

60713

**INTERNATIONAL INDIAN SCHOOL, DAMMAM**

**FIRST TERMINAL EXAMINATION- JUNE-2015**

CLASS: XII

Time: 3 Hrs

SUBJECT: BIOTECHNOLOGY

Max Marks: 70

**General instructions**

- (1) All questions are compulsory.*
- (2) There is no overall choice. However internal choice has been provided in one question of three marks and three questions of five marks. You have to attempt only one of the choices in such questions. Question paper contains four sections – A, B, C and D*
- (3) Question numbers 1 to 5 are very short answer questions, carrying 1 mark each.*
- (4) Question numbers 6 to 15 are short answer questions, carrying 2 marks each.*
- (5) Question numbers 16 to 25 are also short answer questions, but carrying 3 marks each.*
- (6) Question numbers 26 to 28 are long answer questions, carrying 5 marks each.*
- (7) use of calculators is not permitted. However, you may use log tables, if necessary.*

**SET A**

**SECTION A ( 1 Mark )**

1. If the gene coding for the gas hormone , ethylene in plants is mutated, what commercial importance can this serve?
2. Will you prefer bacterial or yeast host for expression of eukaryotic products. Give one reason?
3. Write the role of high concentration of auxins and cytokinins in organogenesis of plant tissue culture.
4. Expand GRAS, GMO, GMP.
5. Name two molecular/selectable marker genes used in RDT experiments.

**SECTION B ( 2 Marks )**

6. A gene coding for enzyme A inhibits pollen formation and another gene coding for enzyme B block the enzyme A so that normal pollens are formed.
  - (a) Identify enzyme A and B.
  - (b) Name the source of gene for enzyme A
7. Write a short note on pBR322.
8. Explain how gene gun functions to deliver gene into plant cells
9. Schematically represent the steps of making recombinant plasmid.
10. Explain how antifoam agents play important role in microbial culture media.
11. How Interspecific/intergeneric cross lead to sterile seeds. Suggest a plant tissue culture method to overcome this problem.
12. Distinguish between blunt end and sticky end cutting of restriction enzymes.

