

Fig. a

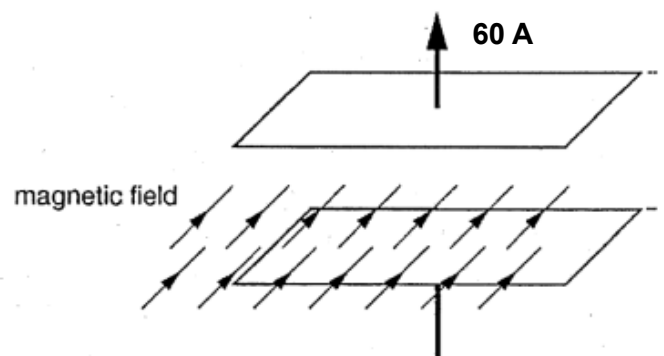


Fig. b

The U-tube shown above contains liquid sodium of density 960 kg m^{-3} . Electrodes are set into the upper and lower faces of the horizontal section and a current of 60 A is sent through the liquid as shown in Fig. a.

When a uniform magnetic field is applied as shown in Fig. b, the liquid in the left arm rises by 1.0 cm while the liquid in the right arm lowers by 1.0 cm .

What is the magnetic flux density of the applied magnetic field?

- A** 0.013 T **B** 0.025 T **C** 0.031 T **D** 0.063 T

