

Enrollment No. _____



**NAVACHANA
UNIVERSITY**
a UGC recognized University

School: School of Science
Program/s: BSc.-LS
Year: 3rd **Semester:** 5th
Examination: End Semester Examination
Examination year: December - 2021

Course Code: LS302, **Course Name:** Defense mechanisms in plants and animals.

Date: 02/12/2021

Time: 11.30am to 1.30 pm

Total Marks: 40

Total Pages: 02

Instructions:

- Write each answer on a new page.
- Draw the diagram wherever necessary
- Stick to the Word Limit given in the Questions.

| Q. No. | Details | Marks | CO | BTL |
|--------|--|-------|-----------|------------|
| Q.1 | <p>Choose the Correct Option.</p> <p>1. The membrane attack complex in the complement pathway consists of: a) C3b3b, Bb b) C5b,6,7,8,9 c) Colicins d) Properdin</p> <p>2. Which of the following is the BEST at presenting antigen to T helper cells? a) Dendritic cell with MHC I b) Dendritic cell with MHC II c) Macrophage with MHC I d) Macrophage with MHC II</p> <p>3. Find the Incorrect statement. P. Adaptive Immunity plays a role in Antigenic challenging conditions. Q. The major agents of adaptive immunity are macrophages and neutrophils while major agents of Innate Immunity lymphocytes and antibodies. R. Adaptive Immunity has a remarkable property of "memory." a) Only P b) P & Q c) Only Q d) P,Q,& R e) Q & R</p> <p>4. NK cells recognize and kill a) Normal host cells b) Cells with increased expression of MHC-I molecules c) Cells with decreased expression of MHC-I molecules d) Intracellular pathogens</p> <p>5. SAR stands for... a) Systemic Acquired Resistant. b) Sequence Acquired Resistant.</p> | 1x6=6 | CO1,2,3,4 | BTL1,2,3,4 |

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|------------|--|--------|---------------|----------------|
| | <p>c) System Acquired Resistance. d) Sequence Acquired Resistance.</p> <p>6. The disease triangle may exclude</p> <p>a) Host b) Pathogen c) Environment d) Time</p> | | | |
| Q.2 | <p>Answer the following (20-30 words only per answer)</p> <p>1. Explain the discovery of Small pox virus by illustrating the experiment.</p> <p>2. List down all markers of immune cells.</p> <p>3. What is the role of stromal cells in the B cell maturation?</p> <p>4. What are the different sources of inoculum for different diseases?</p> <p>5. What are the different objectives of learning plant pathology?</p> | 2x5=10 | CO1,2,3 ,4 | BTL1, 2,3,4 |
| Q.3 | <p>Answer the following – <u>any four</u> (max 300-350 words per answer)</p> <p>1. What happens when an antigen enters the human body? Discuss the various events in detail explaining each and every minute detailing of it.</p> <p>2. Explain the different phases of B cell development with the help of diagram.</p> <p>3. Discuss the experiment how we can produce different types of antibodies in lab system.</p> <p>4. Discuss about different types of stress metabolism found in plants.</p> <p>5. What are the different ways in which plant disease pathogens can affect plants?</p> | 3x4=12 | CO1,2,3 ,4 | BTL1, 2,3,4 |
| Q.4 | <p>Answer the following (max 500 words per answer).</p> <p>1. Explain the different types of Antibodies their structures, concentration, and its effector functions.</p> <p style="text-align: center;">OR</p> <p>2. Explain the role of different factors that are key players in:</p> <p>a) Inflammation b) Tissue Homeostasis c) Activation of innate followed by adaptive immune system.</p> <p>3. Describe the different mechanisms adapted by the plants in response to the attacks by herbivores and pathogens.</p> | 6x2=12 | CO1,2,3 ,4 | BTL1, 2,3,4 |

-----All The Very Best-----