



PHYSICS

BOOKS - TARGET PUBLICATION

CURRENT ELECTRICITY AND MAGNETISM

Exercise

1. Fill in the blanks :

Negatively charged particles which get

transferred from one object to another when rubbed against each other are



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2. Fill in the blanks :

During A large current flows from cloud to the ground .



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3. Fill in the blanks:

The SI unit of electric potential difference is the



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4. Fill in the blanks :

Flow of constitute an electric current .



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5. Fill in the blanks :

Unit electrical Flowing through a wire in one second is called as unit current .



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6. Fill in the blanks :

..... Terminal of lead -acid cell is lead dioxide .



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7. Fill in the blanks :

..... Cells are used in cars , trucks and motorcycles .



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8. Fill in the blanks :

..... Cells are used in modern equipments such as smart phones and laptops .



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9. Fill in the blanks :

The connection in which various electrical components are connected is called an



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10. Fill in the blanks :

Electricity is supplied to household equipments from outside the house instead of



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11. Fill in the blanks :

A Is formed when two or more cells are connected in series



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12. Fill in the blanks :

Hans christian oersted was the first to observe effects of electric current .



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13. Write proper words from the following group of words in the blanks and rewrite the completed sentences:

Water in the waterfall flows from a higher level to the lower level because of ----



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14. Write proper words from the following group of words in the blanks and rewrite the completed sentences:

In an electric circuit, electrons flow from a

point of ----potential to the point of ----
potential



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15. Write proper words from the following group of words in the blanks and rewrite the completed sentences:

The difference between the electrostatic potential of the positive end the negative end of an electric cell is the ---- of the cell



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16. Write proper words from the following groups of words in the blanks :

(magnetism, 4.5 v, 3.0 v, gravitational attraction, potential difference, potential., higher, lower, 0 v)

Three electric cells of potential differences 1.5 V each have been connected as a battery . The potential difference of the battery will be



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17. Write proper words from the following group of words in the blanks and rewrite the completed sentences:

An electric current flowing in a wire creates ---- around the wire.



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18. Choose the correct alternative :

Ni - Cd cell delivers a potential difference of Volts .

A. 2

B. 1.5

C. 1.2

D. 3

Answer: A::B



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19. Choose the correct alternative :

The connection in which many cells are connected in series is known as

A. battery

B. Ni-Cd cells

C. dry cells

D. lead-acid cells

Answer: A::B



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20. Choose the correct alternative :

If each cells has a potential difference of 2 V ,

then the total potential difference when four cells are connected in series is

A. 2 v

B. 8 v

C. 0.5 v

D. 0 v

Answer:



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21. Choose the correct alternative :

Magnetic field is created around a wire when
..... Flows through it .

A. electrolyte

B. electrostatic potential

C. electrical energy

D. electric current

Answer: C



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22. Choose the correct alternative :

When the battery connected to an electromagnet is reversed .

A. the magnet needle kept near it will show deflection in opposite direction

B. there will not be any current flowing through the circuit

C. magnetic needle kept near it will come back to its original position and will stay here

D. electromagnet will lose its magnetism

Answer: A::C::D



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23. Name the following :

The electric level , which decides the direction of flow of electric charges .



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24. Name the following :

A source required to produce a uniform flow of charges in a circuit .



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25. Name the following :

It is used to obtain higher potential difference as compared to potential difference obtained with the help of single cell .



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26. Name the following :

It is formed by wounding a conductor (a copper wire) around an iron piece/screw.



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27. Right or wrong . If wrong , write the correct sentence :

An object doesn't show any charge though its atoms contain charged particles .



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28. State whether the following statements are True or False:

In the external circuit, the conventional current flows from the positive terminal of the cell to the negative terminal of the cell



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29. Right or wrong . If wrong , write the correct sentence :

One ampere is equal to one coulomb per second .



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30. Right or wrong . If wrong , write the correct sentence :

The direction of flow of conventional current is from negative terminal to positive terminal .



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31. Right or wrong . If wrong , write the correct sentence :

Electric current is a scalar quantity .



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32. Right or wrong . If wrong , write the correct sentence :

Lithium ion cells are non-rechargeable cells .



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33. Right or wrong . If wrong , write the correct sentence :

Electromagnet is a permanent magnet .



