Questions

1. Capacitor is a device used to_____

a) store electrical energy

b) vary the resistance

c) store magnetic energy

d) dissipate energy

2. Capacitor stores which type of energy?

a) kinetic energy

b) vibrational energy

c) potential energy

d) heat energy

3. The ohm is the unit of capacitance.

(a) True

(b) False

33. Energy is stored by a capacitor in a magnetic field.

(a) True

(b) False

4. There ….. types of capacitors so far.

a. 2 b. 3 c. 4 d. 5

5. In an electric double capacitor, the electrodes are made by:

a. Metal oxides

b. Porous carbon

c. Conducting polymer

d. All above

6. In a pseudo capacitor, the electrodes are made by:

a. Porous carbon

b. Graphene

c. Carbon nanotubes

d. Metal oxides or conducting polymer

7. A pseudo capacitor has:

a. Higher energy density than EDLCs

b. Lower cost than EDLCs

c. Lower energy density than EDLCs

d. Higher power density than EDLCs

8. An electric double layer capacitor has :

a. Higher energy density than pseudo capacitor

b. Lower cost than pseudo capacitor

c. Higher power density than pseudo capacitor

d. All above

9. A hybrid capacitor has :

a. Most flexible performance

b. High energy density

c) High power density

d) All above

10. The charge storing mechanism of electric double layer capacitor based on :

a. Adsorbing electrolyte ions onto the surface of the electrode.

b. Redox reaction at the surface of the electrode

c. The reaction between hydrogen and oxygen

d. The burning of fossil fuels

11. The charge storing mechanism of pseudo capacitor based on :

a. Adsorbing electrolyte ions onto the surface of the electrode.

b. Redox reaction at the surface of the electrode

c. The reaction between hydrogen and oxygen

d. The burning of fossil fuels

12. The charge storing mechanism of hybrid capacitor based on :

a. Adsorbing electrolyte ions onto the surface of the electrode.

b. Redox reaction at the surface of the electrode

c. Combination of double layer capacitor and pseudo capacitor

d. No one of above

13. The advantages of supercapacitor are:

a. Very high rates of charge and discharge

b. Wide working temperature

c. High cycle efficiency

d. All above.

14. The disadvantages of supercapacitor are:

a. High self-discharge

b. Cost is high

c. Low voltages

d. All above.

15. Compared to batteries, supercapacitors are

a. Have more power density

b. Fast charge-discharge

c. Simple fabrication and low cost

d. All above

16. The structure of a capacitor is comprised of:

a. Conductive plates

b. Electrolyte

c. Separator

d. All above