

# 3.3 Inheritance

## Question Paper

Course	DP IB Biology
Section	3. Genetics
Topic	3.3 Inheritance
Difficulty	Easy

**Time allowed:** 10  
**Score:** /5  
**Percentage:** /100

### Question 1

Which of the following statements best describes how Mendel eliminated any uncertainty from his experiments?

- A. He performed a large number of crosses over many years.
- B. He studied the trait of height, which could be measured easily.
- C. He studied a wide variety of traits, such as flower colour, shape of pea, height of stem.
- D. He carefully transferred pollen from one pea plant to the reproductive parts of another.

[1 mark]

### Question 2

Which option correctly completes the sentence below?

**The segregation of alleles occurs during \_\_\_\_\_ in eukaryotic organisms**

- A. Mitosis
- B. Binary fission
- C. Meiosis
- D. DNA replication before cell division

[1 mark]

### Question 3

Which of the following statements correctly describes co-dominance?

- A. The alleles are both expressed to an equal extent in the phenotype.
- B. Two alleles are 'blended together'.
- C. One allele is dominant over the other.
- D. Neither allele is expressed in the phenotype.

[1 mark]

#### Question 4

Which of the following statements is a feature of X-linked genetic diseases in humans?

- A. Females can't inherit the defective gene as they don't possess a Y chromosome.
- B. Females can either be normal, a carrier or have the disease.
- C. Males can be a carrier for the defective allele.
- D. Females can only be heterozygous for the defective gene.

[1 mark]

#### Question 5

Which of the following statements correctly describes the consequences of the Chernobyl nuclear accident in 1986?

- I. Concentrations of radioactive iodine in the environment increased.
  - II. There was a large increase in the reported cases of thyroid cancer.
  - III. Horses and cattle near the nuclear power plant died due to damage to their thyroid glands.
  - IV. The effects of the disaster were localised to the immediate area.
- A. I and II only.
  - B. I, II and III.
  - C. III and IV only
  - D. I, II, III and IV.

[1 mark]