

The 55th meeting of the School Board of the School of Sciences was held on 4th December, 2015 at 11.00 a.m. in the Conference Room of Block D, IGNOU, Maidan Garhi, New Delhi – 110068.

The following members were present:

1. Prof. Vijayshri, Director (SOS), Chairperson
2. Prof. R.P. Tandon, Former Head, Dept. of Physics and Astrophysics, University of Delhi
3. Prof. H. B. Srivastava, Centre of Advanced Study in Geology, Banaras Hindu University
4. Prof. Rajender Parsad, Indian Agricultural Statistics Research Institute, Delhi
5. Prof. Seemi Farhat Basir, Jamia Millia Islamia
6. Prof. S. Kumaresan, School of Mathematics and Statistics, University of Hyderabad
7. Prof. K. Barik, SOSS, IGNOU
8. Prof. T. K. Jena, SOHS, IGNOU
9. Dr. Manoj Kulshreshtha, SOET, IGNOU
10. Prof. S.C. Garg, SOS, IGNOU
11. Prof. Parvin Sinclair, SOS, IGNOU
12. Prof. Sunita Malhotra, SOS, IGNOU
13. Prof. Poornima Mital, SOS, IGNOU
14. Prof. Jaswant Sokhi, SOS, IGNOU
15. Prof. Neera Kapoor, SOS, IGNOU
16. Prof. S.R. Jha, SOS, IGNOU
17. Prof. B. I. Fozdar, SOS, IGNOU
18. Prof. Amrita Nigam, SOS, IGNOU
19. Prof. M.S. Nathawat, SOS, IGNOU
20. Prof. Shubha M. Gokhale, SOS, IGNOU
21. Dr. S. Venkataraman, SOS, IGNOU
22. Dr. Kamalika Banerjee, SOS, IGNOU
23. Dr. Vijay Kumar Baraik, SOS, IGNOU
24. Dr. Sanjay Gupta, SOS, IGNOU
25. Dr. Seema Kalra, SOS, IGNOU
26. Dr. Kakoli Gogoi, SOS, IGNOU
27. Shri Prabhat Kumar Sangal

Prof. Madhu Parhar, Prof. B.S. Saraswat, Prof. Sujatha Varma, Prof. Geeta Kaicker, Prof. Javed A. Farooqi and Dr. Bano Saidullah could not attend the meeting.

At the outset, the Chairperson welcomed the members of the School Board. Thereafter, the following items on the agenda were deliberated:

Item No. 1: To confirm the minutes of the 54th meeting of the School Board of the School of Sciences held on Sept. 3, 2015 and to note the action taken thereon.

SB 55.1.1 The School Board was informed that no comments had been received on the Minutes of the 54th meeting of the School Board as circulated on Sept. 18, 2015. The Minutes were confirmed as circulated and the Action Taken Report was noted by the School Board.

SB 55.1.2 A copy of the confirmed Minutes of the 54th meeting of the School Board of the School of Sciences held on September 3, 2015 (without Annexures) and the Action Taken Report are placed at **Annexures 1 and 2**, respectively.

Item No. 2: Matters arising out of the minutes.

SB 55.2.1 The School Board was informed that as per its decision vide SB 54.2.2, a letter was sent to Director Education (Akashdeep) seeking information on the topics taught in Mathematics to the Associate Degree Holders in Science registered in Akashdeep along with the list and syllabi of all Mathematics courses offered in the B. Sc. Programme as well as the syllabi of the Mathematics course entitled Mathematical Methods, the physics courses entitled Mathematical Methods in Physics-I, Mathematical Methods in Physics-II and Mathematical Methods in Physics-III. The School Board was further informed about the response of the Director Education (Akashdeep) requesting that only the physics elective entitled Mathematical Methods in Physics – II (PHE-05) be included in the list of courses offered to students registering for the third year of B. Sc. (Hons.) in Applied Sciences of IGNOU (copy of the letter placed at **Annexure 3**).

SB 55.2.2 After detailed deliberations, the School Board decided that Director Education (Akashdeep) may be informed that students can opt for two 2-credit physics electives entitled Mathematical Methods in Physics – I (PHE-04) and Mathematical Methods in Physics – II (PHE-05) together. Or else, neither of the two courses would be offered to students under this scheme.

