STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086 (For candidates admitted from the academic year 2004-2005 & thereafter)

SUBJECT CODE: BT/MC/AB64

B.Sc. DEGREE EXAMINATION, APRIL 2008 BRANCH V(a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY SIXTH SEMESTER

COURSE PAPER TIME	: MAJOR - CORE : APPLIED BIOTECHNOLOGY : 3 HOURS	4	MAX. MARKS : 1	00
ANSWEI	R ALL QUESTIONS	-		
I. FI	LL IN THE BLANKS:		(5 MARK	S)
1. 2.	is regarded as the father of tiss A microbial cell or foreign substance that cause an	es an immu	_	as
3. 4. 5.	are responsible for initiating A small piece of plant taken for culture is calle In human interferon is produced by fibroblast i and	d	<u></u> .	S
II. M	ATCH THE FOLLOWING:		(4 MARKS)
6.	Role of auxin and cytokinin in organogenesis was found out by	- S	koog & Miller	
7. 8. 9.	Cultures incubated at 18°C lead to High auxin and low cytokinin promotes Low auxin and high cytokinin promotes	- Si	loot hoot bud diffenentiatio Juha & Maheshwari hoot	n
III. ST	CATE WHETHER TRUE OR FALSE:		(5 MARKS)
10. 11.	Hybridoma originated as an artificial combinat The nutrient media used in tissue cultures are cand filter sterilisation.			
12.	The haptenes are those substances, which do no vertebrates.	ot produce	the antibodies in	
13.	Xenobiotic is completely synthetic chemical coon earth.	ompound a	nd it is found in nature	
14.	The substances, which elicit immune response,	are known	as immunogens.	
IV. CI	HOOSE THE CORRECT ANSWER:		(4 MARK	S)
15.	Most widely used disinfectants are a) Bromine water b) Mercuric chloride c)	•	-) .
16.	Which one is not a cry gene obtained from Bac a) Cry IA b) Cry IB c) C		d) Cry ID	

- 17. Active immunization by artificial means can be achieved by
 - a) Attenuated organisms

- b) Inactivated organisms
- c) Purified microbial macromolecules
- d) all the above
- 18. The antigenic determinants or epitopes on immunoglobulin molecules full into major categories.
 - a) 2
- b) 3
- c) 4
- d) 5

V. ANSWER ANY SIX OF THE FOLLOWING. EACH ANSWER NOT TO EXCEED 50 WORDS: (6 x 3 = 18)

- 19. Cybrid.
- 20. Totipotency.
- 21. Vaccines.
- 22. Antigen.
- 23. Organogenesis.
- 24. Haptens.
- 25. Immunology
- 26. Gene cloning
- 27. nif genes

SECTION-B

ANSWER ANY FOUR OF THE FOLLOWING. EACH ANSWER NOT TO EXCEED 200 WORDS: $(4 \times 6 = 24)$

- 28. What is biofertilizer? Write a brief note on its benefits.
- 29. Give the composition of MS medium.
- 30. What is gene therapy? Discuss the ethical issues involved in gene therapy.
- 31. Give an account of acquired immunity.
- 32. Explain microbial degradation of xenobiotics.
- 33. Discuss somatic hybridization.

SECTION -C

ANSWER ANY TWO OF THE FOLLOWING. EACH ANSWER NOT TO EXCEED 1000 WORDS: (2x 20 = 40)

- 34. Describe the methods to produce transgenic plants with herbicide resistance
- 35. Give an account of applications of plant tissue culture in horticulture, forestry and pharmaceutical industry.
- 36. What is cell mediated immune system? Write the mechanism involved in this system.
- 37. Give the protocol for isolation of plant protoplast. Mention their various applications.