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34. Odd one out :

ZnCl_2 , NH_4Cl , H_2SO_4 , PbO_2



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35. Odd one out :

Electric bulb , electric bell , electric iron ,
electric oven



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36. Complete the analogy :

Electric current : :: Potential difference :
volt (v) .



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37. Complete the analogy :

 : Plug key ::  : _____



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38. Complete the analogy :

Dry cell : $ZnCl_2$ and NH_4Cl :: : Dilute
 H_2SO_4 .



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39. Match the following :

Match the physical quantities given in group

'A' with their units in group 'B' .:

| | Group 'A' | | Group 'B' |
|------|----------------------|----|-----------|
| i. | Electric current | a. | second |
| ii. | Potential difference | b. | ampere |
| iii. | Electric charge | c. | volt |
| iv. | Time | d. | coulomb |



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40. Match the following :

Match the pairs :

| | Coloum I | | Coloum II |
|------|------------------|----|-----------------------|
| i. | Lead dry cell | a. | 1.2 V |
| ii. | Ni-Cd cell | b. | Zinc (Zn) metal layer |
| iii. | Lead-Acid cell | c. | Laptop cells |
| iv. | Lithium ion cell | d. | Pb electrode |

Answer:



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41. What will happen if a glass rod is rubbed on a silk cloth?



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42. How do objects get charges?



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43. What are static and moving charges?



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44. Answer the following :

Moving negatively charged particles are the electrons . Can this negative charge be made to flow ?



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45. Answer the following :

Can electricity be made to flow like water flowing from higher to lower level ?



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46. Answer the following :

When is current electricity generated ? Give examples where flow of current is observed .



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47. Answer the following :

How can we measure water flow emerging from a pipe ?



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48. Answer the following :

How is the electric current measured ?



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49. Answer the following :

Explain the concept of electrostatic potential .



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50. Answer the following :

What is potential difference ? State its SI unit .



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51. Answer the following :

Write a short note on electric cell .



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52. Answer the following question

Describe the construction working and usefulness of a dry cell, with the help of a diagram.



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53. Answer the following :

Explain construction , working and applications of lead-acid cell , with the help of neat diagram .



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54. Answer the following :

State two advantages of Ni-Cd cell .



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55. Answer the following :

State the difference between the storing capacity of lithium ion cells and Ni-Cd cells .



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56. Answer the following :

Classify the following applications into the type of cells (Lithium ion cells , dry cells , Ni-Cd cells)

Radio , torches , smart phones , cars ,

uninterrupted power supplies , trucks , motorcycles , wall clocks , laptops .



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57. In an electric circuit ,a battery and a bulb have been connected and the battery consists of two cells of equal potential difference. If the bulb is not glowing ,then which tests will you perform in order to find out the reason for the bulb not glowing?



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58. Answer the following :

State the observation made by Hans Christian Oersted on the basis of his experiment with wire carrying current .



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59. Answer the following :

State a simple method by which one can locate concealed wiring in a wall .



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60. Write a short note on electromagnets.



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61. Answer the following :

Give examples of any four devices in which electromagnets are used .



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62. Describe the construction and working of an electric bell with the help of a diagram.



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63. Give reasons :

Objects around us are filled with plenty of electrical charges but don't show any charges .



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64. Give reasons :

In transistor radio , 2-3 dry cells are used .



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65. You must have seen the car battery available in the market. It is called a battery and not a cell. Why?



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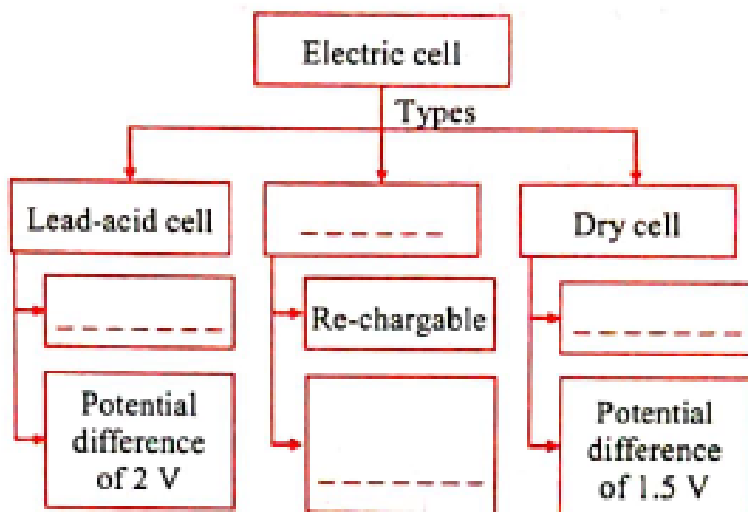
66. Distinguish between :

