

## **(5) MASTER OF SCIENCE IN PHYSICS. (M.SC. IN PHYSICS)**

### **Structure and Brief Syllabi**

**Objective:** - The importance of physics to society today is most easily represented by our reliance on technology. Many of the technologies that are continually transforming the world we live in can be directly traced back to important physics research. For example, research on the physics of semiconductors enabled the first transistor to be developed in 1947. This seemingly simple device is the key component in all of our electronic systems, including computers, and it is now considered one of the most important inventions in human history. The study of physics in schools and universities is undoubtedly relevant to society today. In summary, the world needs more physicists. It is the language of innovation and advancement. Other than being a noble profession, the benefits of studying physics are valuable and numerous.

**Eligibility Criteria for Admission:** – Graduate in Physics.

**Scheme of Examination-** M.Sc. in Physics is of two years duration divided into Part-I and Part-II, each Part consisting of eight papers. Each paper carries 100 marks, divided into term end theoretical written examination and home assignment /practical work in a ratio of 80:20. Failure in one paper will mean failure in that Part of the examination. Hence, students must strive to pass in all the papers. It is necessary to pass Part-I of the examination before a student can be promoted to Part-II. In order to pass each part of the examination, it is, now, compulsory for every student, to secure at least 33% of marks in each paper. To determine 33% of marks in each paper, the marks obtained by the candidate, both in the term end theoretical written examination and the practical examination/home assignment, as the case may be, will be clubbed and counted together and percentage determined accordingly. However, if a candidate has failed to appear or secured zero mark in term end theoretical examination or practical examination/home assignment, as the case may be, in any paper, he/she will be deemed to have failed in that paper and the part. The abstract of the syllabus of M.Sc. in Physics course is as below

Paper	Title of the paper	Distribution of Marks between Theory and Assignment/ Practical			Minimum Marks required to pass the examination(written exam.+ practical/Assignment)
		Written exam	Assignment	Practical	
<b>PART-I</b>					
1.	Mathematical Physics	80	20		33
2	Quantum Mechanics	80	20		33
3	Electro Dynamics & Plasma Physics	80	20		33
4	Statistical Physics	80	20		33
5	Nuclear & Particle Physics	80	20		33
6	Atomic & Molecular Physics	80		20	33
7	Condensed Matter Physics	80		20	33
8	Electronic Devices	80		20	33
	<b>Total</b>	<b>640</b>	<b>100</b>	<b>60</b>	<b>264</b>
<b>PART-II</b>					
9	Computational Mathematics	80	20	-	33
10	Programming with Fortran & C++	80		20-	33
11	Physics of nano-materials	80	20	-	33
12	Science & Technology of Renewable Energy	80	-	20	33
13	Environmental Physics	80	20		33
14	Photonics	80		20	33
15	Advanced Condensed Matter Physics	80	-	20	33
16	Advance Electronics	80	-	20	33
	<b>Total</b>	<b>640</b>	<b>60</b>	<b>100</b>	<b>264</b>