### MCQ TEST SERIES

## S12-BZ-C4-PRINCIPLES OF INHERITANCE AND VARIATION

#### 4.9. CHROMOSOMAL ABNORMALITIES

- 1. Chromosomal abnormalities are primarily caused by:
  - A. Hormonal imbalance
  - B. Environmental pollution
  - C. Errors during cell division (non-disjunction)
  - D. Gene point mutations
- 2. The condition where an individual has one extra chromosome is called:
  - A. Monosomy
  - B. Trisomy
  - C. Euploidy
  - D. Nullisomy
- 3. Which of the following syndromes is due to trisomy of chromosome 21?
  - A. Patau's syndrome
  - B. Turner's syndrome
  - C. Down's syndrome
  - D. Klinefelter's syndrome
- 4. Patau's syndrome is caused due to trisomy of:
  - A. Chromosome 21
  - B. Chromosome 13
  - C. Chromosome 18
  - D. Chromosome 23
- 5. Down's syndrome is characterized by:
  - A. Webbed neck and short stature
  - B. Elongated limbs and enlarged testes
  - C. Flattened face, mental retardation, protruding tongue
  - D. Degeneration of motor neurons
- 6. Klinefelter's syndrome is a result of:
  - A. XO karyotype
  - B. XXY karyotype
  - C. XY karyotype
  - D. XYY karyotype
- 7. Klinefelter's individuals are usually:
  - A. Sterile females
    - B. Fertile males
    - C. Sterile males
    - D. Fertile hermaphrodites
- 8. What is the chromosome composition in Turner's syndrome?
  - A. 47, XXY
  - B. 45, XO
  - C. 46, XY
  - D. 47, XYY

- 9. Which of the following symptoms is not typical of
  - Turner's syndrome?
  - A. Webbed neck
  - B. Underdeveloped breasts
  - C. Gynaecomastia
  - D. Rudimentary ovaries
- 10. What is the cause of aneuploidy?
  - A. Gene mutation
  - B. Non-disjunction during meiosis or mitosis
  - C. Chromosomal translocation
  - D. Chemical exposure
- 11. In chromosomal terminology, a "syndrome" refers to:
  - A. Any infectious disease
  - B. A hereditary point mutation
  - C. A set of symptoms due to chromosomal anomaly
  - D. A behavioural disorder
- 12. How many chromosomes are found in a person with Down's syndrome?
  - A. 44
  - B. 45
  - C. 46
  - D. 47
- 13. The most common chromosomal abnormality resulting in viable offspring is:
  - A. Turner's syndrome
  - B. Trisomy 21 (Down's syndrome)
  - C. XO
  - D. Triploidy
- 14. Which of the following is an autosomal trisomy?
  - A. XXY
  - B. XO
  - C. 21-Trisomy
  - D. XY
- 15. Allosomal abnormalities involve:
  - A. Only autosomes
  - B. Chromosome 13
  - C. Sex chromosomes
  - D. Mitochondrial DNA

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#### **ANSWER KEY**

- 1. C
- 2. B
- 3. C
- 4. B
- 5. C
- 6. B
- 7. C
- 8. B
- 9. C
- 10. B
- 11. C
- 12. D
- 13. B
- 14. C
- 15. C