

Answer any two questions from 1 to 3 (1 mark each)

1. Find the odd one and give reason  
(Nickel, Chromium, Copper, Iron)
2. Which of the following is not an expression of power?  
( $IR$ ,  $V/R$ ,  $VI$ ,  $H/t$ )
3. What is the unit of charge?  
(ampere, coulomb, ohm, volt)

Answer any two questions from 4 to 6 (2 mark each)

4. Write down the energy changes in the following devices  
a. electric bulb b. mixer
5. Write any two peculiarities of nichrome.
6. What is the current if  $4\Omega$  and  $2\Omega$  resistors are connected in series and 6 V potential difference is applied?

Answer any two questions. (3 mark each)

7. State Joule's law. If we increase resistance in a circuit what will happen to heat?
8. A current of 0.4 A flows through an electric bulb working at 230 V. What is the power of the bulb?
9. What are the advantages of using discharge lamps instead of incandescent lamps? (at least three advantages)

Answer any two questions. (4 mark each)

10. a. Write any two types of lamps working on electricity.  
b. what is meant by amperage?  
c. what is power? Write its unit.
11. An electric bulb marked 500W, 250V is connected to a supply. Find the electric current and resistance of the circuit.
12. a. How does the fuse wire ensure protection of the circuit?  
b. What are the advantages of using tungsten as a filament?  
c. State why bulb is evacuated?