Q 20.
A ladybug sits at the outer edge of a merry-go-round, and a gentleman bug sits halfway between her and the axis of rotation. The merry-go-round makes a complete revolution once each second. The gentleman bug’s angular speed is

1. half the ladybug’s.
2. the same as the ladybug’s.
3. twice the ladybug’s.
4. impossible to determine

Q 21.
A ladybug sits at the outer edge of a merry-go-round, that is turning and slowing down. At the instant shown in the figure, the radial component of the ladybug’s (Cartesian) acceleration is

1. in the +x direction.
2. in the −x direction.
3. in the +y direction.
4. in the −y direction.
5. in the +z direction.
6. in the −z direction.
7. zero.

Answers
Q20. 2
Q21. 2