Monthly Test

March 2026

Electronic mechanic

Govt ITI Yadahalli

Q. ID: ITISKILL8206CH

Answer Key

Duration: 60 Mins **Total Marks: 29** **Q.ID: ITISKILL8206CH**

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

A) Constant voltage charging method
B) Constant current charging method
C) Trickle charging method
D) Float charging method

Answer: A) Constant voltage charging method

2. Which rechargeable cell is designed with conductive polymer?

A) Lead acid cell
B) Nickel metal hydride cell
C) Gelled electrolyte lead acid cell
D) Plastic cell

Answer: D) Plastic cell

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

A) 2.0 V
B) 2.2 V
C) 1.5 V
D) 12 V

Answer: B) 2.2 V

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

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

Answer: D) 40%

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

A) High rate discharge tester
B) Hydrometer
C) Multimeter
D) DC voltmeter

Answer: A) High rate discharge tester

6. What is the specific gravity of concentrated sulphuric acid?

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

Answer: D) 1.835

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

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

Answer: A) 27%

8. What is the unit of electric charge?

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

Answer: A) Coulomb

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

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

Answer: B) Reddish brown

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

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

Answer: A) 1.7 V

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

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

Answer: B) Topping up

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

A) Leaking
B) Charging
C) Unloading
D) Discharging

Answer: D) Discharging

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

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

Answer: B) 1.5 VDC

14. Which battery is used for cellular phones?

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

Answer: D) Lithium ion

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

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

Answer: B) Measure the rated output voltage

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

A) Ceramic electrolyte
B) Gelled electrolyte
C) Sodium electrolyte
D) Potassium electrolyte

Answer: B) Gelled electrolyte

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

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

Answer: B) Nickel metal hydride (NiMH)

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

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

Answer: A) Sulphuric acid

19. How batteries are classified?

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

Answer: C) Primary cells and secondary cells

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

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

Answer: C) Chemical energy into electrical energy

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

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

Answer: A) 10 mm to 15 mm

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

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

Answer: D) Indicate the health condition of battery

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

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

Answer: D) Electrodes

24. How the circuit schematic drawn using the simulation software is tested?

A) Using external oscilloscope
B) Using multimeter
C) Using virtual oscilloscope
D) Using analysis menu

Answer: D) Using analysis menu

25. How batteries are classified based on their working?

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

Answer: C) Primary cells and secondary cells

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

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

Answer: B) 100 to 400 Amp

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

A) Cadmium
B) Nickel hydroxide
C) Lithium
D) Zinc

Answer: D) Zinc

28. Which space is used to design circuit in schematic editor of the Tina software?

A) Components type space
B) Components groups space
C) File operation space
D) Circuit work space

Answer: D) Circuit work space

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

A) 6 VDC
B) 3 VDC
C) 12 VDC
D) 9 VDC

Answer: D) 9 VDC