

**RAMNARAIN RUIA AUTONOMOUS
COLLEGE DEPARTMENT OF PHYSICS**

24/10/2020

BOS MEETING (On GOOGLE MEET Online Platform)

Minutes of Meeting

(02:00PM – 04.05PM)

Members Present:

| Sr. No. | Name | Designation |
|----------------|-------------------------|--|
| 1. | Dr. Vijay Mayekar | Head, Dept. of Physics, Ramnarain Ruia Autonomous College |
| 2. | Dr. Rajendra Rathi | Assistant Professor |
| 3. | Dr. Pratap Patil | Associate Professor |
| 4. | Mr. Bhupesh Mude | Assistant Professor |
| 5. | Mr. Onkar Ramdasi | Assistant Professor |
| 6. | Ms. Sneha Nandi | Assistant Professor |
| 7. | Dr. Suhas Asgekar | Associate Professor, Textile & Engineering Institute, Ichalkaranji, Shivaji University |
| 8. | Dr. Vedawyas Mangasuli | General Manager, R&D, Modison Metals Ltd., Gujarat |
| 9. | Dr. Mohan Narayan | Associate Professor, Head, Dept. of Physics, ICT, Mumbai |
| 10. | Dr. Vaibhav Prabhudesai | Associate Professor, TIFR, Mumbai |

➤ Introduction & Welcome by Dr. Vijay Mayekar, HOD.

Agenda 1 – To approve revised syllabus for FY/SY/TY for Even semester classes – B.Sc. and M.Sc. programs

DISCUSSED THAT:

1.1 TYBSc: Theory papers

- 1) RUSPHY601- Accepted with no change in content.
- 2) RUSPHY602- Accepted with no change in content.
- 3) RUSPHY603 - Accepted with no change in content.
- 4) RUSPHY604- Accepted with no change in content.
- 5) RUSACEI 601 - Accepted with no change in content.

1.2 SYBSc: Theory papers

- 1) RUSPHY401- Syllabus accepted with no change in content.
- 2) RUSPHY402 - Syllabus accepted with no change in content.



3) RUSPHY403 - Syllabus accepted with no change in content.

1.3 FYBSc: Theory papers



- 1) RUSPHY201: Syllabus accepted with no change in content.
- 2) RUSPHY202- Syllabus- accepted with no change in content.

1.4 Practical:

1.4.1-In TYBSc practical Syllabus

(Physics- RUSPHY601, RUSPHY602 and Applied component (EI) RUSACEI6P1):- Syllabus Accepted as it is.

1.4.2-In SYBSc practical Syllabus (RUSPHY03):- Syllabus Accepted as it is.

1.4.3 In FYBSc practical Syllabus (RUSPHY01):- Syllabus Accepted as it is.

RESOLVED THAT:

BOS members accepted the BSc and MSc syllabus as it is.

Agenda 2 – Approval of changes in modalities of examinations conducted in September and October for completing the academic year of the T.Y.B.Sc. and M. Sc. part-II of the year 2019-20:

DISCUSSED THAT:

- **Theory examination**

All the pending theory (TYBSc-sem6) and MSc-sem4 examinations- Regular and ATKT- were conducted online MCQ Question paper of 50 marks-40/38 MCQ- Eklavya software company was hired for the online conduction.

- **Practical examination**

TYBSc (two practical papers and one AC practical paper):Two components per paper- Test(20 marks-30 minutes) and viva(30 marks-15 minutes)

MSc(one practical paper with two groups and one project paper):Practical paper-two components per group-Test(20 marks-30 minutes) and viva(30 marks-15 minutes) and project presentation by students and viva.

- Dr. Vaibhav Prabhudesai suggested co-relation of the marks and the scatter of the performance for better understanding and approval of the modalities.

RESOLVED THAT:

BOS member approved the changes in the modalities of examinations conducted in September and October for completing the academic year of the T.Y.B.Sc. and M. Sc. part-II of the year 2019-20.





Agenda 3 – Approval of the changes in the modalities of the assessment which includes the question paper pattern/distribution of marks for online- internal/external- Theory/Practical examinations in this academic year 2020-21 due to the closure of the college.

DISCUSSED THAT:

- **Internal Theory modalities:**(For B.Sc. and M.Sc.)

Each theory paper: 20 marks test- 30 minutes and assignments on all units(20 marks)

- **Internal Practical:**

I. Dr. Vijay Mayekar(HoD) gave a brief introduction of the practical session of TYBSc conducting in this academic year 2020-21.

Pre-practical sessions are conducted with following 3 components.

- 1) Creating e-journal of the experiments
- 2) Exposure to the simulation experiments(Virtual labs-MHRD)
- 3) Circuit simulations on LT-Spice and on the TINA work bench.

II. Dr. Pratap Patil demonstrated the method of conducted practical and the e-journal.

III. It was discussed that there are experiments available online that are a bit different than the one prescribed in the syllabus and some are found to be similar to the experiments mentioned in the syllabus.