Dry cell and lead - acid cell



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67. Complete the given chart / table :



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68. A battery is to be formed by joining 3 dry cells with connecting wires. Show how you will connect the wires by drawing a diagram.



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69. Question based on diagram :

Electric cells having 2V potential difference each have been connected in the form of battery . What will be the total potential

difference of the battery in both cases ?:



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70. Question based on diagram :

Electric cells having 2V potential difference each have been connected in the form of battery . What will be the total potential difference of the battery in both cases ?:

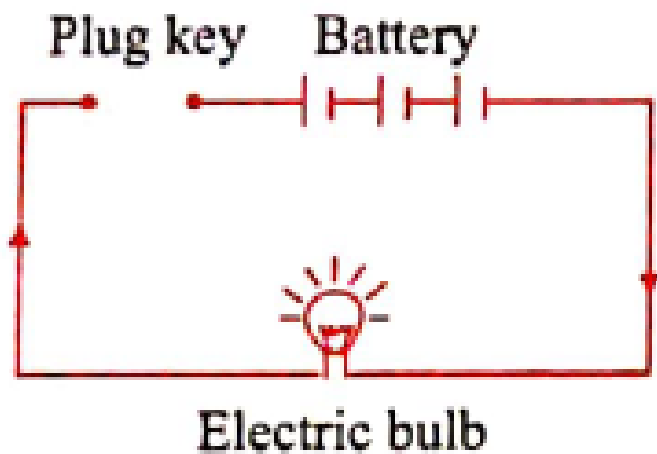




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71. Question based on diagram :

Correct and complete the following circuit diagram .:

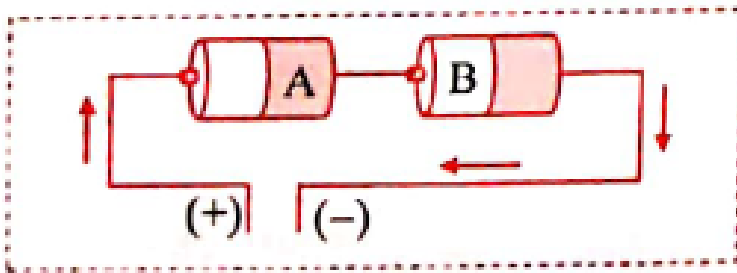


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72. Question based on diagram :

Observe the given figure and answer the questions below it :

The terminals A and B denotes :



A. positive and negative terminals
respectively

B. negative and positive terminals
respectively

C. negative terminals

D. positive terminals

Answer: negative and positive terminals respectively

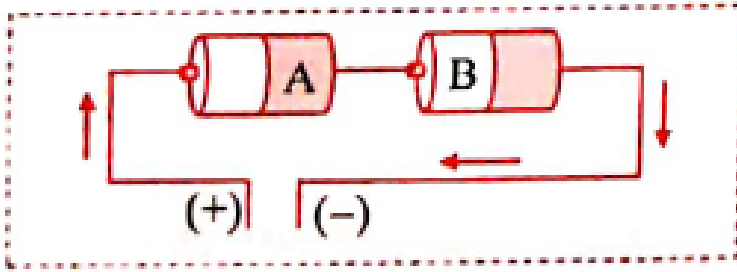


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73. Question based on diagram :

Observe the given figure and answer the questions below it :

