# SUBJECT CODE NO:- B-2160 FACULTY OF SCIENCE AND TECHNOLOGY B.Sc. F.Y (Sem.-II) Examination OCT/NOV 2019 Botany Paper-V Histology, Anatomy and Embryology

[Time: Three Hours] [Max.Marks:50]

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N.B	Please check whether you have got the right question paper.  i) Attempt all questions.	
	ii) Draw neat and well – labeled diagrams whenever necessary.	
Q.1	Describe Various theories for Root Apex organization	20
	OR	
	Describe microsporogenesis and development of male gametophyte	20
Q.2	Describe in detail the T. S of Dicot leaf.	20
	OR OR	
	Write short Notes on (any four)	20
	a) Anemophily	
	b) L.S. of orthotropous ovule.	
	c) Collenchyma	
	d) Structure of phloem	
	e) Structure of Dicot and monocot seed	
	f) Helobial type of endosperm	
Q.3	Multiple choice questions.	10
	1) When xylem is surrounded by phloem the vascular bundle is called	
	a) Collateral b) Radial c) Amphiceribal d) Amphivasal	
	2) Wood is the common name of	
	a) Cambium b) Vascular bundles c) Phloem d) secondary xylem	
26		
1829	3) Sap wood differ from heart wood in being	
867	a) Darker and non- conducting	
STAN S	b) Softer and non- conducting	
3/20/C	c) Lighter and conducting	
973	d) Harder, darker and less conducting.	
OF TO	4) Dermatogen is a tissue formed by apical meristem and it develops into	
FIFTON	a) cortex b) Xylem c) Epidermis d) Pith	
	& T & T & B & B & C & B & C & B & B & B & B & B	

5) In fertilization			THE OF TO
a) synergids fuse	with the antipoda	l cell.	
, ,	ises with antipoda		
, 00	ferred to the stigm		
	eus fuses with the		
a) The male mach	ous luses with the	4	
6) The entry of poll	en tube into ovule	through micropyle i	s called
a) mesogamy		c) Porogamy	
		67,19,000	
7) A microspore mo	other cell forms		
a) An ovule	b) Embryo sac	c) Pollen sac d)	Pollen grains
			5 (2) (3) (3) (4) (4) (4) (4) (4)
8) After fertilization	n, seed coat develo	ops from	50 4 6 7 0 0 0 6 V
a) Integuments	b) Embryo sac	c) chalaza	d)Ovule
			6 5 5 7 5 5 0 A 6 7 5
9) In angiosperms fa	ree nuclear divisio	on occurs during	
a) Gamete formation	on E	b) Embryo	formation
c) Endosperm forn	nation	d) flower for	rmation
	461179P		
10) Pollination which	ch can occur in the	e same plant is	
a) Herkogamy	b) Cleistogamy	c) Dichogamy	d) Dicliny.

#### SUBJECT CODE NO:- D-2053 FACULTY OF SCIENCE & TECHNOLOGY

B.Sc. F.Y. (Sem-II)

# Examination November/December- 2022 Botany Paper-V Histology, Anatomy and Embryology

Histology, Anatomy and Embryology [Max. Marks: 50] [Time: 1:30 Hours] Please check whether you have got the right question paper. N.B 1. Attempt all questions 2. Draw neat and well labelled diagram wherever necessary. Describe in brief permanent tissue and give a detail account of xylem Q.1 Explain in detail the primary structure of dicot root 20 Describe the process of double fertilization. Add a note on its significance. 20 Q.2 Write Short notes on (Any your) 20 a) Sclerenchyma b) characteristics of Meristematic cells c) T. S. of Monocot leaf d) Heart wood & sapwood zoophily Monocot seed Multiple choice questions 10 The leaf and stem epidemics is occurred with pares called..... c) Guard cell Trichrome b) stomata d) Hole Apical cell theory proposed by. b) Hanstein c) Crick d) None of these Nageli

