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# INDIAN SCHOOL MUSCAT SECOND PERIODIC TEST

# **BIOLOGY**

CLASS: XII Sub. Code: 044 Time Allotted: 50mts

13.09.2018 Max. Marks: 20

# GENERAL INSTRUCTIONS: GENERAL INSTRUCTIONS:

- All questions are compulsory.
  Internal choices are provided for one 2 marks and both the 3marks questions.
- 1. Lactose is considered an inducer in lac operon. Give reason.
- 2. What do you mean by biogenesis?
- 3. If the sequence of the coding strand in a transcription unit is written as follows:
  - 5' ATCGATCGATCGATCGATCGATCG-3'

Write the sequence of mRNA transcribed from it.

- 4. Expand Eco R1.
- 5. Describe the isolation of DNA from bacterial cell.
- 6. Explain any two methods of vector less gene transfer. 2
- 7. Why *hn* RNA needs to undergo splicing?
- 8. Differentiate between the theories of Charles Darwin and Hugo de Vries regarding evolution. 2

# OR

What is founder effect? List any two factors affecting Hardy Weinberg equilibrium.

- 9. Describe two salient features of genetic code.
- 10. Explain Nucleosome model of chromosome with a neat labeled diagram.

### OR

List any 3 salient features of Double Helix model of DNA.

11. Discuss different steps involved in the process of amplification of DNA.

### OR

Explain how  $\beta$  galactosidase site acts as selectable marker.

# End of the Question Paper