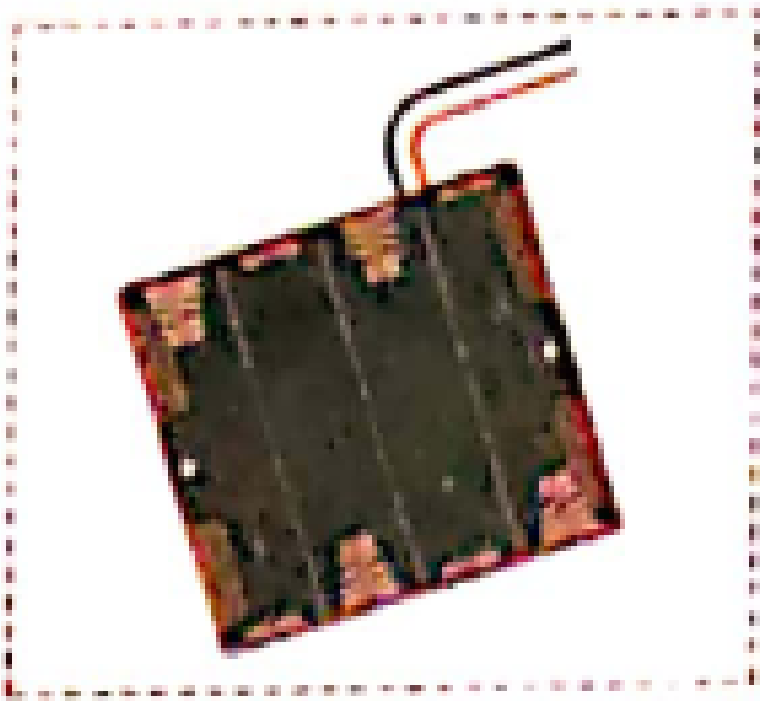
What does the arrows represent ? :



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74. Question based on diagram :

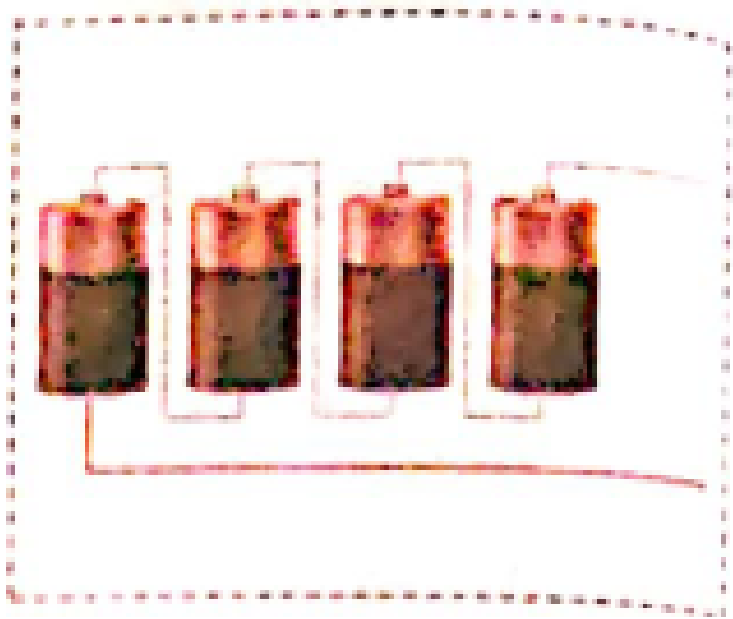
Name the figures below and state their uses :



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75. Question based on diagram :

Name the figures below and state their uses :



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76. Question based on paragraph :

Amol was performing an experiment with a simple electric circuit . He connected an electric bulb , a plug key and a cell using

connecting wires as shown in the circuit diagram given below :

Answer the following questions based on the above electrical circuit :

What happens to the electric bulb when the plug key is closed ?



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77. Question based on paragraph :

Amol was performing an experiment with a simple electric circuit . He connected an

electric bulb , a plug key and a cell using connecting wires as shown in the circuit diagram given below :

Answer the following questions based on the above electrical circuit :

What happens to the electric bulb when the cell is removed ?



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78. Question based on paragraph :

Amol was performing an experiment with a

simple electric circuit . He connected an electric bulb , a plug key and a cell using connecting wires as shown in the circuit diagram given below :

Answer the following questions based on the above electrical circuit :

Give direction of electric current , when it flows through the circuit .



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79. Question based on paragraph :

Amol was performing an experiment with a simple electric circuit . He connected an electric bulb , a plug key and a cell using connecting wires as shown in the circuit diagram given below :

Answer the following questions based on the above electrical circuit :

Give directions of electrons , when it flows through the circuit .



