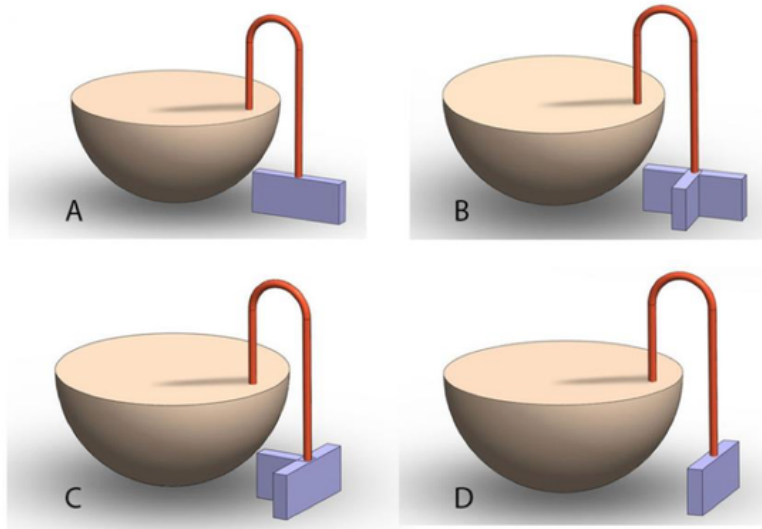
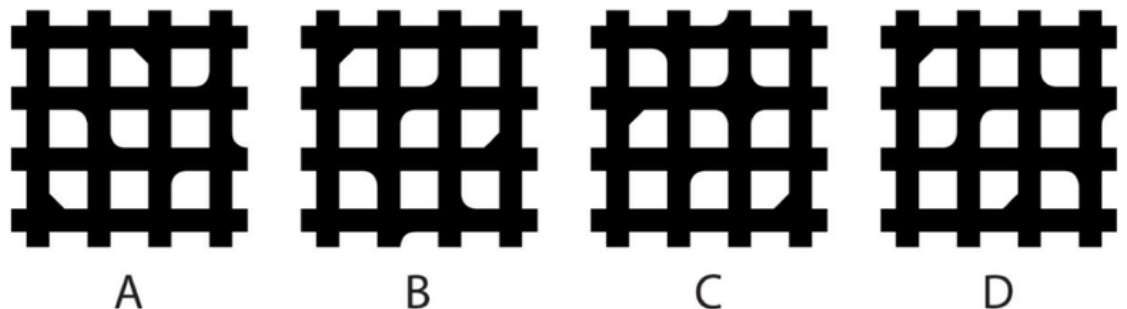
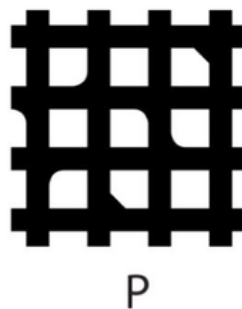


Q.01 Shown below are tables of a new design. Which table(s) will not tilt, if given a small perturbation in any direction?



Q.02 Which of the options is/are simple rotation(s) of the image P?

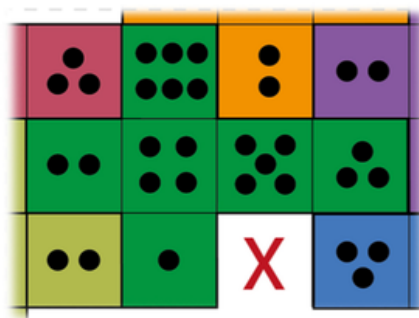


Q.03 If a solid octahedron as shown in the figure is cut by a plane into two pieces, what is/are the possible shape(s) of the cross-section?



- A. Triangle
- B. Square
- C. Pentagon
- D. Hexagon

Q.04 Seven identical playing dice are unfolded in an identical manner. Six of the unfolded dice are laid out on a flat surface and are arranged to touch each other without overlapping. The figure shows a portion of the arrangement. Which face(s) from the seventh unfolded dice CAN NOT replace X if overlap must be avoided?



- A

B

C

D

Q.05 A set of two frames with square openings when perfectly overlapped with each other allow light through in certain patterns. Shown below are four sets of such frames. These frames are either hinged (A and B) or pivoted (C and D) to each other. Assuming that the red frames are fixed and the blue frames are allowed to move, which option(s) will allow light to pass through as in the pattern shown on the left?

