

BHARATHIAR UNIVERSITY, COIMBATORE.

B.Sc. BOTANY

(For students admitted during the academic year 2010 – 2011 batch & onwards)

SCHEME OF EXAMINATION - CBCS PATTERN

Semester	Study Components	Course title	Ins. hrs/ week	Examinations				Credit
				Dur.Hrs	CIA	Marks	Total Marks	
SEMESTER I								
I	Language – I		6	3	25	75	100	4
II	English - I		6	3	25	75	100	4
III	Core Paper – Plant diversity I		3	3	25	75	100	4
	Core Paper II Fundamentals of Computer Applications		4	3	25	75	100	4
	Allied -I Paper I Zoology / Chemistry		5	3	20	55	75	3
IV	Environmental Studies #		2	-	-	50	50	2
SEMESTER II								
I	Language – II		6	3	25	75	100	4
II	English - II		6	3	25	75	100	4
III	Core Paper III - Plant diversity II (Bryophytes, Pteridophytes Gymnosperms & Palaeobotany)		7	3	25	75	100	4
	Core Practical - Paper I		-	-	40	60	100	4
	Allied -II - Paper II Zoology / Chemistry		5	3	20	55	75	3
	Allied Practical - I		2	3	20	30	50	2
IV	Value Education – Human Rights #		2	3	-	50	50	2
SEMESTER III								
I	Language – III		6	3	25	75	100	4
II	English - III		6	3	25	75	100	4
III	Core Paper IV Cell Biology & Lab techniques		3	3	20	55	75	3
	Core Paper V ANATOMY & Embryology		3	3	25	75	100	4
	Allied III - Paper I Chemistry / Zoology		5	3	20	55	75	3
	Skill based Subject – Biodegradable waste management Paper I - Introduction to Environmental Pollution		3	3	20	55	75	3
	Tamil @ / Advanced Tamil# (OR) Non-major elective - I (Yoga for Human Excellence)# / Women's Rights#		2	3	50	50	50	2

SEMESTER –IV							
I	Language – IV	6	3	25	75	100	4
II	English - IV	6	3	25	75	100	4
III	Core Paper VI Medicinal Botany	4	3	25	75	100	4
	Core Practical II - Paper IV, V & VI	2	3	40	60	100	4
	Allied IV - Paper II Chemistry / Zoology	5	3	20	55	75	3
	Allied III Practical	2	3	20	30	50	2
IV	Skill based Subject – Biodegradable waste management Paper II – Urban waste and management	3	3	20	55	75	3
	Tamil @ /Advanced Tamil # (OR) Non-major elective -II (General Awareness #)	2	3	50		50	2
SEMESTER – V							
III	Core Paper VII - Taxonomy of Angiosperms & Economic Botany	5	3	25	75	100	4
	Core Paper VIII – Genetics Plant Breeding and Biostatistics	4	3	25	75	100	4
	Core Paper IX -Ecology & Phytogeography	4	3	25	75	100	4
	Core Paper X Microbiology-Fundamentals of Microbiology	4	3	20	55	75	3
	Elective – I	4	3	20	55	75	3
IV	Skill based Subject – Biodegradable waste management Paper III – Industrial wastes and management	3	3	20	55	75	3
SEMESTER – VI							
III	Core Paper XI Biophysics Biochemistry & Plant Physiology	5	3	25	75	100	4
	Core Paper- XII Horticulture	5	3	25	75	100	4
	Elective – II	5	3	20	55	75	3
	Elective – III	5	3	20	55	75	3
	Core Practical III Paper VII, VIII, IX, X & XI	2	3	40	60	100	4
	Core Practical IV - Practical for Elective subjects I, II & III	2	3	40	60	100	4
	Skill based Subject – Biodegradable waste management Practical	4	3	30	45	75	3
	Extension Activities @	-	-	50	-	50	2
	Total					3500	140

@ No University Examinations. Only Continuous Internal Assessment (CIA)

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List of Elective papers (Colleges can choose any one of the paper as electives)		
Elective – I	A	Microbiology – Applied Microbiology
	B	Plant Pathology
	C	Economic Botany
Elective – II	A	Biotechnology – Concept & Techniques
	B	Seed Technology
	C	Pomology
Elective - III	A	Biotechnology – Applied biotechnology
	B	Ethnobotany
	C	Bioinformatics

Note :

1. The syllabi for the above papers be the same as **B.Sc. Plant Biology & Plant Biotechnology** degree course (except the **all the practical papers**) prescribed for the academic year 2008-09.
2. The Syllabus for **the practical papers** are furnished below:

CORE PRACTICAL-I (Papers I, II, &III)

**(Algae, Fungi, Lichens, Plant Pathology; Fundamentals of Computer and applications;
Bryophytes, Pteridopytes, Gymnosperms and Pale botany -2010 -2011 Batch)**

Time: 3 Hrs

Max. Marks: 60

1. Make suitable micro preparations of A, B & C. Draw labeled sketches.
Identify Giving reasons and submit the slides for valuation 3x5=15 Marks
2. Comment on instrument D 1x5=5 Marks
3. Identify any TWO algal members from the algal mixture E. 2x4=8 Marks
4. Identify, draw diagrams and write notes on F,G,H,I,J,K,L,M and N 9x3=27 Marks