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80. Question based on paragraph :

Amol was performing an experiment with a simple electric circuit . He connected an electric bulb , a plug key and a cell using connecting wires as shown in the circuit diagram given below :

Answer the following questions based on the above electrical circuit :

Will the electric bulb glow , if the cell is connected in reverse direction ?



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81. Which constituents are present in an atom?



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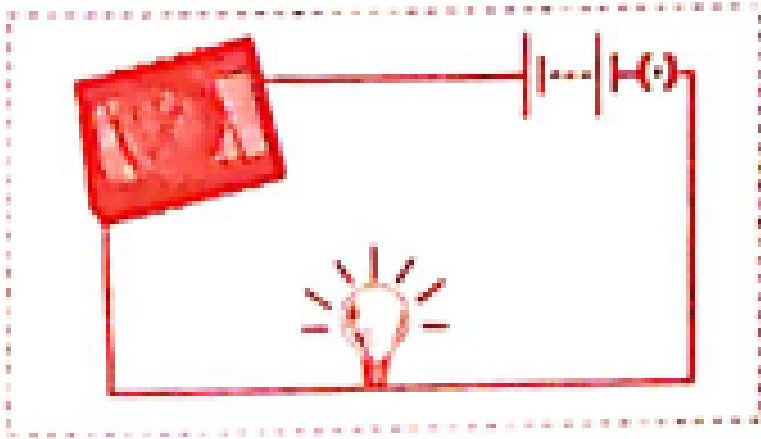
82. Take the inside tray of a used up match box and place a small magnetic needle inside the tray . Now take a long connecting wire and wind it around the tray . Complete the electric circuit by connecting in it , this wire , electric cell , plug key and a bulb as shown in the

below figure .:

Mark the position of the magnetic needle .

take a bar magnet near to the magnetic needle .:

What do you observe ? :



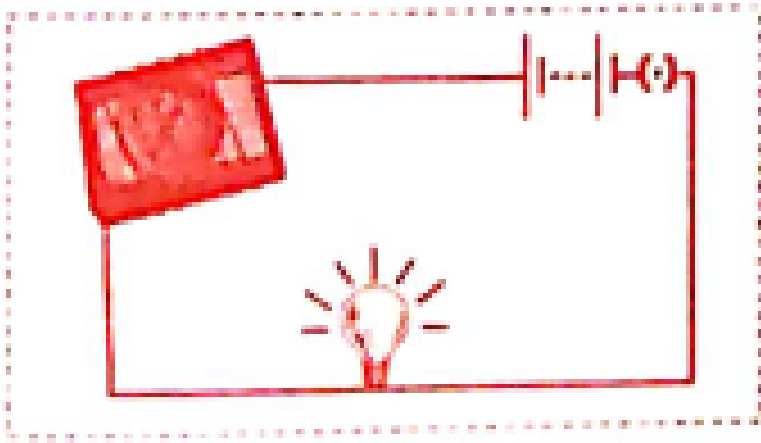
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83. Take the inside tray of a used up match box and place a small magnetic needle inside the tray . Now take a long connecting wire and wind it around the tray . Complete the electric circuit by connecting in it , this wire , electric cell , plug key and a bulb as shown in the below figure .:

Mark the position of the magnetic needle .
take a bar magnet near to the magnetic needle .

keep looking at the needle and close the plug key . the bulb will light up , and you will realize

that the current has started flowing . does the magnetic needle change its position ? :



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84. Answer the following :

Fill in the blanks :

Electrons in the wire flow due to between the two ends of the dry cell .



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85. Answer the following :

State right or wrong . If wrong , write the correct sentence :

Conventional current flows in the same direction as that of electrons .



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86. Answer the following :

Match the physical quantities given in column I with their SI units given in column II .



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87. Answer the following :

Name the following :

Cell used in an uninterrupted power supplies (UPS).



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88. Answer the following :

Complete the given analogy :

Potential differences across lead-acid cell : 2 V

:: Potential difference across Ni :



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89. Choose the correct alternative :

If each cells has a potential difference of 8 V ,

then the total potential difference when four

cells are connected in series is





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90. Choose the correct alternative :

..... are used to produce a strong magnetic field useful in scientist research .



