STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086 (For candidates admitted from the academic year 2011 –12 & thereafter)

SUBJECT CODE: 11BT/MC/AE44

B.Sc. DEGREE EXAMINATION, APRIL 2016 BRANCH V(a) - PLANT BIOLOGY AND PLANT BIOTECHNOLOGY FOURTH SEMESTER

	JOR – C		VOLOCV OF ANCI	OCDEDMC
		AND ENIDS	HOLOGI OF ANGI	MAX. MARKS: 100
		SECTI	ON-A	
A. ANSWER THE FOLLOWING I. Choose the correct answer				18 Marks (1x5=5)
Double fertiliza	ation is ch	aracteristic of	,	
a. Pteridophyt	tes b. Br	yophytes	c. Gymnosperms	d. Angiosperms
		_		er in d. Monocot seed
				d. Monocot seed
a. Pericycle			c. Endodermis	d. Endosperm
a. Exarch			c. Bicollateral	d. Endarch
				1. D. d. 1
a. Internode	b. No	ode	c. Shoot apex	d. Petiole
II. Fill in the blanks:				(1x5=5)
The outermost	layer of s	tele in a dicot	stem is .	
Commercial co	ork is a de	ad tissue with	thickened walls by the	-
III. State True or False				(1x4=4)
				at is the result of increase
			-	ms.
Quiescent cent	Quiescent centre have inactive cells.			
Vessels are not	character	ristic of the A	ngiosperms.	
IV.Match the following				(1x4=4)
Xylem	-	Phellogen		
Hypodermis Phytidoma	-	Isobilateral		
	: AN: : 3 H WER THE FOL e the correct ans Double fertiliza a. Pteridophyt Numerous vasc a. Monocot st The Presence of a. Pericycle The arrangeme a. Exarch In Angiosperm a. Internode in the blanks: The outermost Commercial co Nyctanthes arb In a mature dic The Bisporic en e True or False Palms do not in in size of cells, Companion cel Quiescent cent Vessels are not the following Xylem	: ANATOMY : 3 HOURS WER THE FOLLOWING e the correct answer Double fertilization is cha. Pteridophytes b. Bry Numerous vascular bunda. Monocot stem b. Mo The Presence of casparia a. Pericycle b. Per The arrangement of xyle a. Exarch b. Co In Angiosperms the leaf a. Internode b. No in the blanks: The outermost layer of st Commercial cork is a dea Nyctanthes arbor-tristis s In a mature dicot embryo The Bisporic embryosac True or False Palms do not increase in in size of cells, fiber tisst Companion cells are abso Quiescent centre have in Vessels are not character the following Xylem Hypodermis -	: ANATOMY AND EMBR : 3 HOURS SECTION WER THE FOLLOWING the correct answer Double fertilization is characteristic of a. Pteridophytes b. Bryophytes Numerous vascular bundles are arrang a. Monocot stem b. Monocot root The Presence of casparian strips is a cla. Pericycle b. Periblem The arrangement of xylem in a stem is a. Exarch b. Collateral In Angiosperms the leaf gap is found i a. Internode b. Node In the blanks: The outermost layer of stele in a dicot Commercial cork is a dead tissue with Nyctanthes arbor-tristis shows anomal In a mature dicot embryosac, the egg a The Bisporic embryosac are typically_ True or False Palms do not increase in girth, because in size of cells, fiber tissues, intercellu Companion cells are absent in Pteridop Quiescent centre have inactive cells. Vessels are not characteristic of the And the following Xylem - Phellogen Hypodermis - Significant is second in Isobilateral	: ANATOMY AND EMBRYOLOGY OF ANGI : 3 HOURS SECTION-A WER THE FOLLOWING e the correct answer Double fertilization is characteristic of a. Pteridophytes b. Bryophytes c. Gymnosperms Numerous vascular bundles are arranged in a scattered manna a. Monocot stem b. Monocot root c. Monocot leaf The Presence of casparian strips is a characteristic feature of a. Pericycle b. Periblem c. Endodermis The arrangement of xylem in a stem is said to be a. Exarch b. Collateral c. Bicollateral In Angiosperms the leaf gap is found in a. Internode b. Node c. Shoot apex in the blanks: The outermost layer of stele in a dicot stem is

18.

Monocot leaves -

Fibers

V. ANSWER ANY <u>SIX</u> OF THE FOLLOWING QUESTIONS IN 50 WORDS EACH: (6x3=18)

- 19. What are Medullary Rays?
- 20. Describe a stomatal apparatus.
- 21. What is a Pallisade Parenchyma?
- 22. Describe Dendrochronology.
- 23. Define Apomixis.
- 24. What is a Periderm?
- 25. Describe an Orthotropous ovule.
- 26. Write about Apical meristem.
- 27. What are Lenticels?

SECTION-B

ANSWER ANY <u>FOUR</u> OF THE FOLLOWING QUESTIONS IN ABOUT 200 WORDS EACH. DRAW DIAGRAMS WHEREVER NECESSARY. (4x6=24)

- 28. Write notes on Vascular Cambium.
- 29. Explain the following structures Sapwood, Heartwood, Compressionwood, Tensionwood.
- 30. Write about the Primary thickening Meristem in Monocots.
- 31. Explain the structure of Centric Monocot leaf.
- 32. Explain the 3 types of Endosperms.
- 33. Explain leaf Abscission.

SECTION-C

ANSWER ANY <u>TWO</u> OF THE FOLLOWING QUESTIONS IN ABOUT 1000 WORDS EACH. DRAW DIAGRAMS WHEREVER NECESSARY. (2x20=40)

- 34. Describe the process of Double Fertilization.
- 35. Describe Microsporogenesis.
- 36. Describe the process of secondary growth in normal dicot root.
- 37. Write an essay on secondary phloem.