- **Internal Practical examination Modalities:**

I. Proposed Marks Distribution:(40 marks)E-

journal – 10 Marks

Powerpoint presentation – 10 Marks

Viva – 10 Marks

Convert 30 marks to 40 marks

II. Dr. Vaibhav Prabhudesai suggested to keep aside 10 Marks for hands on performance (skill training) in the event, college reopens early in December.

RESOLVED THAT:

- **Approved Marks Distribution by BOS:**E-

journal – 10 Marks

Power-point presentation – 10 Marks

Viva – 10 Marks

Marks kept for hands on performance(on skill training) in the event college reopens early in December– 10 Marks



Otherwise convert 30 marks to 40 marks



- **Approved to include the simulation experiments** that are close to the experiments mentioned in the syllabus and also those experiments that are prescribed in the sem-6, sem-4, sem-2 syllabus.

Agenda 3 – To review Question papers of the previous exams.

DISCUSSED THAT:

- Reviewed question papers of the sem5(the offline theory paper and the online applied component paper) of TYBSc.
- The online question papers of MSc sem4.

RESOLVED THAT:

Approved the question paper pattern.

Agenda 4 – To approve certificate courses offered by SWAYAM/NPTEL/MOOC/College. FYBSc students are to be encouraged to take up these courses.

DISCUSSED THAT:

| Sr. No. | Class | Course description and Institute |
|---------|------------|--|
| 1 | TYBSc | Introduction to Atmospheric and Space Sciences through Swayam-Prof. M V Sunil Krishna-IIT Roorke-content-type-video-MSc in Pune University |
| 2 | TYBSc | Introduction to Photonics-MSc in Photonics-Manipal University-career in optics Instruments-Prof. Balaji Srinivasan-IITM |
| 3 | SYBSc | Quantum Mechanics-IIT Bombay-Theoretical |
| 4 | BSc | Experimental Physics-I,II,III- Prof. Amal Kumar Das-IIT Kharagpur-video |
| 5 | TYBSc, MSc | Physics of biological systems-Prof. Mithun Mitra |
| 6 | MSc | Optical sensors-Prof. Sachin Srivastava-IIT Roorkee |

RESOLVED THAT:

BOS members approved the certificate courses.

Vijay Mayekar

Dr. Vijay Mayekar

Head, Department of Physics



_____X_____X_____X_____X_____



S.P.Mandali's
RAMNARAIN RUIA AUTONOMOUS COLLEGE
DEPARTMENT OF PHYSICS

15/05/2021

Board of Studies MEETING (On GOOGLE MEET Online Platform)

Minutes of Meeting
(04:00PM – 06:00PM)

Members Present:

| Sr. No. | Name | Designation |
|---------|-------------------------|--|
| 1. | Dr. Vijay Mayekar | Associate Professor and Head of the Department |
| 2. | Dr. Rajendra Rathi | Assistant Professor |
| 3. | Dr. Pratap Patil | Associate Professor |
| 4. | Dr. Bhupesh Mude | Associate Professor |
| 5. | Mr. Onkar Ramdasi | Assistant Professor |
| 6. | Ms. Sneha Nandi | Assistant Professor |
| 7. | Mr. Devendra Chavan | Assistant Professor |
| 8. | Dr. Suhas Asgekar | Associate Professor, Textile & Engineering Institute, Ichalkaranji, Shivaji University |
| 9. | Dr. Mohan Narayan | Associate Professor ,Head, Dept. of Physics, ICT, Mumbai |
| 10. | Prof. Rajendra Deshmukh | Registrar, Professor, Department of Physics, ICT, Mumbai. |
| 11. | Dr. Vaibhav Prabhudesai | Associate Professor, TIFR, Mumbai |

➤ Introduction & Welcome by Dr. Vijay Mayekar, HOD.

Agenda 1 – To review the Feedback of students from F.Y.B.Sc., S.Y.B.Sc., T.Y.B.Sc. and M.Sc. regarding course curriculum.

DISCUSSED THAT:

1. Students Feedback
 - 1) Few students suggested some topics from the F.Y.B.Sc syllabus should be removed since they have already been covered in HSC/12th Std.



- 2) Some students found the syllabus to be challenging.
- 3) One of the SYBSc students pointed out that Electronics has been given undue importance in the syllabus and that can be replaced with some other topics of Physics like Quantum mechanics and Classical Mechanics

RESOLVED THAT:

- BOS Members suggested that the feedback should be anonymous, compulsory and semester wise.
 - There should Qualitative feedback i.e. remarks should be included along with the grading scale.
-

Agenda 2 – Approval for Revised F.Y.B.Sc. Syllabus DISCUSSED

THAT:

- HoD put forward purpose of the revision of the FYBSc syllabus. Subject part which had been covered in the Physics syllabus of the 12th Standard in Maharashtra higher secondary board should be replaced by advanced topics from the SYBSc syllabus. This will create some slots in the SYBSc syllabus which would be then filled in with connected subject-units from the TYBSc syllabus. Addition of some new -advanced subject part like Astronomy, Ultrasonics could be introduced to the students at SYBSc and TYBSc This academic year-201-22-FYBSc syllabus revision, to be followed by Revision of Syllabi of SYBSc and TYBSc, practical in the following academic Years.

