a)

c)

dicot stem

monocot stem

Register	12711			
Number				

Part III - BOTANY

			(English V	ersion)	
Tin	ne Al	lowed: 3 Hours]	a leading	[Maximus	m Marks: 150
			SECTION	- A	
		Note: 1)	Answer all quest	tions.	
		ii)	Choose and writ	e the correct answer.	1. TV
		iii)	Each question c	arries one mark.	$30 \times 1 = 30$
1.	In S	Smilax aspera the pl	hyllotaxy is		
	a)	alternate	b)	opposite	
	c)	whorled	d)	spiral.	
2.	The	common name of l	Borassus flabellife	er is	
	a)	Coconut tree	b)	Wine palm	
	c)	Royal palm	d)	Palmyra palm.	
3.	Wh	ich of the following	is referred to as s	stone cells ?	
	a)	Brachysclereids	b)	Macrosclereids	
	c)	Osteosclereids	d)	Sclerenchyma fibres.	
4.	Cas	sparian strips are fo	und in the endod	ermis of	

dicot root

dicot leaf.

b)

d)

5.	In di	icot stem hypodermis is made u	p of	
	a)	Parenchyma	b)	Sclerenchyma
	c)	Collenchyma	d)	Xylem.
6.	RNA	is universally present in all org	anisn	ns except in
	a)	TMV	b)	bacteria
	c)	algae	d)	DNA viruses.
7.	Pseu	idomonas putida is an engineere	ed ba	cterium that can digest
	a)	a hormone	b)	an antibiotic
	c)	crude oil slick	d)	carbohydrate.
8.	By t	he application of tissue culture		are produced.
	a)	artificial synthetic seeds	b)	natural seeds
	c)	pesticides	d)	insecticides.
9.	The	term single cell protein was coin	ned in	1
	a)	1956	b)	1960
	c)	1966	d)	1971.
10.	The	pigment which is highly efficien	it in a	absorbing solar energy is
	a)	Phycobilins	b)	Chlorophyll
	c)	Carotenoids	d)	Xanthophyll.
11.	Who	isolated cytokinin from Herring	g fish	? Assume the property of the
	a)	Darwin	b)	Miller and Skoog
	c)	Went	d)	Calvin.

. 9	a) Tobacco	b)	Sunflower	
	c) Maize	d)	Wheat.	
13.	A mung, Phaseolus mungo variety	was ir	ntroduced from	30-2-
-	a) Japan	b)	China	
	c) Australia	d)	America.	
14.	Pyricularia oryzae cause			
	a) Blast disease in rice			
	b) Tikka disease in groundnut			Hart II.
	c) Citrus canker			
	d) Tungro disease of rice.			
15.	Gossypium hirsutum belongs to the	e fami	lly	
	a) Fabaceae	b)	Asteraceae	
	c) Malvaceae	d)	Liliaceae.	
16.	Species Plantarum was written by			
#1 #0	a) Carolus Linnaeus		146	
	b) Gaspard Bauhin	¥		
	c) Adolf Engler			
	d) Charles Darwin.			ing was a
Δ.				1

12. Which of the following is a long day plant?

704		4	
17.	The ovules are naked in		
7.5	a) Angiosperms	b)	Gymnosperms
	c) Algae	d)	Fungus.
18.	In Abelmoschus esculentus the fruit	is	
	a) Drupe	b)	Schizocarp
	c) Regma	d)	Loculicidal capsule.
19.	Vernonia arborea is a		r f
	a) Herb	b)	Shrub
	c) Tree	d)	Twiner.
20.	The stem of all the plants of Euphori	oiacea	ae has
4	a) gums	b)	resins
	c) latex	d)	mucilage.
21.	Guard cells are present in		
	a) Endodermis	b)	Cortex
	c) Epiblema	d)	Epidermis.
22.	Lenticels are seen in the		
	a) Root	b)	Stem
	c) Flower	d)	Leaf.
23.	Double minute chromosome occurs	in	
	a) Adipose tissue	b)	Oocyte

