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SEAT No. _____

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY

B.Sc. (SEM-6) EXAMINATIONS

10-00 AM TO 1-00PM

WEDNESDAY , 4TH APRIL-2018

US06CBOT05 PLANT BIOTECHNOLOGY (MARKS-70)

Q-1 MULTIPLE QUESTIONS:

(10)

(a) A low auxin-cytokinin ratio:

- (i) stimulates initiation of shoot buds
- (ii) suppress root initiation
- (iii) suppress initiation of shoot buds
- (iv) more than one option

(b) part of the plant used as culturing is known as:

- (i) cutting
- (ii) callus
- (iii) stock
- (iv) explants

(c) Cybrids are produced by:

- (i) fusion of two different nuclei from two different species
- (ii) nucleus of one species but cytoplasm from both the parent species
- (iii) fusion of two same nuclei from same species
- (iv) all of these

(d) Restriction endonuclease is used to cleavage:

- (i) Protein
- (ii) DNA
- (iii) RNA
- (iv) all of these

(e) What is used to make copies of small segments of DNA?

- (i) PAGE
- (ii) PCR
- (iii) Both
- (iv) None of these

(f) PAGE is a technique used to separate:

- (i) protein
- (ii) RNA
- (iii) DNA
- (iv) None of these

(g) A vector used in molecular cloning is a :

- (i) protein
- (ii) RNA
- (iii) DNA
- (iv) All of these

(h) Bioluminescence is caused by the enzyme:

[P.T.O]

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(i)luciferase (ii)octopine synthase(iii)both a and b (iv)none of these

(I)Biotechnology may be a promising technology for a clean environment by the mass production of:

(i)Biodiesel (ii)Bioethanol (iii)both a and b (iv)None of these

(J)The world's first clinically tested plantibody is:

(i)caro Rx (ii)neo Rx(iii)pip (iv)scfv84.66

Q-2 Answer any ten questions:

(20)

(a)what is totipotency?

(b)what is the importance of plant tissue culture?

(c)Write contribution of one scientist in the field of plant tissue culture.

(d)What are restriction endonucleases?

(e)Write full form of RAPD and RFLP.

(f)What is genetic engineering?

(g)How transgenic plant can be produced?

(h) Write names of method of gene transfer.

(i)What are luciferase genes?

(j)What is the role of transgenic plants in degrading pollutants?

(k)Describe edible vaccine in brief.

(l)What are mycoherbicides?

Q-3 Write notes on-(a) cybrids (b)protoplast culture OR

(10)

Q-3 write in general about steps involved in plant tissue culture.

Q-4 Write in detail about polymerase chain reaction. OR

Q-4Write notes on:(a)FISH(b)RFLP

(10)

Q-5Give an illustrated account of gene constructs. OR

(10)

Q-5Describe the direct methods of gene transfer.

(10)

Q-6 State the importance of biotechnology in agriculture. OR

(10)

Q-6 Describe the role of superbug in detail.

(10)