Item No. 3: To confirm the Minutes of the 14th Meeting of the Standing Committee of the School Board of the School of Sciences held on Nov. 18, 2015.

SB 55.3.1 The Minutes of the 14th meeting of the Standing Committee of the School Board held on November 18, 2015 were placed before the Board for consideration and confirmation.

SB 55.3.2 The Minutes of the 14th meeting of the School Board Standing Committee were confirmed by the School Board as such. A copy of the confirmed Minutes (with its Annexures) is placed at **Annexure 4**.

Item No. 4: To consider and approve the Phase 1 form for the B. Sc. Programme under the UGC-CBCS.

SB 55.4.1 The School Board was informed that in its 54th meeting held on Sept. 3, 2015, the Board had approved that the B.Sc. Programme under the UGC-CBCS should be offered in July, 2016 after following due statutory processes and procedures as per the revision policy approved by the Academic Council.

Accordingly, the Phase 1 form for the B. Sc. programme under the UGC-CBCS (**Annexure 5**) was placed for the consideration and approval of the School Board.

SB 55.4.2 After detailed discussion, the School Board, by an overwhelming majority, approved the Phase 1 Form for the B. Sc. Programme (as a single Programme having different combinations of three Disciplines) with the direction that no *a priori* conditions be placed in the admission criteria for the choice of science subjects by applicants at the +2 level.

SB 55.4.3 The Phase 1 Form for the B. Sc. Programme under UGC-CBCS approved by the School Board is placed at **Annexure 6**.

Item No. 5: To consider and approve the Minutes of the meeting of the Programme Expert Committee for the B. Sc. Programme under the UGC-CBCS held on Oct. 1, 2015.

SB 55.5.1 The School Board was informed that in its 54th meeting held on Sept. 3, 2015, the Board had approved that the B.Sc. Programme under the UGC-CBCS should be offered in July, 2016 and had devised the strategy for implementation of the B. Sc. programme from the July, 2016 session. In accordance with the decision of the School Board vide SB 54.7.2 (4), a meeting of the Programme Expert Committee (as approved by the School Board vide SB 54.9.1 and SB 54.9.2) was held on Oct. 1, 2015. The Minutes of the meeting were placed for the consideration and approval of the School Board.

SB 55.5.2 After detailed deliberations, the School Board approved the Minutes of the Programme Expert Committee meeting for the B. Sc. Programme worth 132 credits under the UGC-CBCS. However, the School Board advised that the Director, School of Sciences should request the Director, ACD to seek confirmation from the UGC (through the Vice Chancellor) about the total number of credits of the B. Sc. Programme to be offered with three Disciplines. The Minutes of the meeting approved by the School Board are placed at **Annexure 7**.

Item No. 6: To consider and approve the Minutes of the Expert Committee meeting for the Programme B. Sc. (Hons.) in Geology and B. Sc. with Geology as one of three subjects under the UGC-CBCS held on Sept. 4, 2015.

SB 55.6.1 The School Board was informed that the Expert Committee meeting for devising the structure, list of courses and their syllabi for the Programmes B. Sc. (Hons.) in Geology and B. Sc. with Geology as one of three subjects under the UGC-CBCS was held on Sept. 4, 2015. The Minutes of the meeting were placed for the consideration and approval of the School Board.

SB 55.6.2 The Minutes of the meeting approved by the School Board after due deliberations are placed at **Annexure 8** along with Appendix 1 to Appendix 4 to the Minutes.

Item No. 7: To consider and approve the syllabi (finalised and unitised) of Semester 1 and Semester 2 courses in Botany, Zoology, Chemistry, Physics and Mathematics of the B. Sc. Programme under the UGC-CBCS and the Minutes of the corresponding Expert Committee meetings.

SB 55.7.1 The School Board was informed that in its 54th meeting held on Sept. 3, 2015, the strategy for implementation of the B. Sc. programme from the July, 2016 session had been devised. In accordance with the decision of the School Board vide SB 54.7.2 (5), Expert Committee meetings for finalizing the detailed syllabi and unitizing the syllabi as per the recommendations of the Programme Expert Committee given in its meeting held on Oct. 1, 2015, were held for the Semester 1 and Semester 2 Core Courses in Botany, Zoology, Chemistry, Physics and Mathematics. The finalised and unitized syllabi of the courses along with the Minutes of the corresponding meetings were placed for the consideration and approval of the Board.

