Department of Botany
Ordinary Meeting of B.O.S
Held on 20.11.2017

Minutes

of the ordinary meeting of the Board of Studies of the Department of Botany held on
Monday, 20th November, 2017 at 03:00 p.m. in the Conference Hall of the department. The
following were present:

1. Prof. Firoz Mohammad
2. Prof. Nafees Ahmad Khan
3. Prof. Irshad Mahmood
4. Prof. Mansoor A. Siddiqui
5. Prof. M. Badruzzaman Siddiqui
6. Prof. Abrar A. Khan
7. Prof. Hisamuddin
8. Prof. Tabrez Ahmad Khan
9. Prof. M. Masroor A. Khan
10. Prof. Samiullah Khan
11. Prof. Zaki A. Siddiqui
12. Prof. Shamsul Hayat
13. Prof. Moinuddin
14. Prof. Altaf Ahmad
15. Dr. (Mrs.) Kiran Lata Chauhan
16. Dr. Qazi Fariduddin
17. Dr. Anwar Shahzad
18. Dr. (Mrs.) Shahtla Faizan
19. Dr. Asim Masood
20. Dr. Tariq Aftab
21. Dr. MU. Naeem
22. Dr. (Mrs.) Rose Rizvi
23. Dr. (Mrs.) Sana Choudhary
24. Dr. Saad Bin Javed
25. Dr. Faheem Ahmad
26. Dr. Naseem Ahmad
27. Dr. (Mrs.) Shahina Parveen
28. Dr. (Mrs.) Iram Siddique
29. Prof. M. Yunus Khalil Ansari (In the Chair)

Before taking the agenda of the meeting chairman on behalf of the BOS and his own behalf
welcomed the new incumbents as Assistant Professors Dr. (Mrs.) Shahina Parveen and Dr. (Mrs.)
Iram Siddique.

Chairperson
Department of Botany
Allahabad Muslim University
Allahabad, India
The following items were considered and approved:

**Item No. 1**

The minutes of meetings of Board of Studies held on 07.06.2016, 20.09.2016, 16.11.2016, 03.06.2017 & 18.09.2017 were confirmed.

**Item No. 2**

The board considered and recommended the admission of the following candidates to Ph.D. (Botany) Course - 2017-2018 along with the supervisor and area of research of the candidates as given below:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name</th>
<th>Roll No.</th>
<th>Supervisor assigned (Co-supervisor, if any)</th>
<th>Area of Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Waqar Ahmad</td>
<td>3310005</td>
<td>Dr. Saad Bin Javed</td>
<td>Plant Biotechnology</td>
</tr>
<tr>
<td>2.</td>
<td>Sayyada Bushra</td>
<td>3310009</td>
<td>Dr. (Mrs.) Shahla Faizan</td>
<td>Environmental Botany</td>
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<tr>
<td>3.</td>
<td>Mohd. Saleem</td>
<td>3310011</td>
<td>Dr. Gazi Fariduddin</td>
<td>Advanced Plant Physiology</td>
</tr>
<tr>
<td>4.</td>
<td>Zeeat Mushtaq</td>
<td>3310013</td>
<td>Dr. (Mrs.) Shahla Faizan</td>
<td>Environmental Botany</td>
</tr>
<tr>
<td>5.</td>
<td>Nazarul Hasan</td>
<td>3310019</td>
<td>Dr. (Mrs.) Sana Choudhary</td>
<td>Cytogenetics and Plant Breeding</td>
</tr>
<tr>
<td>6.</td>
<td>Ritu Chaudhary</td>
<td>3310023</td>
<td>Prof. Altaf Ahmad</td>
<td>Plant Biotechnology</td>
</tr>
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<td>7.</td>
<td>Qurat Ul Ain</td>
<td>3310031</td>
<td>Prof. M. Badruzzaman Siddiqui</td>
<td>Environmental Botany</td>
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<tr>
<td>8.</td>
<td>Irfan Bashir Ganie</td>
<td>3310041</td>
<td>Dr. Anwar Shahzad</td>
<td>Plant Biotechnology</td>
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<td>10.</td>
<td>Mumayyza Khan</td>
<td>3310055</td>
<td>Prof. M. Badruzzaman Siddiqui</td>
<td>Environmental Botany</td>
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<tr>
<td>11.</td>
<td>Mudassara Hasan</td>
<td>3310058</td>
<td>Dr. (Mrs.) Fauzia Naushin</td>
<td>Environmental Botany</td>
</tr>
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<td>12.</td>
<td>Shazia Hasan</td>
<td>3310060</td>
<td>Prof. Nafoes A. Khan</td>
<td>Advanced Plant Physiology</td>
</tr>
<tr>
<td>13.</td>
<td>Adnan Shakeel</td>
<td>3310062</td>
<td>Prof. Abrar A. Khan</td>
<td>Environmental Botany</td>
</tr>
<tr>
<td>14.</td>
<td>Uzma Kafeel</td>
<td>3310065</td>
<td>Prof. Fareed A. Khan</td>
<td>Environmental Botany</td>
</tr>
<tr>
<td>15.</td>
<td>Hera Nadeem</td>
<td>3310066</td>
<td>Dr. Faheem Ahmad</td>
<td>Plant Pathology</td>
</tr>
<tr>
<td>16.</td>
<td>Mohammad Shariq</td>
<td>3310067</td>
<td>Prof. Mansoor A. Siddiqui</td>
<td>Plant Pathology</td>
</tr>
<tr>
<td>17.</td>
<td>Hina Shafer</td>
<td>3310068</td>
<td>Dr. (Mrs.) Fauzia Naushin</td>
<td>Environmental Botany</td>
</tr>
<tr>
<td>18.</td>
<td>Saima Malik</td>
<td>3310070</td>
<td>Prof. Samiullah Khan</td>
<td>Cytogenetics and Plant Breeding</td>
</tr>
<tr>
<td>19.</td>
<td>Andleeb Zehra</td>
<td>3310071</td>
<td>Dr. Tariq Aftab</td>
<td>Advanced Plant Physiology</td>
</tr>
<tr>
<td>20.</td>
<td>Mohammad Haris</td>
<td>3310075</td>
<td>Prof. Abrar A. Khan</td>
<td>Environmental Botany</td>
</tr>
<tr>
<td>21.</td>
<td>Iqbal Rashid Mir</td>
<td>3310077</td>
<td>Dr. Asim Masood</td>
<td>Advanced Plant Physiology</td>
</tr>
<tr>
<td>22.</td>
<td>Sadaf Choudhary</td>
<td>3310098</td>
<td>Dr. Tariq Aftab</td>
<td>Advanced Plant Physiology</td>
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</tbody>
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Item No. 3