	D-2053
3.	Protective Secondary covering of certain plants, especially woody plants is called
	a) cortex b) Periderm c) Endodermis d) Guard cells
4.	In seed plants is the structure that give rise to seed.
	a) Anther b) Gametes c) ovule d) None of these
5.	Occurs within a Closed flower
	a) Cross Pollination b) self-Pollination c) Both A & B d) None of above
6.	In embryo has an axis and the two cotyledons are on either side in opposite direction
	a) dicot b) Monocot c) Both A&B d) None of above
7.	The Phloem in the monocot Stem consists of and companion cells
	a) Parenchyma b) sclerenchyma c) dine tubes d) vessels.
8.	According to korper-kappe theory there are two regions, outer and enter the cells divide in a
	pattern known as
	a) 'y' division b) 'L' division c) cell division d) 'T' division.
9.	The that occurs in the cells of the permanent tissue is fairly at lower side
	a) Respiration b) photosynthesis c) Glycolysis d) Metabolism
10.	Sieve tubes are suited for translocation of food because they possess.
	a) Bordered pit b) No end walls
	c) Broader lumen & Pea orated cross walls d) No protoplasm.

# SUBJECT CODE NO:- 2053 FACULTY SCIENCE AND TECHNOLOGY

B.Sc. F.Y (Sem-II)

#### Examination March/April-2022 (To Be Held In June/July-2022) Botany Paper-V

### Histology, Anatomy and Embryology

[Time:	: 1:53 Hours]	•		[Max.	Marks:50
N.B	1. At	whether you have got tempt all questions. raw neat & well labe	9. 9. 4. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.		
Q.1	Describe in details the simple pe	rmanent tissue in pla	nt		20
Q.1	Describe in details the simple pe	OR		8 7 2 3 8 5 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	20
	Describe the origin, structure and	l function of perider	m.		20
Q.2	Explain in detail the primary stru	acture of monocot ro	ot.	1	20
		OR			
	Write short notes on (any four)			S Charles Share	20
	a) Structure of stomata			25 Z	
	b) Phloem tissue			\$ 50 J	
	<ul><li>c) Histogen theory</li><li>d) Growth ring</li></ul>			2	
	e) T.S. of anther				
	f) Anatropous ovule				
Q.3	Multiple choice questions:-				10
(	1. There are three types of r	neristematic tissue; a	pical a	and lateral.	
			) Vascular	d) Intercalary	
9	2. The xylem tissue is response to the leaves.	nsible for the conduc	ction of water and	from the	
10 J. J.	a) Fertilizer b) Gluc	ose c) Minerals	d) Micro el	lements	
	3. Permanent tissue can be o		• •		
	a) Three b)	Four c) '	Two d	) Five	
	4. Many trees have a darker	region of wood at th	ne center of the tru	ink or root called	
	a) Dark wood by	√ / <del>-</del>	c) Pericycle	d) None	
3000	5root hairs are for	med due to elongation	on of some cells o	of eniblema	
430	a) Unicellular		ticellular	F	
B. D. D.	c) Cellular		e of these		

6.	The	fertile portion of s	stam	en 18 calle	ed		555555
	a)	Embryo	b)	Ovule		c) Anther	d) None
7.	Dou	ıble fertilization is	a co	mplex fe	rtiliza	tion mechanism of	plants.
	a)	Non flowering			b)	Gymnosperms	
	c)	Flowering			d)	All of these	
8.	The	order apical cell t	heor	y was rep	laced	by the histogen theor	y proposed by.
	a)	Manoj kuchekar			b	) Robert Hooke	
	c)	Mendel			ď	) Hanstein	
9.		is the outer	mos	t single c	ell lay	yer the cells of which u	isually divide by radial
	wall	ls & give risk to ep	oider	mis	(12) S		
	a)	Plerome	b)	Dermato	gen	c) Meristem	d) Periblem
10.		of Embryo	sac	is found a	at the	micropylar end.	
	a)	Synergids & egg			b)	Polar nuclei	
	c)	Antipodal cells	6		(d)	None of these	