SB 55.7.3 After detailed deliberations (to which Dr. Deepika was invited while the syllabus of the core course on 'Calculus' was being discussed by the Board), the Minutes of the Expert Committee/Course Design and Development Committee meetings along with the finalised and unitized syllabi of all Semester 1 and Semester 2 Core Courses in Botany, Zoology, Chemistry, Physics and Mathematics of the B. Sc. Programme under the UGC-CBCS were approved. For the core course on Calculus in Mathematics, it was recommended that Euler's theorem on homogeneous functions be retained in the syllabus as per the UGC-CBCS syllabus for the course.

The approved Minutes of the meetings for the Courses 1 and 2 in **Botany held on Oct. 26, 2015 and Nov. 19, 2015**, respectively, Course 2 in **Zoology held on Oct. 26, 2015**, Courses 1 and 2 in **Chemistry held on Oct. 30, 2015 and Nov. 20, 2015**, Courses 1 and 2 in **Physics held on Oct. 21, 2015 and Nov. 13, 2015**, respectively

and Courses 1 and 2 in **Mathematics held on Oct. 28, 2015 and Nov. 23, 2015**, respectively, are placed at **Annexures 9a, b, d to j** along with the finalised and unitized syllabi of the courses. The **approved finalized, unitized syllabus of the Core Course 1 in Zoology**, to be offered in Semester 1, is placed at **Annexure 9c**.

Item No. 8: To consider and approve the Phase zero/Phase 2 form for the B. Sc. Programme under the UGC-CBCS.

SB 55.8.1 The School Board was informed that in its 54th meeting held on Sept. 3, 2015, the Board had approved that the B.Sc. Programme should be offered in July 2016 in accordance with the CBCS of UGC after following due statutory processes and procedures as per the revision policy approved by the Academic Council vide SB 54.7.2. The Board was also informed that guidance was sought from the Academic Programme Committee/Planning Board (the statutory body of IGNOU that decides the process of approvals for programmes to be offered) through the concerned Division, namely, the Planning and Development Division, as to which Phase Form(s) were to be approved for the B. Sc. programme under UGC-CBCS: Phase Zero as for minor revision or Phase 2 as for a new Programme. Since no guidance was provided, both Phase Zero and Phase 2 forms were placed for the consideration and approval of the School Board. This measure was required for efficient use of the time available for putting the B. Sc. programme under UGC-CBCS on offer in July, 2016. The Phase Zero and Phase 2 forms placed before the School Board are appended at **Annexures 10a and 10b** without respective Appendixes.

SB 55.8.2 The School Board discussed both forms in detail and approved the Phase Zero and Phase 2 forms with the following recommendations:

- The following conditions given in the Phase 2 form under admission criteria be deleted:
 1. Only those who have studied Mathematics at +2 (or equivalent from other recognised Boards) will be eligible to take Mathematics as a subject in B. Sc.
 2. Only those who have studied Biology at +2 (or equivalent from other recognised Boards) will be eligible to take Botany and Zoology as subjects in B. Sc.
- The B. Sc. Programme under the UGC-CBCS be offered initially with the following **four** combinations of three Disciplines each:
 - i) Group 1: Physics, Chemistry, Mathematics (PCM),

ii) Group 2: Chemistry, Botany, Zoology (CBZ)

iii) Group 3: Physics, Chemistry, Geology (PCG)

iv) Group 4: Chemistry, Geology, Zoology (CGZ)

Other combinations proposed, viz., Chemistry, Geology, Botany (CGB), Physics, Mathematics, Geology (PMG) could be offered later after reviewing the experience of introducing Geology as one of three subjects in the programme.

- The duration of the term-end examinations of all theory courses should be of three hours.
- The B. Sc. programme can be offered in July, 2016, provided the condition of 50% of the course materials of the entire programme being printed before it is put on offer is relaxed.

The Phase Zero and Phase 2 Forms approved by the School Board are placed at **Annexures 11a and b** with respective Appendixes.