Cancer cells.

d)

Salivary gland

Turn over

			5	1041
4.	Hug	go de Vries first used the term 'm	utati	on' based on his observation on
	a)	Sorghum	b)	Neurospora
	c)	Oenothera lamarckiana	d)	Cicer gigas.
5.	Dou	ible helix DNA model was propos	sed b	y ended to the second
	a)	Watson and Crick	b)	O. T. Avery et al
	c)	Griffith	d)	Stinberg.
26.	Wh	ich of the following wavelengths	of lig	ght is most effective for photosynthesis?
	a)	100 to 200 nm	b)	200 to 300 nm
	c)	400 to 700 nm	d)	700 to 900 nm.
27.	Wh	nich of the following is the comm	on re	spiratory substrate ?
	a)	Proteins	b)	Lipids
	c)	Vitamins	d)	Carbohydrates.
28.	Gly	ycolysis occurs in		
	a)	Nucleus	b)	Chloroplast
	c)	Cytoplasm	d)	Mitochondria.
29.	Th	e instrument used to demonstra	te th	at CO 2 is released during respiration is
	a)	Auxanometer	b)	Ganong's light screen
	c)	Mercury manometer	d)	Ganong's respiroscope.
30.	Ar	n example for synthetic auxin is		
	a)	IAA	b)	PAA Tumyi bafa a hali ili sa
	c)	ABA	d)	NAA.

SECTION - B

Note: 1) Answer any fifteen questions.

ii) Each question carries three marks.

 $15 \times 3 = 45$

- 31. What is called nomen ambiguum?
- 32. What is polypetalae?
- 33. Write the floral formula of Datura metal.
- 34. What is allicin?
- 35. Define chlorenchyma. What is its function?
- 36. Define gene.
- 37. What are chiasmata?
- 38. What is transcription?
- 39. What are plasmids?
- Define callus.
- 41. What are isoenzymes?
- 42. What is photolysis of water?
- 43. Define Chemosynthesis.
- 44. Explain anaerobic respiration.
- 45. What is Glycolysis?
- 46. Which are called the power-houses of the cell? Why are they called so?

- 47. What is Sigmoid curve?
- 48. Define Vernalization.
- 49. What is heterosis?
- 50. What is humulin?

SECTION - C

- Note: i) Answer any seven questions including Question No. 54 which is compulsory.
 - Each question carries five marks.
 - iii) Draw diagrams wherever necessary.

- $7 \times 5 = 35$
- 51. Bring out the merits of Bentham and Hooker's classification.
- 52. Give an account of economic importance of the family Arecaceae.
- 53. Explain the different types of meristems based on their position.
- Draw the transverse section of dicot root and label the parts.
- 55. What are Tyloses? Explain.
- 66. Write short notes on Crossing over.
- 7. Draw and label the structure of polytenic chromosome and lampbrush chromosome.
- 8. What are the outcomes of application of plant tissue culture?
- 9. Give an account of SCP.
- 0. Write the characteristics of Enzymes.
- Explain the test-tube and funnel experiment.
- 2. Write a short note on Cissus quadrangularis.

SECTION - D

Note: i) Answer any four questions:

- ii) Each question carries ten marks.
- iii) Draw diagrams wherever necessary.

 $4 \times 10 = 40$

- 63. What are the types of classification of plants? Add a note on each type.
- 64. List out the general characters of the family Fabaceae. Draw the floral diagram and write the floral formula.
- 65. Describe the primary structure of Monocot stem.
- 66. Give an account on numerical chromosomal aberration.
- 67. Write an essay on DNA recombinant technology.
- Describe the light reactions of photosynthesis.
- 69. Describe the sequences of reactions of Kreb's cycle.
- 70. Write the economic importance of Rice and Groundnut.