# **SUBJECT CODE NO: - Y-2053** FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. F.Y (Sem-II)

#### **Examination March / April - 2023** Botany Paper-V Histology, Anatomy and Embryology

[Tim	ne: 1.30 Hours] [Max. Ma	rks: 50
N. B		ST.
	2) Draw neat & well labelled diagrams whenever necessary.	
Ο1	What are anidermal tissues? Describe in detail different types of stemate	20
Q1	What are epidermal tissues? Describe in detail different types of stomata.  OR	20
	Describe different theories of cellular organization of root and shoot apex.	
	Describe different theories of centular organization of root and shoot apex.	
$\Omega^2$	Explain in detail the development of male gametophyte in angiosperms.	20
Q2	OR	20
	Write short note on: - (any 4)	20
	a. Glandular and non-glandular trichomes	5
	b. Xylem vessel thickenings	
	c. Anatomy of dorsiventral leaf.	
	d. Functions of phellem, phellogen, phelloderm.	
	e. Contrivances of self-pollinations.	
	f. Anemophily	
3		
Q3	Multiple choice questions.	10
	1 plants have vessels in xylem.	
	a) Pteridophytes b) Angiosperms c) Algae d) Bryophytes	
4	2. Conjoint, collateral & open vascular bundles are found in	
	a) monocots b) Dicots	
	c) Both dicots and monocots d) None of the plants	
	3. In Hydrophytes, floating ability is due to the presence of tissue.	
	a) collenchyma b) chlorenchyma	
5	c) sclerenchyma d) Aerenchyma	
	4 increase the diameter of stem & root.	
	a) Intercalary meristem b) Apical meristem	
	c) Lateral meristem d) All of the these	
	5. Stomata are the example of	
ST.	a) Secretory tissues b) Permanent tissues c) meristematic tissues d) Epidermal tissues	
	(c) mensiemanc ussues (d) Epidermai ussues	

<ul> <li>Y-2053</li> <li>6 tissues are found in all soft plant parts. <ul> <li>a) Parenchyma</li> <li>b) collenchyma</li> <li>c) sclerenchyma</li> <li>d) None of the above</li> </ul> </li> <li>7. Tunica corpus theory is connected with</li> <li>a) Root apex b) Root cap c) shoot apex d) secondary growths</li> <li>8. In embryogenesis, fusion of male gamete and polar nuclei results in</li> <li>a) Endosperm b) embryo c) suspensor d) Zygote</li> <li>9 layer of anther provides nourishment to the sporogenous tissue</li> <li>a) Endothecium b) middle c) Tapetum d) epidermal</li> <li>10. After fertilisation, seed, coat develops from</li> </ul>
<ul> <li>a) Parenchyma</li> <li>b) collenchyma</li> <li>c) sclerenchyma</li> <li>d) None of the above</li> <li>7. Tunica corpus theory is connected with</li> <li>a) Root apex b) Root cap c) shoot apex d) secondary growths</li> <li>8. In embryogenesis, fusion of male gamete and polar nuclei results in</li> <li>a) Endosperm b) embryo c) suspensor d) Zygote</li> <li>9 layer of anther provides nourishment to the sporogenous tissue</li> <li>a) Endothecium b) middle c) Tapetum d) epidermal</li> </ul>
<ol> <li>Tunica corpus theory is connected with</li> <li>a) Root apex b) Root cap c) shoot apex d) secondary growths</li> <li>In embryogenesis, fusion of male gamete and polar nuclei results in</li> <li>a) Endosperm b) embryo c) suspensor d) Zygote</li> <li> layer of anther provides nourishment to the sporogenous tissue</li> <li>a) Endothecium b) middle c) Tapetum d) epidermal</li> </ol>
9 layer of anther provides nourishment to the sporogenous tissue a) Endothecium b) middle c) Tapetum d) epidermal
10. After fartilisation, good, goot develops from
a) Chalaza b) Ovule c) embryo sac d) Integuments
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# SUBJECT CODE NO: - Y-2053 FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. F.Y (Sem-II)