SB 55.8.3 While discussing this agenda item (as also the agenda item no. 7), it was emphasised by the School Board that the essence of its academic decisions had to be matched by administrative will and support required for meticulous preparation of course materials for the programme. The Board cautioned that once the programme is offered, it has to be sustained till the last semester as far as developing and offering the courses was concerned.

It was unanimously agreed that Faculty members can meet the schedule of launching B. Sc. in July, 2016 and sustain the momentum for later semesters only if necessary support by way of working computers, Consultants, Translators, graphic artists, proof readers, support staff for word processing in English and Hindi, etc. is made available .

Moreover, the Board advised that the B. Sc. programme should not be offered in isolation as courses from other Schools were required in the first semester and from the third semester onwards. The Board further advised that information about the state of preparedness of other Schools be obtained by the Director, School of Sciences. In view of these concerns, the School Board decided that it would like to review the state of preparedness of the School in March, 2016 for offering the B. Sc. programme in July, 2016 to decide the final schedule for launching the B. Sc. programme under UGC-CBCS.

Item No. 9: To consider and decide the strategy for implementation of the decision of the Academic Council regarding change of nomenclature from B. Sc. (Major) to B. Sc. (Hons.) taken in its 64th meeting vide 64.25.2.

SB 55.9.1 The School Board was informed that in its 64th meeting held on July 10, 2015, the Academic Council directed the Schools to make changes in the nomenclature of the Bachelor's degree of IGNOU from 'Major' to 'Honours' in a time bound manner and seek the approval of the School Board for the same so that the shifting could be made smoothly within the specified time frame. Specifically for B. Sc. (Major), the Academic Council took the decision vide AC 64.25.2 that the nomenclature of B. Sc. degree may be changed from B. Sc. (Major) at present to B. Sc. (Honours) in line with its decision taken vide AC 64.23.2. Relevant extracts of the Minutes of the 64th Academic Council meeting are placed at **Annexure 12**.

SB 55.9.2 After detailed deliberations, the School Board decided that since the change in nomenclature is to be done in the light of the UGC-CBCS, the B. Sc. (Major) degree should not be renamed automatically as B. Sc. (Hons.). The School Board further decided that the process of holding meetings of the Programme Expert Committees, approved by the School Board in its 54th meeting vide SB 54. 10.1, for the B. Sc. (Hons.) programmes in various Disciplines, should be initiated so that the B. Sc. (Hons.) programmes in those Disciplines, compliant with the UGC-CBCS, may be offered in due course of time.

Item No. 10: To consider and approve the list of Experts for the Course Design and Development Committees, Course Writers, Course Editors, Translators and Language Editors for courses in Geology in the B.Sc. Programme under UGC-CBCS.

SB 55.10.1 The lists of Experts for the Course Design and Development Committees, Course Editors, Translators and Language Editors for courses in Geology in the B.Sc. Programme under UGC-CBCS (**Annexures 13a, c to e**) were approved and the list of Course Writers for the Core Courses in Geology in the B.Sc. Programme under UGC-CBCS (**Annexure 13b**) were recommended by the School Board of the School of Sciences.

Item No. 11: To consider and approve the list of examiners for the thesis of Mr. S. Krishnaraj, Enrolment No. 112247370, on the topic "Assessment and monitoring of spatial and temporal changes in groundwater quality in Karur district of Tamilnadu using multivariate techniques".

SB 55.11.1 For the sake of confidentiality, the list of examiners of the Ph.D. thesis of **Mr. S. Krishnaraj**, Ph.D. Scholar (Enrolment No. **112247370**) working under the joint supervision of **Dr. Sanjiv Kumar** and **Dr. K. P. Elango** on the topic "**Assessment and**

monitoring of spatial and temporal changes in groundwater quality in Karur district of Tamilnadu using multivariate techniques” was read out for the approval of the School Board.

