

NAME
SCHOOL

INDEX NUMBER
DATE

ELECTROSTATICS I

1. 1995 Q11 P1

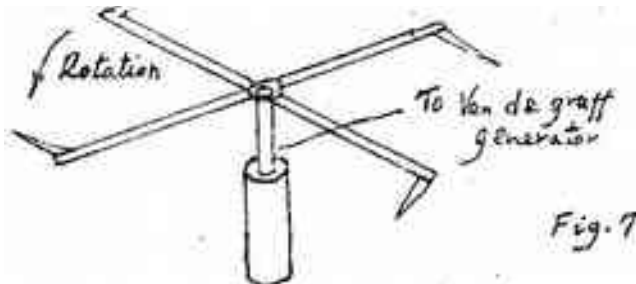
You are provided with a charged electroscope, an insulator and a conductor.
Describe how you would use these apparatus to distinguish in the insulator from the conductor (2 marks)

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2. 2001 Q9 P1

Fig. 7 shows “windmill” which when connected to the dome of a positively charged Van de Graff generator is observed to rotate as indicated. A, B, C and D are sharp points

Figure 7.



Explain how this rotation is caused.

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3. 2003 Q9 P1

Figure 7 shows a highly negatively charged rod being brought slowly near the cap of a positively charged leaf electroscope. It is observed that the leaf initially falls and then rises.

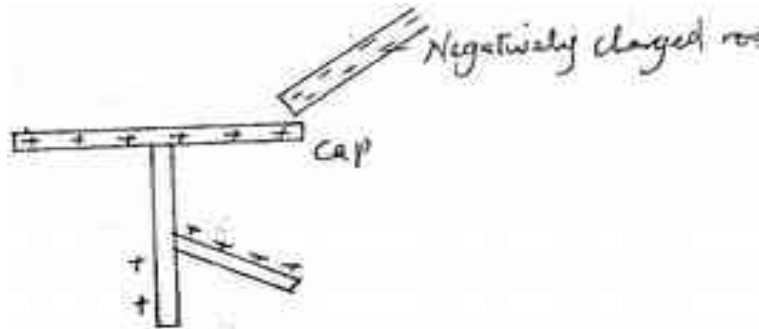


Figure 7

Explain this observation

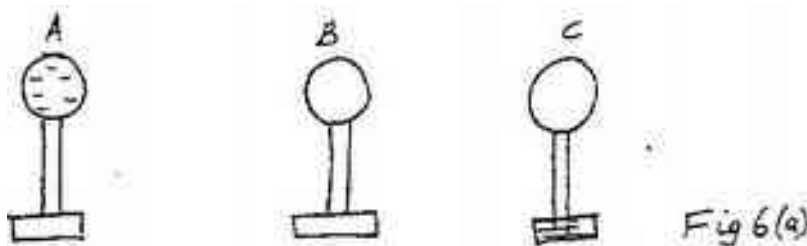
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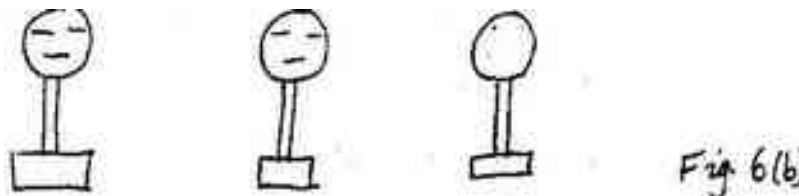
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4. 2004 Q8 P1

Figure 6 (a) shows three spherical balls of the same size placed on insulating stands. Balls A and B are conductors while ball C is non conductor. Ball A was initially charged as shown. The quantity of charge is represented by the number of dashes.

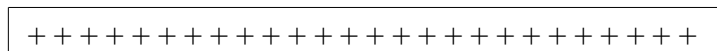


Ball A is made to touch B momentarily and then C. Show on Figure 6(b), the final distribution of charge on the balls.



5. 2005 Q8 P1

Sketch the electrostatic field pattern due to the arrangement of the charges shown in Fig 6

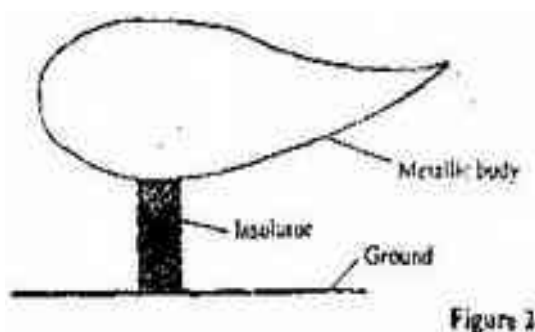


(1 mark)

Fig 6

6. 2006 Q3 P2

A metallic body shaped as shown in figure 2 is positively charged and insulated from the ground as shown in the figure.



On the figure show the charge distribution

(1 mark)

7. 2008 Q2 P2

A leaf electroscope A is charged and placed on the bench. Another uncharged leaf electroscope B is placed on the same bench and moved close to A until the caps touch. State and explain what is observed on the leaves of A and B.

(2marks)

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8. 2009 Q3 P2

A conductor is slowly brought near the cap of a positively charged electroscope. The leaf first collapses and then diverges. State the charge on the conductor

(1 mark)

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9. 2010 Q4 P2

A positively charged sphere is suspended by an insulating thread. A negatively charged conductor is suspended near it. The conductor is first attracted, after touching the sphere it is repelled. Explain this observation.

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10. 2012 Q4 P2

Figure 4, Shows a negative point charge placed near a positively charged rod.
Draw on the diagram, the resulting electric field pattern (2marks)

