

Questions from Previous Years

2014-2015 (2017)

1. Marks: $(2+2)+2+(2+2)+4=14$

- (a) Define Coulomb's law. Does Coulomb's law hold for all charged objects?
- (b) Describe the facts that charge is quantized and conserved.
- (c) Define electric field and electric potential.
- (d) The nucleus of a uranium atom has a radius R of 6.8 fm. Assuming that the positive charge of the nucleus is distributed uniformly, determine the electric field at a point on the surface of the nucleus due to that charge.

2. Marks: $5+5+4=14$

3. Marks: $5+5+4=14$

4. Marks: $5+5+4=14$

5. Marks: $5+5+4=14$

6. Marks: $5+5+4=14$

7. Marks: $5+5+4=14$

8. Marks: $5+5+4=14$