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KANAKAPURA

Question Paper

Duration: 30 Mins

Total Marks: 27

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Student Name: _____ Roll No: _____

1. How batteries are classified based on their working?

- A) Cylindrical cells and rectangular cells
B) Primary cells and secondary cells
C) Button cells and lithium cells
D) Dry cells and alkaline cells

A) 12 VDC

B) 9 VDC

C) 3 VDC

D) 6 VDC

2. Which energy is converted by the battery to produce electricity?

- A) Chemical energy into electrical energy
B) Electrical energy into mechanical energy
C) Electrical energy into light energy
D) Mechanical energy into electrical energy

9. Which rechargeable cell is designed with conductive polymer?

A) Plastic cell

B) Nickel metal hydride cell

C) Gelled electrolyte lead acid cell

D) Lead acid cell

3. What is the colour of positive electrode in fully charged lead acid battery?

- A) Reddish brown
B) Spongy grey colour
C) Grey colour
D) Red colour

10. What is the effect on a secondary cell supplying current to the load?

A) Discharging

B) Charging

C) Unloading

D) Leaking

4. What is the use of battery analyzers with rapid-test program?

- A) Test the load current delivered
B) Test the charging current of battery
C) Test the battery life
D) Indicate the health condition of battery

11. Which material is used for negative terminal of alkaline manganese dioxide batteries?

A) Lithium

B) Cadmium

C) Zinc

D) Nickel hydroxide

5. What is the name of the pair of metal strips used in battery cell?

- A) Electrolyte
B) Electrodes
C) Cathode
D) Carbon rod

12. Which device is used to test the fully charged condition of a lead acid battery cell?

A) Hydrometer

B) DC voltmeter

C) Multimeter

D) High rate discharge tester

6. What is the percentage of sulphuric acid in electrolyte used for lead-acid batteries?

- A) 27%
B) 25%
C) 12%
D) 40%

13. What is the rated voltage of a single cell in lead acid battery?

A) 2.2 V

B) 2.0 V

C) 12 V

D) 1.5 V

7. What is the electrolyte level maintained above the top of the plates in lead acid battery cells?

- A) 16 mm to 25 mm
B) 2 mm to 4 mm
C) 5 mm to 8 mm
D) 10 mm to 15 mm

14. Which electrolyte is used in maintenance free lead acid batteries?

A) Potassium electrolyte

B) Gelled electrolyte

C) Ceramic electrolyte

D) Sodium electrolyte

8. What is the total voltage of six 1.5 V cells, connected in series?

15. Which method is adopted to charge a car battery with voltage rating of 2.3 V per cell?

A) Constant voltage charging method

B) Trickle charging method

C) Constant current charging method

D) Float charging method

16. What is the specific gravity of concentrated sulphuric

acid?

- A) 1.175
- B) 1.835
- C) 1.245
- D) 1.945

17. What is the unit of electric charge?

- A) Ampere
- B) Hertz
- C) Coulomb
- D) Volts

18. What is the rated output voltage of a silver oxide cell?

- A) 1.0 VDC
- B) 4.0 VDC
- C) 1.5 VDC
- D) 2.5 VDC

19. Which is the additional percentage of power delivered by the lithium ion compared to NiMH battery?

- A) 25%
- B) 60%
- C) 0.15
- D) 40%

20. Which battery is made from non-toxic materials?

- A) Lithium ion (Li-Ion)
- B) Nickel metal hydride (NiMH)
- C) Nickel cadmium (Nicad)
- D) Lithium polymer (Li-Poly)

21. What is the name of the process to maintain the recommended level of electrolyte in lead-acid battery cell?

- A) Charging the cell
- B) Topping up
- C) Cycling of the cell
- D) Recharging

22. Which electrolyte is used in lead-acid battery?

- A) Zinc chloride
- B) Sulphuric acid
- C) Potassium hydroxide solution
- D) Alkaline solution

23. Why the load testing is done on the lead-acid battery?

- A) Measure the rated output voltage
- B) Verify the rated power delivery
- C) Test the dimensional accuracy
- D) Test I²R power loss in the battery cell

24. What is the range of current rating of lead acid batteries used in automobiles?

- A) 2.5 to 4.5 Amp
- B) 10 to 25 Amp
- C) 100 to 400 Amp
- D) 5 to 10 Amp

25. Which battery is used for cellular phones?

- A) Sodium sulphur
- B) Zinc chloride
- C) Lithium ion
- D) Nickel ion

26. How batteries are classified?

- A) Dry cells and alkaline cells
- B) Button cells and lithium cells
- C) Primary cells and secondary cells
- D) Cylindrical cells and rectangular cells

27. What is the lowest voltage level of discharging the lead-acid battery?

- A) 1.85 V
- B) 1.7 V
- C) 1.2 V
- D) 1.5 V