

# Half Yearly Examination - 2019

Class: 12

Subject : Biology

Marks : 70

Time: 3 Hrs.

[35 Marks]

## Bio-Botany

### Part - I

Answer all the questions:

(8 x 1 = 8)

Choose the correct answer:

- In which of the following plant, Trisomy is found ?  
 a) ☒ Oenothera      b) Triticum      c) Secale      d) Gossypium
- Assertion: Ti plasmid causes gall disease in many Gymnosperms.  
 Reason: Onc gene, Ori gene, Inc gene are found in Ti plasmid.  
 a) Assertion is right ; Reason is wrong  
 b) ☒ Assertion and Reason are right  
 c) Assertion is wrong ; Reason is right  
 d) Assertion and Reason are wrong
- Which one of the following is a correct Ecological hierarchy ?  
 a) Individual organism → Community → Ecosystem → Population  
 b) Community → Population → Ecosystem → Individual organism  
 c) Ecosystem → Individual organism → Population → Community  
 d) ☒ Individual organism → Population → Community → Ecosystem
- Select the correct pair:  
 a) March 21      - World ozone day  
 b) ☒ May 22      - World biodiversity day  
 c) July 07      - Van Mohostar day  
 d) April 22      - Earth day
- Match the following:  
 i) Lichens      - a) Pongamia pinnata <sup>i</sup>  
 ii) Green manure      - b) Andrographis paniculate <sup>iv</sup>  
 iii) Acalypha indica      - c) Sulphur di oxide indicator <sup>i</sup>  
 iv) "King of Bitters"      - d) Cures bed sores <sup>iii</sup>  
 a) ☒ i - c ; ii - a ; iii - d ; iv - b      b) i - a ; ii - d ; iii - b ; iv - c  
 c) i - c ; ii - b ; iii - d ; iv - a      d) i - d ; ii - c ; iii - a ; iv - b
- The active principle medicine transtetra hydro cannabial is (THC)  
 present in \_\_\_\_\_  
 a) Opium      b) Curcuma      c) ☒ Marijuana      d) Andrographis
- Virus free plants are produced through \_\_\_\_\_  
 a) Organ cultue      b) ☒ Meristem culture  
 c) Protoplast culture      d) Cell suspension culture



8. Which of the following statements are true ?

- i) Jadav payeng is called as "Forest man of India" ✓
  - ii) Eichhornia is called as "Terror of Bengal" ✓
  - iii) Sesbania is a Rehabilitation plant ✓
  - iv) Azadirachta indica is not functioning as protein Bank X
- a) i, ii are correct  
 b) i, ii and iii are correct  
 c) i and iv only correct  
 d) ii and iv only correct

### Part - II

Answer any four of the following:

(4 x 2 = 8)

- 9. Write a note on Orthotropous and Anatropous. (12)
- 10. Write any two significance of crossing over. (60)
- 11. What is SCP ? 82
- 12. What is Biofortification ? 196
- 13. Draw the diagram of Ten percent law. 152
- 14. Define poly lactic acid. 98 Biodegradable & bioactive thermoplastic

### Part - III

Answer any three of the following:

(3 x 3 = 9)

Q.No. 18 is compulsory.

- 15. Draw the structure of an Ovule and label the parts. (12)
- 16. Describe "Atavism". (49)
- 17. Write a note on PBR 322 plasmid. 87
- 18. Write any six importance of Geographic Information system. 181 & 182
- 19. Write the uses of Tectona grandis. 209

### Part - IV

Answer the following in brief:

(2 x 5 = 10)

Draw the diagrams wherever necessary.

- 20. What is grafting ? Explain its types. (4) (5)

[OR]

- i) Write any three uses or applications of Tissue culture. 115
- ii) Write any two secondary metabolites and its plant resources with uses. 113

- 21. Differentiate primary succession from secondary succession. 162

[OR]

How are the hydrophytic plants are classified based on their relation to water and air ? Describe with suitable diagrams. 135

**SRI VENKATESWARA MATRIC BIO - ZOOLOGY**  
**HR. SEC. SCHOOL SECTION - I**

**PREPARED BY:**  
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**Marks : 30**

**Note : Answer all the questions, choose the correct.**

**8 X 1 = 8**

1. Technique used for cultivation of sponges is based on  
 a) multiple fission      b) parthenogenesis      ☒ c) regeneration      d) autogamy
2. The ruptured Graafian follicle forms  
 a) primary follicle      b) Oogonia      c) corpus albicans      ☒ d) corpus luteum
3. Y chromosome was discovered by .....  
☒ a) Stevens      b) Landsteiner      c) Henking      d) Wiener
4. Founder's effect is related to  
☒ a) genetic drift      b) gene mutation      c) extinction      d) artificial selection
5. The first synthetic vaccine produced was .....  
 a) DPT      ☒ b) HbsAg      c) Measles      d) polio
6. Competition between species leads to  
 a) Amensalism      b) Mutation      c) Symbiosis      ☒ d) Extinction
7. At present there are ..... tiger reserves in the country  
 a) 9      b) 32      ☒ c) 47      d) 26
8. PCB is a major components of  
 a) agrowaste      ☒ b) e-waste      c) sewage      d) plastics

**SECTION - II**

**Note : Answer any four of the following questions. (Refer : Zoology book**

**4 X 2 = 8**

9. What is colostrum? **pg: 28**
10. Differentiate Totipotency and pluripotency? **pg: 175**
11. Define Allen's law. **pg: 191**
12. What are interferons? Write their functions. **pg: 171**
13. Illustrate your answer "the Earth without Green house gases". **pg: 227 (132)**
14. Define - Red Data Book. **pg: 225**

**SECTION - III**

**Note : Answer any three questions. Question No. 18 is compulsory.**

**3 X 3 = 9**

15. What are Gemmules? **pg: 5**
16. What are the types of vaccines? **pg: 171**
17. Coagulation factor VIII deficiency leads to haemophilia. Suggest methods to cure the haemophilia. **pg**
18. Enlist the steps involved in the cloning process of Dolly. **pg: 180**
19. Tabulate the difference between Insitu and Exsitu conservation. **pg: 229**

**SECTION - IV**

**Note : Answer all the questions.**

**2 X 5 = 10**

20. a) Explain Menstrual cycle. (OR) **pg: 28 21**  
 b) What is Lac operon? Explain. **pg: 89**
21. a) Write the difference between active and passive immunity. (OR) **pg: 139**  
 b) Explain modern synthetic theory of Evolution. **pg: 108**

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