# Examination March / April - 2023

Botany Paper-V Histology, Anatomy and Embryology

[Tim	e: 1.30 Hours] [Max. Mar]	s: 50
	Please check whether you have got the right question paper.	
N. B	1) Attempt all questions.	
	2) Draw neat & well labelled diagrams whenever necessary.	
Q1	What are epidermal tissues? Describe in detail different types of stomata.	20
	OR OR OF STATE	5
	Describe different theories of cellular organization of root and shoot apex.	
Q2	Explain in detail the development of male gametophyte in angiosperms.	20
	ST ST ST OR ST ST	E
	Write short note on: - (any 4)	20
	a. Glandular and non-glandular trichomes	
	b. Xylem vessel thickenings	
	c. Anatomy of dorsiventral leaf.	
	d. Functions of phellem, phellogen, phelloderm.	
	e. Contrivances of self-pollinations.	
	f. Anemophily	
Q3	Multiple choice questions.	10
	1 plants have vessels in xylem.	
	a) Pteridophytes b) Angiosperms c) Algae d) Bryophytes	
	2. Conjoint, collateral & open vascular bundles are found in	
O.T.	a) monocots b) Dicots	
	c) Both dicots and monocots d) None of the plants	
	3. In Hydrophytes, floating ability is due to the presence of tissue.	
	a) collenchyma b) chlorenchyma	
	c) sclerenchyma d) Aerenchyma	
	4 increase the diameter of stem & root.	
	a) Intercalary meristem b) Apical meristem	
	c) Lateral meristem d) All of the these	
	5. Stomata are the example of	
	a) Secretory tissues b) Permanent tissues	
	c) meristematic tissues d) Epidermal tissues	

<ul> <li>6 tissues are found in all soft plant parts.</li> <li>a) Parenchyma b) collenchyma</li> <li>c) sclerenchyma d) None of the above</li> </ul>
<ol> <li>Tunica corpus theory is connected with</li> <li>a) Root apex b) Root cap c) shoot apex d) secondary growths</li> <li>In embryogenesis, fusion of male gamete and polar nuclei results in</li> <li>a) Endosperm b) embryo c) suspensor d) Zygote</li> <li>layer of anther provides nourishment to the sporogenous tissue</li> </ol>
a) Endothecium b) middle c) Tapetum d) epidermal  10. After fertilisation, seed, coat develops from
a) Chalaza b) Ovule c) embryo sac d) Integuments
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#### SUBJECT CODE NO: - YY-2348 FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. F.Y (Sem- II)

#### **Examination March / April - 2023**

#### Botany Paper-V Histology, Anatomy & Embryology Paper-IV

[Tim	ne: 1:30 Hours]	[Max. Marks: 40
N. B	Please check whether you have got the right question paper.  1) All questions are compulsory.  2) All question carry-equal marks.  3) Draw neat diagram and give labels where ever necessary.	
Q1	Define tissue? Describe the simple permanent tissue in plants.	10
	OR OR AT	
	Explain in Brief.	
	a) L. S. of shoot apex.	
	b) Nectarines and oil glands.	
Q2	Describe secondary growth in sunflower stem.	10
	OR OR	
	Explain in Brief.	
	a) Annual rings.	3
	b) Periderm	N. C.
Q3	write short notes on. (Any Two)	10
	a) cellular endosperm.	
D	b) contrivances for Self Pollination	
	c) structure of monocot seed.	
Q4	Multiple choice questions	10
	1. There are three types of meristematic tissue, apical Lateral.	
	a) Simple b) complex c) Intercalary d) vascular	
	2. Permanent tissues are classified into types.	
	a) One b) Two c) Three d) four	
	3. Tunica corpus theory was put forth by	
	a) Nageli b) Schmidt c) Hanstein d) Eames.	
	4. Guard cells controls the opening and closing of	
	a) Digestive gland b) stomata c) Trichomes d) Nectaries	
	5. In types of Parenchymatous tissue chloroplast is found. a) xylem b) chlorenchyma c) Sclerenchyma d) Phloem.	
	6 is also known as ground tissue.	
	a) Epidermis b) Endodermis c) cortex d) cambium	
	7. Casparian strips are present in	
	a) Endodermis b) Hypodermis c) Pericycle d) Epidermis	

