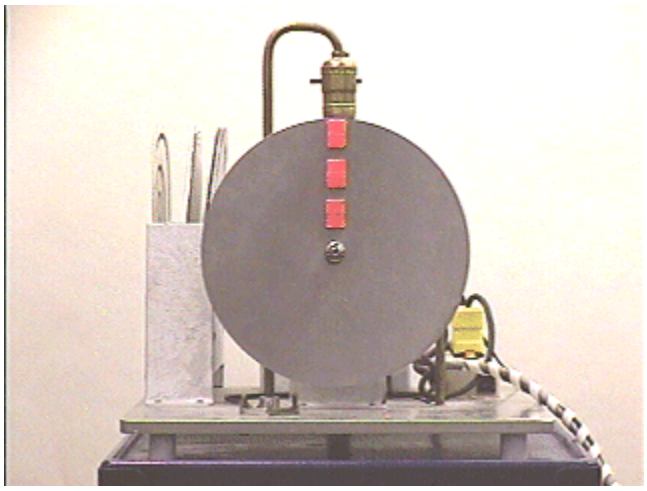
# Answer #24

The answer is (a): the outer magnet will fly off the spinning disc first, followed by the middle magnet and the inner magnet in that order. This can be seen in an mpeg video by clicking your mouse on the photograph below.



The centripetal force required to hold any object in a circular orbit is greater for larger radii: in fact the force is proportional to the square of the angular speed and goes linearly with the radius for a constant angular speed. Therefore, at any angular speed the force is greater for larger radii. If the magnets have the same strength the one at the larger radius will therefore fly off first.

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