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Total Number of Pages: 02

B.Tech
PBT51102

5th Semester Regular Examination 2017-18
Plant & Animal Biotechnology

BRANCH: BIOTECH

Time: 3 Hours

Max Marks: 100

Q. CODE: B189

Answer Part-A which is compulsory and any four from Part-B.
The figures in the right hand margin indicate marks.

Q1 Answer the following questions: *multiple type or dash fill up type* (2 x 10)

- a) _____ enzyme used for disaggregation of cell in culture.
- b) The first successfully cloned animal was
a) Sheep b) Goat c) Monkey d) Gibbon
- c) Disaggregating of cells can be achieved by
a) Physical disruption
b) Enzymatic disruption
c) Treating with chelating agents
d) All of the above
- d) The concentration of CO₂ required for culturing animal cells _____?
- e) The most common indicators used in animal cell culture medium are _____?
- f) Embryonic stem cells are derived from the _____ cell masses of normal blastocyst.
- g) _____ gene mediate the transfer of Ti plasmid into plant cell.
- h) _____ method used for direct gene transfer in to the plant cell.
- i) _____ is the essential component of Ti-plasmid is required for integration into plant genome.
- j) _____ process is used for modification of exogenous compound by plant cell.

Q2 Answer the following questions: *Short answer type* (2 x 10)

- a) Define molecular farming? Name two recombinant vaccines produced through plant systems?
- b) What is disarming of Ti plasmid?
- c) Some living plant cells have the capacity to give rise to whole organism. What is the term used to describe this property?
- d) Which hormone controls cell division and cell differentiation in plant cell?
- e) Which is the most commonly used culture medium for callus culture?
- f) The *Agrobacterium* is considered as "natural genetic engineer of plants." Justify the comment?
- g) What is the optimum pH and temperature required for animal cell culture?
- h) Write two important application of animal cell culture?
- i) What is natural media?
- j) Derive an expression for specific growth rate in animal cell culture?

