

SEAT No. _____

No. of printed pages: 02

[10]

SARDAR PATEL UNIVERSITY

M. Sc Integrated Biotechnology – Seven (07) Semester Examination

Wednesday, 25 -04- 2018, Time: 02:00 pm to 05:00 pm

NAME OF COURSE – PLANT TISSUE CULTURE TECHNOLOGY

COURSE NUMBER-PS07CIGIB01

Maximum Marks: 70

Note: (1) All questions are compulsory. (2) Figure to right indicates marks.

Q.1 Choose the most appropriate answer from the four alternatives givens.

[8]

1. Zinc is very important forsynthesis.
(A) Protein (B)Enzyme (C)Vitamin(D)Lipid
2.is an example of naturally occurring cytokinin.
(A) IAA(B) BAP(C)NAA(D)2,4-D
3. Which techniques use for the haploid plant production?
(A)Endosperm culture (B) Embryo culture(C) Anther culture (D) Somatic embryogenesis
4. of plants used for somaclonal variation is an important variable.
(A)Genotype (B)Phenotype (C) Chromosome(D)Both (A) and (B)
5. is the best osmoticum for protoplast.
(A) Calcium (B)Mannitol (C) Sodium bicarbonate (D) Cellulose
6.technique use for virus eradication.
(A) Anther culture(B) Embryo culture(C)Apical meristem culture(D)Organ culture
7. Which are advantage of Agrobacterium mediated transformation in-plants?
(A) Natural transfer(B)Easy to process(C)Specific genotype(D) Selection of explants
8. Binary vectors system consists ofautonomously replicating plasmids.
(A) Three (B) Two(C) Five (D)One

Q.2 Answer the following (Any Seven).

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1. Enlist the different techniques use for explant sterilization.
2. Write the application of plant tissue culture.
3. Enlist the example of auxin and cytokinin.
4. Write the application of somaclonal variation.
5. Write the drawback of embryo culture.
6. Define cybrid and somatic hybridization.
7. What are the techniques used for identification of hybrid?
8. Write the difference between of transgenic plant and hybrid plant.
9. Brief note on Ti plasmid.

- Q.3 A. Explain different methods of explants sterilization. [6]
- B. Discuss the inorganic components of MS media in detail. [6]
- OR
- B. Enlist the basic requirement of PTC and explain the role and application. [6]
- Q.4 A. Give an account on somatic embryogenesis with advantage and disadvantage. [6]
- B. Write a short note on Endosperm culture. [6]
- OR
- B. Define somaclonal variation. Explain the different pathway through produce the somaclonal variation. [6]
- Q.5 A. Explain the technique of somatic hybridization. [6]
- B. Write a short note on Apical meristem culture. [6]
- OR
- B. Define the protoplast. Enlist the different techniques used for protoplast isolation. Explain any technique with advantages. [6]
- Q.6 A. Define Ri plasmid. Explain the structure of Ri plasmid. [6]
- B. Write a note on Particle bombardment technique. [6]
- OR
- B. Give an account on cointegrate vectors. [6]

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