Details of Mr. S. Krishnaraj, Enrolment number: 112247370

1. Enrolment number: **112247370**
2. Date of Registration: **May 2011**
3. Topic of research: **“Assessment and monitoring spatial and temporal changes in groundwater quality in Karur district using multivariate techniques”**
4. Supervisors
(Internal) Dr. Sanjiv Kumar, Associate Professor in Chemistry, School of Sciences, IGNOU, Delhi
(External) Dr. K.P.Elango, Associate Professor in Chemistry, Gandhigram Rural Institute (Deemed University) Gandhigram, Tamilnadu
5. Date of pre-PhD Thesis submission seminar: **Proposed to be held in the month of Dec.2015**
6. **Publications:**
 1. Assessment of groundwater quality in Karur block of Tamil Nadu using multivariate techniques: A case study; S. Krishnaraj, Sanjiv Kumar and K. P. Elango, IOSR Journal Of Environmental Science, Toxicology And Food Technology (IOSR-JESTFT) e-ISSN: 2319-2402,p- ISSN: 2319-2399.Volume 6, Issue 1 (Sep.-Oct. 2013), PP 36-41 (www.iosrjournals.org)
 2. Factor analysis as a tool for evaluation of spatial and temporal variations in groundwater quality: A case study; S. Krishnaraj, Sanjiv Kumar and K. P. Elango, IOSR Journal of Applied Chemistry (IOSR-JAC) e-ISSN: 2278-5736. Volume 5, Issue 5 (Sep.– Oct. 2013), PP 13-16 (www.iosrjournals.org)
 3. Spatial Analysis of Groundwater Quality Using Geographic Information System – A Case Study, S. Krishnaraj, Sanjiv Kumar and K. P. Elango, IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT) Volume 9, Issue 2 PP 01-06 (2015)
 4. Application of Cluster and Factor Analysis in Groundwater Quality Monitoring-a case study, S. Krishnaraj, Sanjiv Kumar and K. P. Elango, International Journal of scientific Engineering and Technological research (IOSR-JESTFT) Volume 4, Issue 7 pp 1241-46, (2015)

SB 55.11.2 The School Board approved the list of examiners and advised that the approved list of examiners should not be circulated as a part of the Minutes but be forwarded confidentially to the Research Unit.

Item No. 12: To consider and approve the list of examiners for the thesis of Ms. Nasreen Akhtar, Enrolment No. 131637553, on the topic “Impact of ecological changes on the malaria vectors in north-eastern states of India”.

SB 55.12.1 For the sake of confidentiality, the list of examiners of the Ph.D. thesis of **Ms. Nasreen Akhtar**, Ph.D. Scholar (Enrolment No. 131637553) working under the joint supervision of **Prof. Neera Kapoor and Dr. Bhupender Nath Nagpal** on the topic **“Impact of ecological changes on the malaria vectors in north-eastern states of India”** was read out for the approval of the School Board.

Details of Ms. Nasreen Akhtar, Enrolment number: 131637553

1. Enrolment number: **131637553**
2. Date of registration: **January, 2013**
3. Topic: **Impact of ecological changes on the malaria vectors in north-eastern states of India.**
4. Supervisor (Internal/External):
Prof. Neera Kapoor, School of Sciences, IGNOU
and
Dr. Bhupender Nath Nagpal,
Scientist E, National Institute of Malaria Research
Sector 8, Dwarka, Delhi-110077
5. Date of Pre-PhD thesis submission seminar before Doctoral Committee: **15.10.2015**
6. No. of Publications:
 1. **Impact of ecological and climatic changes on vectors of malaria in four north-eastern states of India”** Journal: Indian Journal of Ecology,
Status: Accepted
 2. **“In changing scenario of ecology, the role of *An. culicifacies* in transmission of malaria in north-eastern States of India”.**
Status: Under Review

SB 55.12.2 The School Board approved the list of examiners and advised that the approved list of examiners should not be circulated as a part of the Minutes but be forwarded confidentially to the Research Unit.

Item No. 13: To consider and approve the list of examiners for the thesis of Mr. Naresh Kumar Arora, Enrolment No. 122877705, on the topic “Productive utilization of poor quality groundwater in agriculture”.

SB 55.13.1 For the sake of confidentiality, the list of examiners of the Ph.D. thesis of Mr. Naresh Kumar Arora, Ph.D. Scholar (Enrolment No. 122877705) working under the joint supervision of **Prof. Javed A. Farooqi** and **Dr. S.K. Chaudhary** on the topic “Productive Utilization of poor quality groundwater in agriculture” was read out for the approval of the School Board.