1.1 RUSPHY101 (Mechanics, Optics and Thermodynamics)

I. Topics like Centre of Mass, Linear Momentum are added in the Unit - I

- Dr. Vaibhav Prabhudesai – suggested that, Linear momentum of a single particle should be replaced by Momentum conservation in elastic and inelastic collisions.
- Dr. Mohan Narayan – Angular Dynamics should be included as well.
- Dr. Vijay Mayekar – Angular Dynamics part will be introduced in S.Y.B.Sc. syllabus.



- Dr. Suhas Asgekar – Suggested including the topic of bending of beams in Elasticity.
- II. **In Unit - II**, topics of interference and Diffraction are introduced along with topic of Lens and Aberration.
- Dr. Vaibhav Prabhudesai – suggested explaining the applications of interference and other topics like anti- reflection coating.
 - Dr. Mohan Narayan – Suggested “Fundamentals of Optics by Jenkins and White” as a reference for Optics.
- III. **In Unit – III**, topics like entropy, Clausius Theorem, Reversible process are introduced.
- Dr. Mohan Narayan – suggested “Mechanics and Thermodynamics by Ghosh and Basavaraju“ and “Thermodynamics by Sears and Zemansky” as references for Unit – III.
 - Dr. Vaibhav Prabhudesai – suggested to change “heat as path function” to “state and non-state variables”.

1.2 RUSPHY102 (Nuclear Physics and Quantum Mechanics)

- I. Unit – I and Unit – II of 2020-21 syllabus are merged as Unit – I - Accepted with no change in content.
- II. Dr. Vaibhav Prabhudesai suggested to change the name of Unit – II as Modern Physics which was earlier named as Heisenberg Uncertainty Principle.
- III. Unit – III is changed to Basics of Quantum Mechanics
- Dr. Mohan Narayan – suggested to include postulates of Quantum Mechanics and to change the topic “Requirement of wave-function of Schrodinger equation” to “Requirement of Schrodinger wave-function”.
 - Dr. Vaibhav Prabhudesai – suggested to add the term “comparing with optics” for the topic Analogy between wave equation and Schrodinger’s wave equation.

1.3 RUSPHY201 (Mathematical Physics & Mechanics)

- I. Unit – I - Accepted with no change in content.
- II. Unit – II - Accepted with no change in content.
- III. In Unit – III, Dr. Mohan Narayan suggested that the two lectures for ultrasonic should be divided as one lecture for generation of



ultrasonic and one lecture for application (like flaw detection in metals).

✚ Dr. Vaibhav Prabhudesai pointed out that the group velocity and phase velocity that are covered in *Quantum Mechanics in semester – I* requires the basic mathematical formulation which is covered in *semester – II* and therefore suggested to either relocate the units or to exchange the papers. i.e. *RUSPHY102 (Nuclear Physics and Quantum Mechanics)* to be replaced with *RUSPHY201 (Mathematical Physics & Mechanics)* in *semester – I*.

1.4 RUSPHY202 (Electronics)

- I. Unit – I - Accepted with no change in content.
- II. Dr. Vaibhav Prabhudesai suggested changing the name of Unit – II to Digital and Analog Electronics - Accepted with no change in content.
- III. Old syllabus of Unit –III is completely replaced by new topic of Transistor Biasing – Accepted with no change in the content.

RESOLVED THAT:

- BOS member approved the syllabus changes.
-

Agenda 3 – Changes in the modalities in M.Sc. internal assessment suggested by college authorities.

DISCUSSED THAT:

- I. Earlier, the internal examination comprised of 20 marks objective (MCQ) test and 20 marks assignment. This is changed to 20 marks subjective test and 20 marks for research oriented activity (like literature survey, case study and research paper review).
- II. Government norms based on COVID-19 (online examination in MCQs mode) are included in the syllabus.

RESOLVED THAT:

- BOS member approved the changes in the MSc examination modalities.

Agenda 4 – Scatter plot and co-relation of marks of students practical examination.



DISCUSSED THAT:

- Dr. Vijay Mayekar presented scatter plot of viva and test marks conducted for practical examination.
- From the plot, Dr. Vaibhav Prabhudesai concluded that viva was biased or tests were random.

RESOLVED THAT:

BOS members accepted the examination pattern.

Agenda 5 – To approve 2-4 certificate courses offered by SWAYAM/NPTEL/MOOC/College.

DISCUSSED THAT:

Students from all the courses are encouraged to take certificate courses offered by college and by SWAYAM/NPTEL/MOOC etc. on different topics in Physics not covered in regular curriculum but complementary to the syllabus. Introduction to Atmospheric and Space Sciences (TYBSc)

1. Quantum mechanics (SYBSc)
2. Experimental Physic(FY,SYTY)
3. Physics of Biological Systems(TY, MSc)
4. Course of basic thermodynamics (FYBSc)
5. Micro-Sensors (MSc)

RESOLVED THAT:

- BOS members approved the certificate courses.

V Mayekar

Dr. Vijay Mayekar
Associate Professor and Head, Department of
Physics,
Ramnarain Ruia Autonomous College, Mumbai

