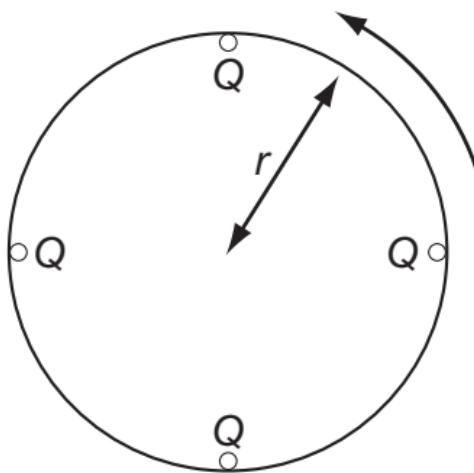


31 Four point charges, each of charge  $Q$ , are placed on the edge of an insulating disc of radius  $r$ .

The frequency of rotation of the disc is  $f$ .



What is the equivalent electric current at the edge of the disc?

A  $4Qf$

B  $\frac{4Q}{f}$

C  $8\pi rQf$

D  $\frac{2Qf}{\pi r}$

32 Which graph shows the  $I - V$  characteristic of a filament lamp?