

I. Choose the right option from the following statements:

3x1=3

1. A) When lead nitrate powder is heated it gives out brown fumes.

R) The brown fumes is due to nitrogen dioxide gas

i) A) is true ii) R) is incorrect

iii) Both (A) and (R) are incorrect

iv) Both (A) and (R) are true

2. Assertion: When the direction of velocity of moving charge is perpendicular to the magnetic field, it experiences a maximum force.

Reason: Force on the moving charge does not depend on the direction of magnetic field in which it moves.

i) A is true but the R is false.

ii) A is true R supports A.

iii) A & R are false

iv) A is false but the R is correct.

3. Assertion A) A geneticist crossed two pea plants and got 50% tall and 50% dwarf in the progeny.

Reason: (R): One plant was heterozygous tall and the other was dwarf

i) A is true but the R is false ii) A is true R supports A.

iii) A & R are false iv) A is false but the R is correct.

II. Fill in the blanks:

4x1=4

1. The decomposition of vegetable matter into compost is an example of an ____ reaction.

2. Inside the magnet, the field lines moves from ____ to ____.

3. Transmission of traits from one generation to the next generation is called ____.

4. In the following cross write the characteristics of the progeny. RRYy x RRYy _____.

III. Answer in one sentence:

6x1=6

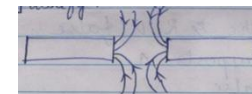
1. What happens when quick lime is added to water?

Write the chemical equation.

2. Why should we store hydrogen peroxide in coloured bottles?

3. Identify the poles of the magnet in the given figure.

Justify.



4. How can a magnetic field be produced without using a magnet?

5. In a cross between a tall pea plant (TT) and short pea plant (tt), what will be the characteristics shown by the F1 generation?

6. Define the term – Variation.

IV. Answer in brief:

4x3=12

1. What is meant by decomposition reaction? Write the chemical equation for decomposition reactions where energy is supplied in the form of heat, light or electricity.

2. Draw the pattern of magnetic field lines through and around a current carrying loop of wire.

i) Mark the direction of electric current in the loop and magnetic field lines.

a) How would the strength of magnetic field due to current carrying loop be affected if

i) Radius of the loop is reduced to half its original value?

ii) Strength of current through the loop is doubled?

3. i) State the Mendel's a) Law of Segregation b) Law of Independent Assortment.

ii) Why Mendel choose garden pea plant for his experiments?

4. How is the Sex of an offspring determined in the zygote in human beings? Explain with suitable diagram showing the cross between male and female gametes.