Details of Mr. Naresh Kumar Arora, Enrolment number: 122877705

1. Enrolment number: **122877705**
2. Date of Registration: **January, 2012**
3. Topic: **Productive Utilization of poor quality groundwater in agriculture**
4. Name of Supervisors:
 - a) **Prof. Javed A. Farooqi (Internal) and**
 - b) **Dr. S.K. Chaudhary (External)**
5. Date of Pre-PhD thesis submission seminar before Doctoral Committee:
19-10-2015
6. No. of Publications: **One**

Effect of poor quality water on chemical properties of the salt affected soil and performance of rice, N.K. Arora, S.K. Chaudhari, J.A. Farooqi and Nirmalendu Basak, Journal of Soil Salinity and Water Quality: 4(2), 114-121, 2012

SB 55.13.2 The School Board approved the list of examiners and advised that the approved list of examiners should not be circulated as a part of the Minutes but be forwarded confidentially to the Research Unit.

Item No. 14: To consider and recommend the names of the external course writers for the following Core Courses for the B.Sc. programme under UGC-CBCS:

- i) **Core Course 1 in Botany entitled Biodiversity (Microbes, Algae, Fungi and Archegoniate Theory and Lab.);**
- ii) **Core Course 2 in Zoology entitled Comparative Anatomy and Developmental Biology of Vertebrates (Theory and Lab).**

SB 55.14.1 The **Core Course 1 in Botany** entitled **Biodiversity (Microbes, Algae, Fungi and Archegoniate), 4 Credits Theory + 2 Credits Practicals** is to be offered in Semester I of B.Sc. programme under UGC-CBCS. The following names of the external course

writers for this course were recommended by the School Board of the School of Sciences.

S. No.	Name and designation	Address and contact
1.	Dr. A.K. Kavathekar (Retd.) Associate Professor	Dept. of Botany, Sri Venkateswara College, Univ. of Delhi Res. AG-1/190B, DDA MIG Flats, Vikas Puri, New Delhi-110018 M: 9958360208
2.	Dr. Sneh Chopra (Retd.) Associate Professor	Dept. of Botany, Kalindi College, University of Delhi Res. C-325, Golf View Apartments, Saket, New Delhi-110017 M: 9873161828
3.	Dr Pooja Gokhale Sinha Assistant Professor	Dept. of Botany, Sri Venkateswara College, Univ. of Delhi Res. G-H 5&7, Flat No. 1140, Paschim Vihar, New Delhi-110 087 M: 9999747375; E-mail : gokhale_20@hotmail.com
4.	Dr. Swati Omanwar	Principal Investigator DST (WOS-A) Scheme, School of Sciences, IGNOU Tel. no. 011-29572818

The **Core Course 2 in Zoology**, entitled **Comparative Anatomy and Developmental Biology of Vertebrates, (4 Credits Theory + 2 Credits Practicals)**, is to be offered in Semester 2 of B.Sc. programme under UGC-CBCS. The following names of external course writers for this course were recommended by the School Board of the School of Sciences:

S.N.	Name and designation	Address and contact
1.	Prof. Shweta Saran	School of Life Sciences, JNU, Delhi
2.	Dr. Anita Grover Associate Professor	Dept. of Zoology, Zakir Hussain College, University of Delhi
3.	Dr. Tanushree Saxena Associate Professor	Dept. of Zoology, SSD College, University of Delhi

Item No. 15: To consider and recommend the names of internal course writers for the Core Courses of Semester 1 and Semester 2 in Botany, Zoology, Chemistry, Mathematics and Physics for the B.Sc. programme under UGC-CBCS.

SB 55.15.1 The following names of internal course writers for the Core Courses of Semester 1 and Semester 2 in Botany, Zoology, Chemistry, Mathematics and Physics for the B.Sc. programme under UGC-CBCS were approved by the School Board of the School of Sciences:

1. **Botany** – *Course 1:* All Faculty members of Life Sciences for Part 1 and Prof. S. S. Hasan (Senior Consultant); Prof. J. Sokhi and Prof. A. Nigam for Part 2.

