

QUIZ 1 (BT-621)

09-09-2024

NAME:

ROLL NO:

SIGNATURE:

- 1) Which of the following is NOT TRUE about sub-genomic RNAs of (+) strand RNA viruses, they
☒ (A) regulate virus life cycle (B) increase coding capacity of small viral genome
☐ (C) counter plant-made siRNAs (D) work as messengers for protein expression
- 2) Anti-sense strand of small RNA duplex finds targets mRNA with the help of
☐ (A) multi-protein RISC complex (B) Argonaute proteins
☒ (C) DICER proteins ☒ (D) RdRP proteins
- 3) Following viral protein is primarily responsible for systemic infection
☒ (A) coat protein ☒ (B) nuclear shuttle protein (C) host suppressor (D) movement protein
- 4) An antisense vector to suppress endogenous gene expression typically consists of a strong promoter-driven
☐ (A) antisense sequence of target gene
☐ (B) direct repeats of target gene sequence separated by a spacer sequence
☐ (C) sense sequence of target gene
☒ (D) inverted repeat sequences separated by a spacer sequence
- 5) Insecticidal Bt protoxins get converted to active toxins in insect's digestive tract by
☒ (A) alkaline pH of the insect gut (B) acidic pH of the insect gut
☐ (C) action of gut microbes (D) plant expressed Bt toxin proteins
- 6) Metabolic interference to prevent the synthesis of following compound(s), lead to delayed ripening in tomato?
☐ (A) ACC (1-aminocyclopropane-1-carboxylic acid) (B) SAM (S-adenosylmethionine)
☒ (C) both (a) and (b) (D) AOA (aminooxyacetic acid)
- 7) Mutations based on T-DNAs insertions is better than transposons insertions as T-DNAs
☐ (A) disrupt only coding regions of genes
☐ (B) help in gain of function
☒ (C) are chemically and physically stable
☐ (D) none of the above
- 8) Insertion of maize transposable element (*Ac* or *Ds*) elements in plants causes
☐ (A) Stable mutation using *Ac* element
☒ (B) Stable mutation using *Ds* element
☐ (C) Unstable mutation using *Ac* element
☐ (D) None of the above
- 9) Stable loss of function mutant can be generated using following mobile genetic elements
☐ (A) *Ac*
☐ (B) *Ds*
☐ (C) *Ac* and *Ds*
☒ (D) All of the above
- 10) Following mobile genetic elements are induced by abiotic stress
☐ (A) *Ac* (B) *Ds* (C) Ty3/gypsy ☒ (D) Ty1/copia