

A

**COMMON HALF YEARLY EXAMINATION - 2025****Standard - XII****Time : 3.00 hrs****BIOLOGY****Marks: 70****Part - I Bio-Botany****Marks: 35****Section - A****I. Answer all the questions.****8×1=8**

Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

- 1) In majority of plants pollen is liberated at \_\_\_\_\_
  - a) 1 celled stage
  - b) 2 celled stage
  - c) 3 celled stage
  - d) 4 celled stage
- 2) Sarbathi Sonora is developed by irradiating of \_\_\_\_\_
  - a) Beta rays
  - b) Gamma rays
  - c) Alpha rays
  - d) UV rays
- 3) Virus free plants are developed from \_\_\_\_\_
  - a) Cell suspension culture
  - b) organ culture
  - c) Meristem tip culture
  - d) Protoplast culture
- 4) Pedogenesis refers to \_\_\_\_\_
  - a) Fossils
  - b) Water
  - c) Population
  - d) Soil
- 5) \_\_\_\_\_ Ecosystem shows inverted shape in pyramid of Biomass
  - a) Forest Ecosystem
  - b) Grassland Ecosystem
  - c) Pond Ecosystem
  - d) Parasite Ecosystem
- 6) Jaya and Ratna are the semi dwarf varieties of \_\_\_\_\_
  - a) Wheat
  - b) Rice
  - c) Cowpea
  - d) Mustard
- 7) The ozone layer of trophosphere is called \_\_\_\_\_
  - a) Middle ozone
  - b) Ozone sheild
  - c) Bad ozone
  - d) Good ozone
- 8) Assertion (A): Turmeric fights various kinds of cancer  
Reason (R): Curcumin is an anti-oxidant present in Turmeric
  - a) Assertion is correct, Reason is wrong
  - b) Assertion is wrong, Reason is correct
  - c) Both are correct
  - d) Both are wrong

(2)

## XII BIOLOGY

## Section - B

4×2=8

## II. Answer any four questions:-

- 9) Tapetum is dual in origin Justify your answer.
- 10) Define - Atavism
- 11) Name the enzymes involved in genetic engineering.
- 12) What is biogeochemical cycle?
- 13) What is Dobson unit?
- 14) Differentiate Bio-medicine and Botanical medicine?

## Section - C

## III. Answer any three questions. Q.No.19 is compulsory:

3×3=9

- 15) Write about pollen - callender?
- 16) Draw the diagram PBR322 plasmid and Label the parts.
- 17) Write the three differences between Habitat and Niche.
- 18) Write the significance of food web?
- 19) Write the economic importance of Rice?

## Section - D

## IV. Answer all the questions:-

2×5=10

- 20) Explain the different mode of entry of pollen tube into the ovule.

[or]

Write the advantages and disadvantages of Bt cotton.

- 21) How to protect the Ecosystem.

[or]

How will you prepare an organic pesticide for your home garden with the vegetables available from your kitchen?

(3)

XII BIOLOGY

Part - II Bio-Zoology

Marks: 35

Section - A

I. Answer all the questions.

8×1=8

Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

- 1) Patau's syndrome is also referred to as
  - a) 13-Trisomy
  - b) 18-Trisomy
  - c) 21-Trisomy
  - d) None of these
- 2) A mRNA molecule is produced by
  - a) Replication
  - b) Transcription
  - c) Duplication
  - d) Translation
- 3) 'Theory of Acquired characters' was disproved by \_\_\_\_\_
  - a) Darwin
  - b) August Weismann
  - c) Lamarck
  - d) Alfred Wallace
- 4) Match column I with column II and select the correct option from the codes given below.
 

A) Copper releasing IUD	-	i) LNG - 20
B) Hormone releasing	-	ii) Lippes loop IUD
C) Non Medicated IUD	-	iii) Saheli
D) Mini pills	-	iv) Multiload - 375

  - a) A-iv, B-ii, C-i, D-iii
  - b) A-iv, B-i, C-iii, D-ii
  - c) A-i, B-iv, C-ii, D-iii
  - d) A-iv, B-i, C-ii, D-iii
- 5) B cells that produce and release large amounts of antibody are called
  - a) Memory cells
  - b) Basophils
  - c) Plasma cells
  - d) Killer cells
- 6) The most common substrate used in distilleries for the production of ethanol is \_\_\_\_\_
  - a) Soyameal
  - b) Groundgram
  - c) Molasses
  - d) Corn meal
- 7) Some organisms are able to maintain homeostasis by physical means \_\_\_\_\_
  - a) Conform
  - b) Regulate
  - c) Migrate
  - d) Suspend

(4)

**XII BIOLOGY**

8) **Assertion:** The environmental conditions of the tropics are favourable for speciation and diversity of organisms.

**Reason:** The climate seasons, temperature, humidity and photoperiod are more or less stable and congenial

- Both Assertion and Reason are true and Reason explains Assertion Correctly.
- Both Assertion and Reason are true but Reason is not the correct explanation of Assertion
- Assertion is true, but Reason is false.
- Both Assertion and Reason are false.

**Section - B**

II. Answer any four of the following questions:-

4×2=8

- What are holandric genes?
- Define Harely - weinberg principle.
- How did Bio diesel produced?
- Difference between: Emigration and Immigration.
- How many hostspots are there in India?
- Write notes on Eutrophication.

**Section - C**

III. Answer any three of the following questions.

Question No.19 is compulsory:

3×3=9

- What is meant by Regeneration? Explain the types of regeneration.
- Amniocentesis, the foetal sex determination test, is banned in our country, Is it necessary? Comment.
- Write any three main goals of Human Genome project.
- Draw and label the structure of Lymph node.
- What is meant by stem cell Banks? Explain the different types of stem cell banks.

**Section - D**

IV. Answer all the questions:-

2×5=10

- Give a schematic representation of spermatogenesis and Oogenesis in humans. [or]
  - What are recombinant vaccines? Explain the types.
- Explain the properties of soil. [or]
  - What is meant by Agrochemicals? Explain the causes of Agrochemicals.

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