Course 2: Prof. J. Sokhi and Prof. A. Nigam.
2. **Zoology** – *Courses 1 and 2:* Prof. G. Kaicker, Prof. Neera Kapoor, Dr. Bano Saidullah and Prof. S. S. Hasan (Senior Consultant).
3. **Chemistry** – *Course 1:* Prof. S. Malhotra, Prof. B. I. Fozdar, Prof. J. A. Farooqi, Dr. Lalita S. Kumar and Dr. Kamalika Banerjee;

Course 2: Prof. S. Malhotra, Prof. B. I. Fozdar, Prof. J. A. Farooqi, Dr. Lalita S. Kumar, Dr. Sanjiv Kumar and Dr. Kamalika Banerjee.
4. **Mathematics** – *Course 1:* Dr. Deepika Garg

Course 2: Prof. P. Mital and Prof. Sujatha Varma.
5. **Physics** – *Course 1:* All Faculty members of Physics, SOS, IGNOU.

Course 2: Prof. Vijayshri, Prof. S. R. Jha, Prof. S. M. Gokhale and Dr. S. Gupta.

Item No. 16: To consider and approve the Expert Committee for peer review of Part 1 on Physical Chemistry of the Theory component of the Core Course II entitled ‘Chemical Energetics, Equilibria & Functional Organic Chemistry (Theory)’ to be offered in the B.Sc. Programme under the UGC-CBCS.

SB 55.16.1 The course material of Part 1 on Physical Chemistry of the theory component of the Core Course II entitled ‘Chemical Energetics, Equilibria & Functional Organic Chemistry (Theory)’ to be offered in the B.Sc. Programme under the UGC-CBCS is by and large being written afresh. It was proposed that the course material be peer reviewed by experts associated with the teaching of the course at the undergraduate level. The names of the following external and internal experts were approved by the School Board of the School of Sciences for the Expert Committee for peer review:

1. Dr. Vijay Sarada, (Retd.) Dept. of Chemistry, Zakir Hussain College, University of Delhi.
Mob: 9871751112 Email: sardavijay@yahoo.co.in

2. Dr. C. K. Seth, Associate Professor, Dept. of Chemistry, Hindu College, University of Delhi
Mob: 09810281122 Email: ckseth@hotmail.com
3. Prof. B. S. Saraswat, Professor of Chemistry, School of Sciences, IGNOU
4. Prof. Sunita Malhotra, Professor of Chemistry, School of Sciences, IGNOU
5. Dr. Sanjiv Kumar, Associate Professor of Chemistry, School of Sciences, IGNOU
6. Dr. Kamalika Banerjee, Associate Professor of Chemistry, School of Sciences, IGNOU

Item No. 17: Any other items with the permission of the Chair.

No items were taken up under this agenda item.

The meeting ended with a vote of thanks to the Chair.


(Vijayshri)
Chairperson

List of Annexures

- Annexure 1** Minutes of the 54th meeting of the School Board of the School of Sciences
- Annexure 2** Action Taken Report on the minutes of 54th meeting of the School Board of the School of Sciences
- Annexure 3** Letter from Director (Education), Akashdeep
- Annexure 4** Minutes of the 14th meeting of the Standing Committee of the School Board held on Nov. 18, 2015 with Annexures
- Annexure 5** Phase 1 Form for the B. Sc. programme placed before the School Board for approval
- Annexure 6** Phase 1 Form for the B. Sc. programme approved by the School Board
- Annexure 7** Minutes of the Programme Expert Committee meeting for B. Sc. under the UGC-CBCS held on Oct. 1, 2015
- Annexure 8** Minutes of the Expert Committee meeting for the Programme B. Sc. (Hons.) in Geology and B. Sc. with Geology as one of three subjects under the UGC-CBCS held on Sept. 4, 2015
- Annexures 9a to j** Minutes of the Expert Committee/Course Design and Development Committee meetings for the Core Courses in Botany, Zoology, Chemistry, Mathematics and Physics for the B. Sc. Programme with three subjects under the UGC-CBCS
- Annexures 10a and b** The Phase Zero and Phase 2 Forms for the B. Sc. programme under the UGC-CBCS placed for the approval of the School Board
- Annexures 11a and b** The Phase Zero and Phase 2 Forms for the B. Sc. programme under the UGC-CBCS approved by the School Board
- Annexure 12** Relevant extracts of the Minutes of the 64th meeting of the Academic Council held on July 10, 2015
- Annexures 13a to e** Lists of Experts for the Course Design and Development Committees, Course Writers, Course Editors, Translators and Language Editors, for courses in Geology in the B.Sc. Programme under UGC-CBCS