3.1 Genes & Chromosomes

Easy

BIOLOGY

IB HL

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Question Paper

Course	DP IB Biology
Section	3. Genetics
Topic	3.1 Genes & Chromosomes
Difficulty	Easy

Time allowed: 10

Score: /5

Percentage: /100

Question 1

Which of the individuals below is represented by the following karyogram?
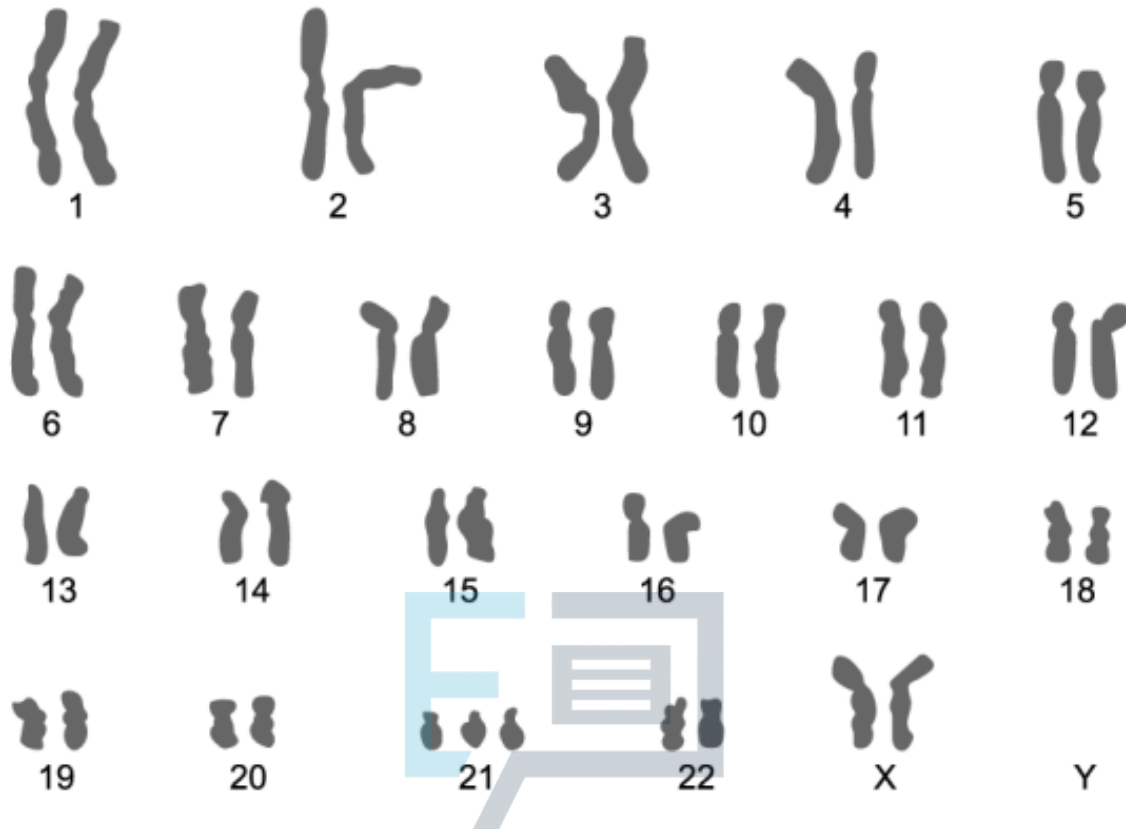
A. A male with a chromosomal abnormality

B. A genetically normal female

C. A male with Down syndrome

D. A female with Down syndrome

[1 mark]

Question 2

Which of the following statements about genomes is **not** correct?

A. Humans have around 20 000 genes

B. Species vary in the number of genes they have

C. The number of genes of an organism is not proportional to genome size

D. Humans have the most genes of any organism

[1 mark]

Question 3

Which option correctly completes the sentence below?
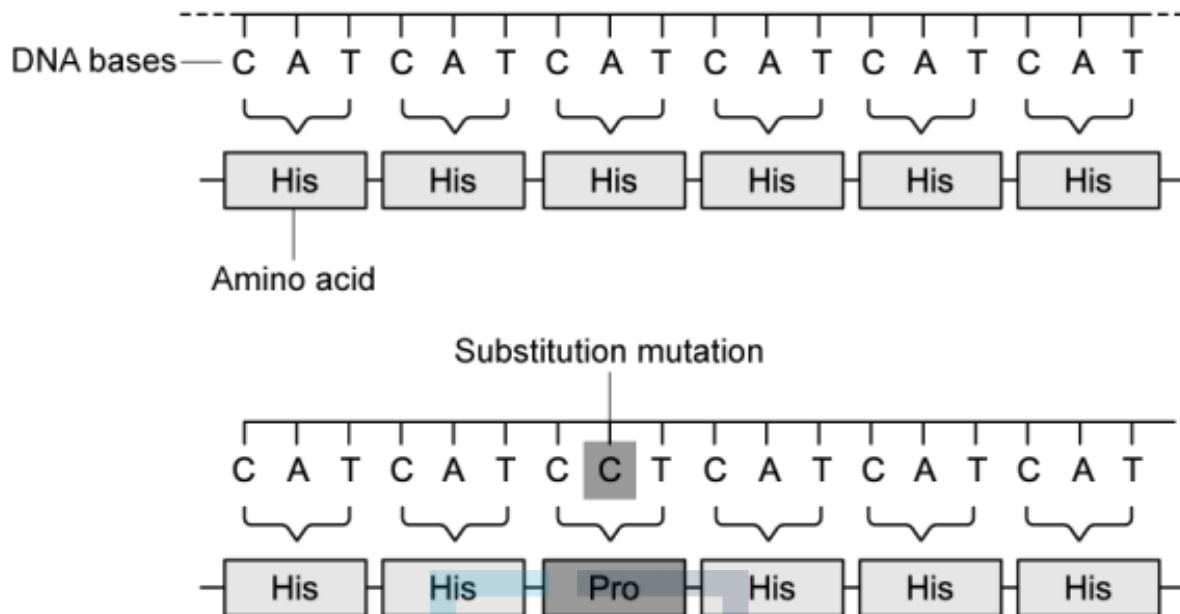
Multiple alleles are present _ _ _ _ _ _ _ _ _.

A. At the same locus on homologous chromosomes

B. At different loci on different chromosomes

C. At different loci on the same chromosome

D. On sister chromatids

[1 mark]

Question 4

Which of the following statements, correctly describes the impact of the substitution mutation shown below?

A. The codon encoding an amino acid was changed to a stop codon, truncating the polypeptide

B. The sequence of amino acids may code for a different protein structure

C. The resulting polypeptide chain will be elongated

D. There will be no change in the polypeptide chain

[1 mark]

Question 5

Which row correctly describes the features of prokaryotic chromosomal DNA?

A.	Associated with histone proteins	Circular
B.	Not associated with histone proteins	Linear
C.	Not associated with histone proteins	Circular
D.	Contains a few hundred genes	Circular

[1 mark]