(i). The Board considered and screened the names of panel of experts for the evaluation/assessment of work done by the Dr. Qazi Fariduddin for promotion to the post of Professor under Career Advancement Scheme (CAS). The panel of experts was drawn and approved (under sealed cover)

(ii). The Board considered and screened the names of panel of experts for the evaluation/assessment of work done by Dr. (Mrs.) Shahla Faizan for promotion to the post of Associate Professor under Career Advancement Scheme (CAS). The panel of experts was drawn and approved (under sealed cover)

(iii). The Board considered and approved the names given by the members for the panels of experts for the Selection Committee for the General & Specialized Posts of Professor / Associate Professor / Assistant Professor / CAS in the Department of Botany and with consultation the panels were drawn (under separate sealed cover)

Item No. 4

Board approved following names as Co-opted members of the Board of Studies.

1. Prof. Abul Hasan
   C-69, Opposite Machhli Mandi
   Dubagga, Hardoi Road,
   Post-Kakori, Lucknow
   Mob. 09455095514
   E-mail: abulhasanand@gmail.com

2. Prof. Bhumi Nath Tripathi
   Head
   Department of Biotechnology,
   Indira Gandhi National Tribal University,
   Amarkantak (M.P.)
   Mob. 9589517179
   E-mail: bhuminath.tripathi@ignatu.ac.in

Chairperson
Department of Botany
Aligarh Muslim University
Aligarh-202002 (INDIA)
Item No. 5 Any other item(s).

The board considered and recommended minor changes (specifications) / major changes in the title of Ph.D. programme of the following students.

(a) Minor changes/specifications

1. Mr. Gulwaiz Akhter (D.O.R: 18.02.2014, En. No.GC-2565) - Ph.D. (Supervisor - Prof. Tabrez A. Khan)
   New Topic
   “Studies on Solanum melongena infected by Orobanche aegyptiaca and Meloidogyne incognita, and their management”
   Old Topic
   “Studies on Interactive Effect of Orobanche aegyptiaca and Meloidogyne incognita on Egg plant (Solanum melongena L.)”

2. Mr. Mohammad Danish (D.O.R: 18.02.2014, En. No.GD-4549) - Ph.D. (Supervisor - Prof. Hisamuddin)
   New Topic
   “Studies on Trachyspermum ammi (L.) Infected with the Root-knot Nematode, Meloidogyne incognita”
   Old Topic
   “Studies on a Medicinal Plant Infected with the Root-knot Nematode, Meloidogyne incognita”

3. Mr. Zishan Ahmad (D.O.R: 12.02.2014, En. No. GC-2436) - Ph.D. (Supervisor - Dr. Anwar Shahzad)
   New Topic
   “Biotechnological studies on morphogenesis, short term conservation and analysis of 2-hydroxy-4-methoxybenzaldehyde (2H4MB) in Decalepis arayalpathra (J. Joseph & V. Chandras.) Venter and D. salicifolia (Bedd. Ex Hook.f.) Venter”
   Old Topic
   “Studies on in vitro propagation, short term conservation and enhancement of important secondary metabolites in some medicinal plant species”

   New Topic
   “Influence of Different Doses of Radiation-processed Sodium Alginate on Growth, Physiological and Essential oil Production of Various Species of Mentha”
   Old Topic
   “Influence of Different Fractions of Radiation-processed Sodium Alginate on Growth, Physiological and Essential oil Production of Various Species of Mentha”
(b) Major changes/specifications

1. Mr. Faryad Khan (D.O.R:28.10.2016, En. No.GE-7570) - Ph.D. (Supervisor - Prof. Mansoor A. Siddiqui)
   New Topic
   "Integrated approach for the management of phytonematodes through organic matter and bioagents infesting Daucus carota L. and Solanum melongena L."

