UNIVERSITY OF MUMBAI

No.UG / 372 of 2009

CIRCULAR:-

A reference is invited to the Ordinances, Regulations and Syllabi relating to the B.Sc. degree course *vide* Pamphlet No. 141and *vide* this office Circular No.UG/131 of 2009 dated 4th May, 2009 and the Principals of the affiliated colleges in Science are hereby informed that the recommendation made by the Board of Studies in Botany at its meeting held on 29th June, 2009 has been accepted by the Academic Council at its meeting held on 14th July, 2009 an adjunct meeting 7th August, 2009 *vide* item No.4.43 and that, in accordance therewith, the pattern of question paper for practicals at the S.Y.B.Sc. examination in the subject of Botany is as per **Appendix** and that the same has been brought into force with effect from the academic year 2009-2010

MUMBAI-400 032
25th September, 2009

PRIN.K.VENKATARAMANI
REGISTRAR

To,

The Principals of the affiliated colleges in Science.

A.C./4.43/07.08.2009

No.UG/372- A of 2009, MUMBAI-400 032 25th September, 2009

Copy forwarded with compliments for information to :-

1) The Dean, Faculty of Science
2) The Chairperson, Board of Studies in Botany,
3) The Controller of Examinations,
4) The Co-Ordinator, University Computerization Centre.

(D.H. KATE)
DEPUTY REGISTRAR
U.G./P.G SECTION

Copy to: -

The Director, Board of College and University Development, , the Deputy Registrar (Eligibility and Migration Section), the Director of Students Welfare, the Executive Secretary to the Vice-Chancellor, the Pro-Vice-Chancellor, the Registrar and the Assistant Registrar, Administrative sub-center, Ratnagiri for information .

The Controller of Examinations (10 copies), the Finance and Accounts Officer (2 copies), Record Section (5 copies), Publications Section (5 copies), the Deputy Registrar, Enrolment, Eligibility and Migration Section (3 copies), the Deputy Registrar, Statistical Unit (2 copies), the Deputy Registrar (Accounts [illegible] (2 copies), the Deputy Registrar, Affiliation Section (2 copies), the Director, Institute of

Scanned with OKEN Scanner

Enclosure to Item No. 4.43

7.8.2009

UNIVERSITY OF MUMBAI

Pattern of Question Paper
For Practicals
at the
S.Y.B.Sc Examination
in the subject of

Botany

(With effect from the academic year 2009-2010)

Scanned with OKEN Scanner

S.Y.B.Sc.(Practical) EXAMINATION
Question Paper - (Revised Course)
Practical I – Plant Diversity II

Duration 3 hours (Total Marks:_40__)

N.B.

1) Candidates should show their slides/ preparations/ results for all questions to the examiner.

2) Use of logarithm tables /calculator is allowed.

Q1	Prepare a slant / plate for the growth of microorganisms Isolate the microflora from specimen A by the streak plate technique	05
	Or	
	Demonstrate the effect of the given plant extract B on microbial growth	
Q2	Identify, Classify and comment on the structures seen in specimens C, D, E, F and G.	15
Q3A	Comment on the exomorphic characters of specimen H using technical terms	05
Q3B	Assign specimen I to its family, giving reasons. Give the floral formula for the same	04
Q4	Identify and describe slides/ specimens J and K.	06
Q5	Journal	05

Key:

C Algae,

D Fungi,

E Bryophyta

F Pteridophyta,

G Gymnosperms

H Angiosperm entire plant

I fc mily

J, K and L –Algae to Angiosperm including fossils/chromatography, thallus range/fungal disease.

Scanned with OKEN Scanner

S.Y.B.Sc.(Practical) EXAMINATION
Question Paper - (Revised Course)
Practical II – Form and Function II

Duration 3 hours (Total Marks: _40_)

N.B.

1) Candidates should show their slides/ preparations/ results for all questions to the examiner.

2) Use of logarithm tables /calculator is allowed.

Q1	Separate carotenoids from the given sample A by TLC.	05
	OR	
	Separate the monosaccharides from the given sample A by circular chromatography	
Q2A	Demonstrate Hill's Reaction	05
	OR	
	Identify the given Plant pigment B by plotting the absorption spectrum	
Q2B	Identify the type of sugar from sample C by carrying out suitable chemical tests.	03
Q3A	Determine the DNA sequence from the given autoradiograph (Sanger's Method)	06
	OR	
	Predict the sequence of amino acids in the protein molecule that will be synthesised from the given mRNA strand. (Prokaryotic/Eukaryotic mRNA)	
Q4	Perform a chi-square test on the given material E and analyse the results	05
	OR	
	Apply t-test (Paired/unpaired) to the data or material provided and comment on the results.	
Q5A	Make a temporary, stained preparation of T.S. of specimen F and comment on the internal structure.	04
Q5B	Comment on the conducting elements seen in the specimen G as observed in L.S./ macerated sample.	03
Q6	Identify and describe H,I and J.	06
Q.7	Herbarium report / Excursion report	03

Key to Q.6 – Gel Electrophoresis instrument, plastid inheritance, vascular bundles. defence mechanism

Scanned with OKEN Scanner

S.Y.B.Sc.(Practical) EXAMINATION

Question Paper- (Revised Course)

Practical III – Current Trends in Plant Sciences

Duration 3 hours (Total Marks: _40__)

N.B.

1) Candidates should show their slides/ preparations/ results for all questions to the examiner.

2) Use of logarithm tables /calculator is allowed.

Q1A	Calculate the stomatal index/ palisade ratio/ vein islet number from the given specimen A	05
Q1B	Identify the active constituents in the specimen B by performing suitable chemical tests.	03
Q2	Describe the ecological factors and enlist the dominant plant species of the marked areas on the map C.	04
Q3	Perform the ecological experiment D allotted to you.	05
Q4	Suggest suitable plant species for different locations in the given garden plan E.	05
Q5	Identify the homologous sequence with respect to R query Sequence.	04
	OR	
	Retrive and carry cut a study of the nucleotide and protein sequence from NCBI database.	
Q6A	Explain the working of the ecological instrument G	02
Q6B	Identify the contents of Gandma's pouch H.	02
Q6C	Identify the source and comment on the uses of I and J	02
Q6D	Comment on the type of garden K	02
Q6E	Identify and comment on the plasmid L. Explain its uses in gene cloning.	02
Q7	Viva-voce	04

Key:

Ecology Experiment D

i) Perform the mechanical analysis of the given soil by sieve method. Comment on its composition.

ii) Determine the organic matter of the given soil sample by Walkley's and Blacks Rapid titration method.

iii) Calculate the bio-mass of the given herbaceous plant D

iv) Study the vegetation by the list quadrat method

I and J (paper/fibre/spices/condiments)

K (bottle/ dish/formal/ informal garden)

Scanned with OKEN Scanner