct explanation of A
b) A and R are true. R is not the correct explanation of A
c) A is true. R is false
d) Both A and R are false
- 5) Choose the correctly matched pair
a) Amphetamines - stimulant
b) LSD - Narcotic
c) Heroin - Psychotropic
d) Benzodiazepine - Pain killer
- 6) Cyclosporin - A is an immunosuppressive drug produced from
a) *Aspergillus niger* b) *Monascus purpureus*
c) *Penicillium notatum* d) *Trichoderma polysporum*
- 7) Interferon is
a) Antibody b) Bacterial antibody
c) fungal antibody d) viral antibody
- 8) Some animals become inactive during summer. It is an example for
a) structural adaptation b) Behavioural adaptation
c) Psychological adaptation d) Physiological adaptation

II. Answer any four of the questions:

4x2=8

- 9) Differentiate External and Internal fertilization
- 10) In genetic code which is called as non-sense codon?
- 11) What are called connecting links? Give examples
- 12) Define antibiotics
- 13) What is pedogenesis?
- 14) What is Red data book

III. Answer any three of the questions:

3x3=9

- 15) Differentiate Vasectomy and Tubectomy
- 16) What are the applications of Karyotyping?
- 17) What is vaccine? What are its types?
- 18) Differentiate between somatic cell gene therapy and germline therapy?
- 19) How does recycling help reduce pollution?

IV. Answer the following:

2x5=10

- 20) a) Give a schematic representation of spermatogenesis in humans
(OR)
b) How is sex determined in human beings?
 - 21) a) What are the salient features of HGP?
(OR)
b) List out the various causes for biodiversity losses?
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