   Old Topic
   "Integrated approach for the management of phytonematodes through organic matter and bioagents infesting Daucus carota L."

2. Mr. Arif Majid (D.O.R:18.11.2016, En. No.GI-3854) - Ph.D. (Supervisor - Dr. Asim Masood)
   New Topic
   "The Interaction of Nitric oxide and Abscisic acid with Nitrogen in Regulation of Salt Stress in Brassica juncea"

   Old Topic
   "The Interaction of Ethylene and Abscisic acid with macronutrients in Regulation of Salt Stress in Brassica juncea"

(c) The board considered and approved the revision of syllabus for M.Sc. Botany Entrance Test according to the Choice Based Credit system (CBCS). Annexure 1

(d) The board considered and approved to increase the intake in B.Sc. 1st year class from 40 to 60 seats.

Copy to:
1. All members of Board of Studies.
2. Dean, Faculty of Life Sciences.
3. Deputy Registrar (Councils).

(M. Yunus Khalil Ansari)
Professor & Chairperson
Department of Botany
Aligarh Muslim University
Aligarh-202002 (INDIA)

(M. Yunus Khalil Ansari)
Professor & Chairperson
Department of Botany
Aligarh Muslim University
Aligarh-202002 (INDIA)
Annexure 1

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Faculty of Life Sciences
Syllabus for M.Sc. Botany Entrance Test

The living world; biological classification of plant kingdom: Characteristics and classification of viroids viruses, bacteria and fungi, host-virus interaction, Reproduction in fungi and bacteria.

Nematodes: Elementary idea of nematodes; diseases caused by nematodes (Cockle of wheat, root knot of okra).

Diseases: General account of diseases caused by plant pathogens including viruses (tobacco mosaic virus), bacteria (citrus – canker), mycoplasma (little leaf of brinjal), fungi (late blight of potato, stem rust of wheat, green-ear disease of bajra, white rust of crucifers, powdery mildews of cucurbits, red root of sugarcane).

Algae: Characteristics and classification; structure and reproduction of Nostoc, Chlamydomonas, Volvox, Vaucheria, Chara, Batrachospermum, Ectocarpus; economic importance.

Bryophytes: Characteristics and classification; structure and reproduction of Riccia, Marchantia, Anthoceros, Funaria; economic importance.

Pteridophytes: Characteristics and classification, structure and reproduction of Psilotum, Lycopodium, Selaginella, Equisetum, Telome theory, evolution, heterospory and seed habit.

Gymnosperms: Characteristics and classification, structure and reproduction of Cycas, Pinus and Ephedra.


Cell: Prokaryotic and eukaryotic cells, structure and functions, cell cycle and cell division (mitosis).
Physiology: Plant water relations; mineral nutrition; photosynthesis; translocation of food material; respiration; nitrogen and nucleic acid metabolism; growth and development.

Reproduction: Asexual and sexual reproduction; structure and functions of flower, microsporogenesis, megasporogenesis, fertilization, development of embryo, endosperm and seed; apomixes.

Genetics and Plant Breeding: Mendel’s principles of inheritance, gene interactions, quantitative genetics, cytoplasmic inheritance. Composition and roles of different forms of nucesic acids; DNA replication, transcription, translation, techniques of hybridization and emasculation, suction method of emasculation, hot water emasculation, bagging, tagging, pollination. Physical and chemical mutagens, gamma garden, polyploidy.

Ecology: Organisms and environment, population, biotic community and succession; ecosystem—structure and function; natural resources and biodiversity and their conservation.

Anomalous Plant Anatomy: Scattered vascular bundles in dicots (Podophyllum), vascular bundles in a ring in monocots (Triticum), Separate xylem and phloem bundles. Dorsiventral, unifacial and isobilateral leaves. Kranz anatomy.

Methods of Environmental Analysis: Cell fractionation (Homogenization and centrifugation), Analysis of water: Colour, odour, turbidity, dissolved oxygen.

Experiments in Cytology and Genetics: Flower bud fixation; preparation of slides. Test cross methods-monohybrid cross, dihybrid cross.

Introduction to Environment: Environmental issues (species invasion, biodiversity, urbanization), control of environmental degradation (Phytoremediation, hot spot concept). Air, water, soil, noise and radioactive pollutions.

Tissue Culture and Plant Biotechnology: Cellular totipotency, callus and cell suspension culture, anther and pollen culture, micropropagation; organogenesis, application in crop improvement, synthetic seeds and their applications; somatic hybridization; somaclonal variation; cryopreservation. Applications of plant biotechnology. Whites medium (1983), preparation of stock solution, sterilization methods, types of culture (Leaf, shoot, nodal Segment, callus, cell suspension cultures).