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91. Choose the correct alternative :

..... is created around a wire when electric current flows through it .



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92. Answer the following :

Why does car uses a battery instead of a cell ?



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93. Write a short note on electromagnets.



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94. Answer the following :

Draw a neat labelled diagram of lead acid cell and explain its construction and working .



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95. Answer the following :

Draw a circuit diagram with a battery of three cells connected to an electric bulb such that the electric bulb glows .



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96. Answer the following :

Explain in detail about the electric bell with the help of a diagram .

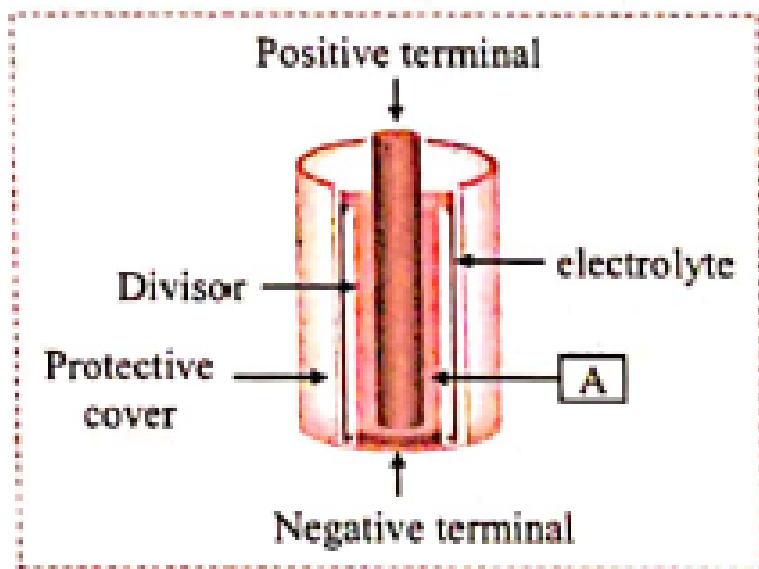


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97. Answer the following :

Answer the following questions based on given diagram :

Name the cell shown in the given diagram .:

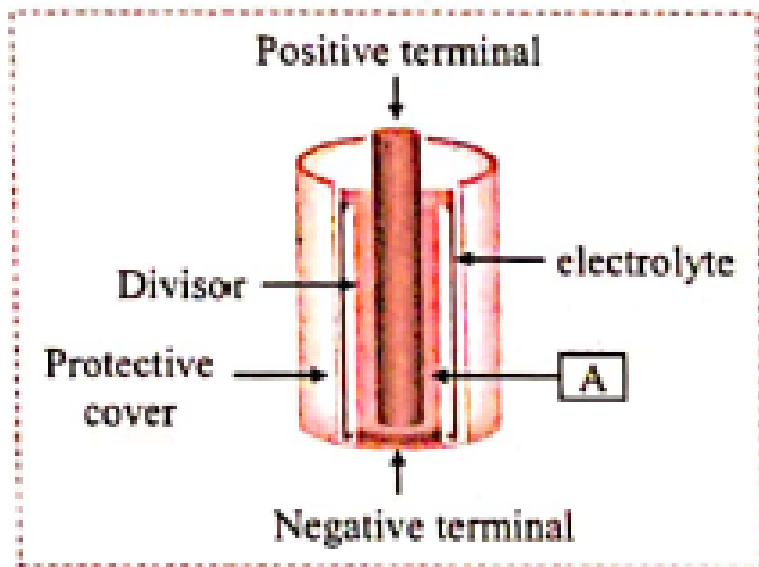


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98. Answer the following :

Answer the following questions based on given diagram :

Which metals acts as positive terminal of the cell ? :