			Service Management	7-2348
<ul><li>8. In Angiospe</li><li>a) Pollen gra</li><li>9. A set of three</li></ul>	ains b) Nucellus c) o ee nuclei present at microp	ylar end in embryo sa	nc are	
a) Polar nuc c) Antipoda 10. Pollination t		these	l as	Ž, Šej,
a) Anemoph		Zoophily d) Enton		STATE OF
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## SUBJECT CODE NO: - BB-2328 FACULTY OF SCIENCE AND TECHNOLOGY

B. Sc. (CBCGS) (Pattern 2022) F.Y (SEM-II)

# **Examination November / December- 2023**

**Botany Paper-V** 

		Histol	ogy,	Anatomy & E	mbry	yology Paper-l	IV 🔊		
[Tim	e: 1:30	Hours]				F)		[Max. Mark	ks: 40]
		Please check	k wh	ether you have	got th	ne right questio	n pape	r. 🕉 🔏	
				C OF			7		
N. B		1) All que	stior	s are compulso	ry.	5 8			
		2) All que	stior	ns carry equal m	arks.				35
		3) Draw r	eat c	liagram & give	label	s wherever nec	essary	297	
						50			y .
Q1	What i	is tissue? Describe in	ı brie		naner	nt tissues.			10
		(E) (C)		OR					
	Explai	n in brief.						5	
	(a)	Tunica corpus theo	ry						
	b)	Parenchyma						06 BY	
Q2	Descri	be primary structure	of n	nonocot steam					10
				OR					
	Explai	n in brief.							
	a)	Heart wood and say	ow c	od					
	b)	Periderm			Ę,				
							SE S		
Q3	Write	short notes on (any t	wo)	£ 39		34			10
	(a)	Anatropous ovule				3			
	b)	Nuclear endosperm	1						
3	c)	Significance of dou	ıble 1	fertilization	8				
Q4	Multip	le choice questions.				23 <sup>T</sup>			10
	1.	The branch of Biol	ogy (	deals with the st	tudy	of tissues is cal	led as		
		a) Cytology							
	2.	is the only de	ead,	simple permane	nt tis	sue.			
		a) Arenchyma	b)	Meristem	c)	Collenchyma	d) S	Sclerenchyma	
5		SP SE							
	3.	Permanent tissues	are c	lassified into		types.			
	20	a) One	b)	Two	c)	Three	d) I	Four	

4.	Pare	enchyma is a					
	a)	Simple tissue		b)	Complex ti	ssue	
	c)	Epidermal tissue		d)	Conducting	g tissue	
			80 SE)				
5.	Api	cal cell theory is p	ut forth by				5
	a)	Nageli b	) Hanstein	c)	Schmidt	d):	Linnaeus
	ŕ	,6°	3	200	TE SECOND	, (G	
6.	A se	et of three nuclei p	resent at micropy	lar e	nd in embry	o sac are	2
		Polar nuclei	5		Synergids		
	c)	Antipodal cells			None of the	7,37	
	σ,	Timerpodar cons		22	7 10110 01 01	,	5),
7.	Poll	ination takes place	through the ager	CV C	of wind is ca	lled as -	
,.		~	) Hydrophily	-	Zoophily		Entemophily
	a)	Anemophity	) Hydrophing	C)	Zoopiniy	u)	Entemophiny
8.		layor of onth	ar provide pourie	hmá	nt to the ene	roganou	a tiggue
0.	Z	V 0-	er provide nouris			- 0	s tissue.
	,	Endothecium		~~	Middle lay	ers	\\ \tag{\tag{\tag{\tag{\tag{\tag{\tag{
	c)	Tapetum		d)	Epidermal		
•	~8		VG, V,			80	
9.		joint, collateral &	open vascular bu			n	-0,
	(a)				Dicots		
	c)	Both dicots & mo	onocots	d)	None		
		2 <sup>7</sup> 29)			E.		
10.	. In h	udrophytes, floatin	ng ability is due to				tissue.
	a)	Collenchyma		b)	Chlorenchy		
	√c)	Sclerenchyma		d)	Aerenchym	na 🔑	
					(F)		
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