	55 Marks
Record	5 Marks
Total	60 Marks

CORE PRACTICAL-I (Papers I, II, &III)

(Algae, Fungi, Lichens, Plant Pathology; Fundamentals of Computer and applications;
Bryophytes, Pteriodopytes , Gymnosperms and Pale botany -2010 -2011 Batch)

Practical- I-KEY

1. A- Algae/ Fungi
B- Bryophytes/ Pteriodopytes
C-Gymnosperms (slide-2, Sketch & Reasons -3) 3x5=15 Marks

2. D- Computer devices 1x5 =5 Marks

3. E- Algal Mixture (Identification-1, Sketch & Notes-3) 2x4=8 Marks

4. F- Algae
G-Fungi
H-Lichen
I-Computer
J-Computer
K-Pteriodopytes
L- Gymnosperms
M-Pale botany
N- Plant Pathology (Identification-1, Sketch & Notes -2) 9x3=27 Marks

	55
Record	5

Total	60 Marks
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CORE PRACTICAL II (PAPERS IV, V, & VI)

[Cell biology, Lab techniques, Anatomy, Embryology, & Medicinal Botany and Human welfare-2010-2011 Batch]

Time: 3.00 Hrs

Max. Marks 60

- | | |
|--|--------|
| 1. Make squash of specimen A. Draw Sketches, Identify any one stage.
Submit the slide for valuation. | 7 |
| 2. Identify B. Draw sketches & Write notes. | 6 |
| 3. Make suitable micro preparation of C. Draw labeled Sketches.
Identify giving reasons & submit the slide for valuation. | 6 |
| 4. Mount the embryo of the given specimen D & submit the slide for
Valuation. | 5 |
| 5. Cut T.S of E. Draw Sketches & write Notes. | 6 |
| 6. Identify F,G,H,I & J | 5x5=25 |

55

RECORD 5

Total 60

CORE PRACTICAL II (PAPERS IV, V, & VI)

**[Cell Biology, Lab techniques, Anatomy, Embryology, & Medicinal
Botany and Human welfare-2010-2011 Batch]**

KEY

1. A: Squash [Identification-1, Slide-2, Sketch & Notes-4]	7
2. B: Lab Techniques [Identification-1, Slide-2, Sketch-1 Notes-3]	6
3. C: Anatomy [Identification-1, Slide-2, Sketch-1, Notes-2]	6
4. D: Embryo Mounting [Tridax / Crotalaria] [Slide-2, Sketch & Notes-3]	5
5. E: Medicinal Botany [Bark leaves, Flowers, Stem, Fruits] [Identification-1, Sketch-2, & Notes-3]	6
6. F: Cell biology	
G: Lab techniques	
H: Anatomy	
I: Embryology	
J: Medicinal botany [Identification-1, Sketch-2, & Notes-2]	5x5 =25

Record 55
5

Total 60

CORE PRACTICAL-III (Papers VII, VIII, IX, X, XI & XII)

**(Taxonomy & Economic Botany; Genetics, Plant Breeding & Biostatistics; Ecology
Phytogeograph; Microbiology; Biophysics, Biochemistry & Plant Physiology and
Horticulture-2010-2011 Batch)**

Time 3 Hrs

Max. Marks 60

1. Assign specimen A to its respective family giving reasons.----- 3
2. Describe specimen B in technical terms. Draw sketches of floral
Parts, Construct floral diagram & write floral formula ----- 7
3. Write Procedure, apparatus required for the experiment C. Give the
Inference from the experiment and leave the setup for valuation ----- 10
4. Assign the specimen D to its respective habitat, giving the morphological and
Anatomical features ----- 5
5. Analyse the plant communities present in the constructed Quadrat /Line
Transect/Belt transect E by Quantitative method. Present the data and give the
Inference ----- 5
6. Work out the given Problem F ----- 5
7. Comment on G& H ----- (2x5)=10
8. Identify and write notes on I&J ----- (2x3)= 6

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Herbarium 4

Record 5

Total 60

CORE PRACTICAL-III (Papers VII, VIII, IX, X, XI & XII)

**(Taxonomy & Economic Botany; Genetics, Plant Breeding & Biostatistics; Ecology
Phytogeograph; Microbiology; Biophysics, Biochemistry & Plant Physiology and
Horticulture-2010-2011 Batch)**

Time 3 Hrs

Max. Marks 60

KEY

- | | |
|--|--------|
| 1. A. Taxonomy (Identification -1 , Reasons -2) | 3 |
| 2. B. Taxonomy (sketches-2,Floral diagram-2,Floral Formula-1,Notes-2) | 7 |
| 3. C. Physiology (Requirements-2, Procedure-3, Result-5) | 10 |
| 4. D. Hydrophyte / Xerophyte/Mesophyte (Identification -1, Sketch-2,Notes-2) | 5 |
| 5. E. Quadrat / Line transect / Belt transect- (Identification-1, Notes-4) | 5 |
| 6. F. Genetics Problem | 5 |
| 7. G. Microbiology apparatus | |
| H. Horticulture (Cutting/ Layering / Grafting)-(Identification-1,Notes-4) | 2x5=10 |
| 8. I. Biostatistics | |
| J. Microbiology / Economic Botany – (Identification-1, Notes -2) | 2x3=6 |