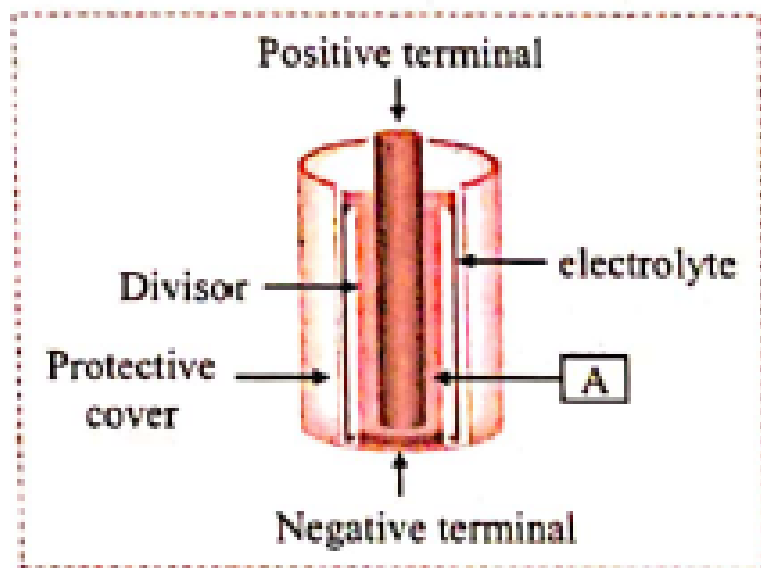
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99. Answer the following :

Answer the following questions based on

given diagram :

Which metals layer acts as negative terminal of the cell ?

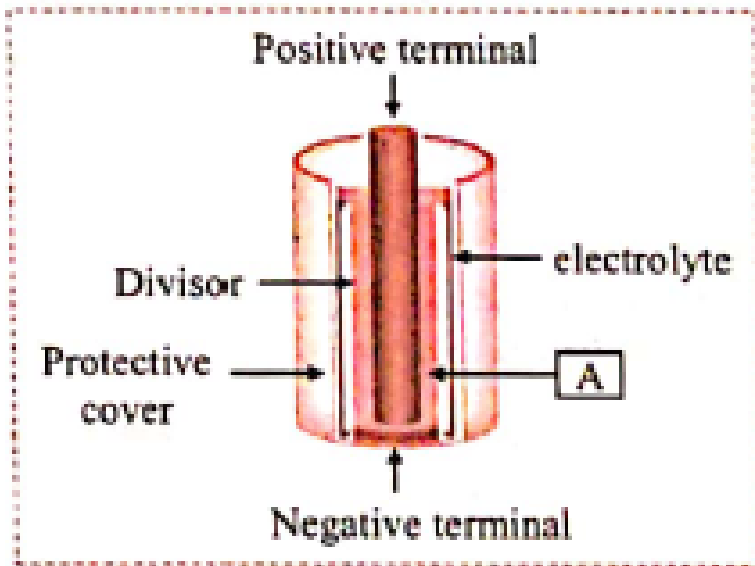


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100. Answer the following :

Answer the following questions based on given diagram :

What does label A represent ? :

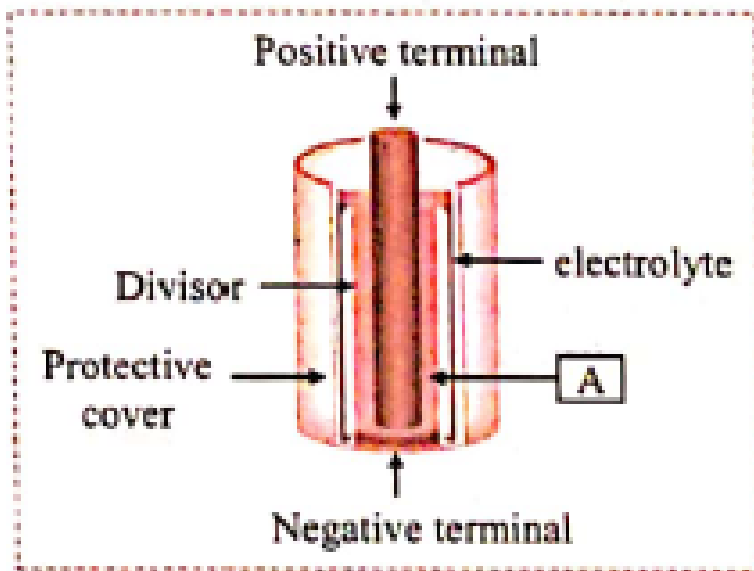


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101. Answer the following :

Answer the following questions based on given diagram :

What does the electrolyte in the given cell consist of ? :



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