51

Herbarium 4

Record 5

Total 60

CORE PRACTICAL – IV (Electives I, II, &III)

**(Applied Microbiology; Biotechnology-Concepts and techniques; Applied Biotechnology-
2010-2011 Batch)**

Time: 3Hrs

Key

Max.Marks:60

1. Write the procedure for the Gram Staining and identify the type of bacteria Present in the given sample A. 10 Marks
2. Write down the procedure for Preparing a medium/culture/inoculation Techniques in B 5 Marks
3. Identify the apparatus given in C and D and Write notes on their use 2x5= 10 Marks
4. Write notes on E, F,G, H, I, J, K, L, M & N 10x3=30 Marks

55 Marks

Record 5 Marks

Total 60 Marks

CORE PRACTICAL – IV (Electives I, II, &III)

**(Applied Microbiology; Biotechnology-Concepts and techniques;
Applied Biotechnology-2010-2011 Batch)**

Time: 3Hrs

Key

Max.Marks:60

1. A- Gram staining 10 Marks
2. B- Culture methods/ inoculation techniques 5 Marks
3. C- Apparatus used in Microbiology
D-Apparatus used in Biotechnology 2x5=10 Marks
4. E, F, G, H & I - Microbiology
(Pleurotus sajor, spoiled food d diary products,
fermentation techniques, etc)
J, K, L, M & N-Biotechnology
(Synthetic seeds, shoot tip culture, callus, VAM, Nostoc ,
Azolla, Azosprillum, Agro bacterium, MS Medium,
Transgenic Plants, Petro chemical Plants, SCP etc.)

10x3 = 30 Marks

55 Marks

RECORD 05 Marks

Total 60 Marks

ALLIED BOTNY PRACTICLALS (Paper I & II)

(2010-2011 Batch)

Time: 3Hrs

Max.Marks:30

1. Refer Specimen A and to the respective families giving reasons 2x2=4 Marks
2. Describe the specimen C in technical terms. Draw floral diagrams 1x3=3 Marks
3. Comment on D with its medicinal value 1x2=2 Marks
4. Cut transverse section of E and F. Identify giving reasons.
Draw diagrams. 2x2=4 Marks
5. Identify G, H, I, J and K giving reasons. 5x2=10 Marks
6. Comment on the set up L. Draw sketches 1x2=2 Marks

25 Marks

Record 5 Marks

Total 30 Marks

ALLIED BOTNY PRACTICLALS (Paper I & II)

(2010-2011 Batch)

KEY

Time: 3Hrs

Max.Marks:30

- | | |
|--|--------------|
| 1. A & B Taxonomy (Identification – 1, Reasons -1) | 2x2=4 Marks |
| 2. C – Taxonomy (Identification -1, Sketch & F, D – 1, Notes -1) | 1x3=3 Marks |
| 3. D – Medicinal Botany (Identification -1, Medicinal Value -1) | 1x2=2 Marks |
| 4. E –Pteridophytes / Gymnosperms | |
| F – Anatomy (Identification & Sketch -1, Notes -1) | 2x2=4 Marks |
| 5. G – Alage | |
| H – Fungi | |
| I – Pteridophytes / Gymnosperms | |
| J – Horticulture | |
| K – Ecology (Identification & Sketch -1, Notes -1) | 5x2=10 Marks |
| 6. L – Physiology (Identification & Sketch -1, Notes -1) | 1x2=2 Marks |

25 Marks

Record 5 Marks

Total 30 Marks

BIODEGRADABLE WASTE MANGEMENT

(2010-2011 Batch)

Time: 3Hrs

Max.Marks:60

1. Write the procedure and Requirements for estimating
The chemical parameter of the given sample A. 20 Marks
 2. Write the procedure and Requirements to calculate the parameter
For the given sample B 10 Marks
 3. Write the method of isolating the micro organism from the sample C 10
Marks
 4. Write notes on D,E,F,G&H 5x3=15 Marks
- 55 Marks
- Record 5 Marks
- Total 60 Marks

BIODEGRADABLE WASTE MANGEMENT

(2010-2011 Batch)

Time: 3Hrs

Key

Max.Marks:60

- | | |
|---|--------------|
| 1. A-(Requirement-5,Procedure-5, Data Presentaion-5 Result-5) | 20 Marks |
| 2. B-(Requirement-2, Procedue-2,Data Presentaion-3 Result-3) | 10 Marks |
| 3. C-(Diagram-4 Notes-6) | 10 Marks |
| 4. D,E,F, G&H (Sketch&Notes-3) | 5x3=15 Marks |

55 Marks

Record 5 Marks

Total 60 Marks
