

ANNEXURE F
FACULTY OF SCIENCES

SYLLABUS
of
Physics
For
Bachelor of Science
(Home Science)
(Semester VI)
(Under Credit Based Continuous Evaluation Grading System)
(12+3+1 System of Education)

Session: 2026-27



The Heritage Institution
KANYA MAHA VIDYALAYA
JALANDHAR

**Physics for
Bachelor of Science (Home Science)**

(Session 2026-27)

Semester-VI								
Course Code	Course Title	Course type	Credits	Total Marks	h	Pract	CA	Examination time
BHSM-6394	Applied Physics	C	3-0-1	100	50	20	30	3+3

Bachelor of Science (Semester System) (12+3 System of Education)
(Session-2026-27)

Bachelor of Science (Home Science) (SEMESTER–VI)

APPLIED PHYSICS

Course Code: BHSM-6394

COURSE OUTCOME

After completing this course the students will be able to

CO1: Explain the principles of home lighting, illumination standards, thermostat operation, and the working and applications of different sources of light used in household systems.

CO2: Describe the phenomena of reflection, refraction, total internal reflection, diffusion, dispersion, and radiation, and explain the applications of different types of electromagnetic and mechanical radiations in daily life.

CO3: Explain the principles of current electricity, electrical energy generation and transmission, and demonstrate an understanding of household electrical wiring, energy meters, fuses, and electrical safety practices.

CO4: Explain the heating and magnetic effects of electric current and analyze their applications in common household electrical appliances such as heaters, electric motors, and grinders.

Bachelor of Science (Semester System) (12+3+1 System of Education)
(Session-2026-27)

Bachelor of Science (Home Science) SEMESTER–VI

Course Title: Applied Physics

Course code: BHSM-6394

Credits: 3-0-1

Marks: 100 (ESE Theory Marks: 50, Pract : 20, CA: 30)

Examination Time: 3 Hours

Pass Mark: 18

Instructions for the Paper Setters:- Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A

Thermostat Concepts of home lighting: Illumination, illumination intensity levels in different parts of the house. Sources of light, incandescent lamps, CFLs.

SECTION-B

Reflection, refraction, total internal refraction, diffusion of light, dispersion of light. Radiation and radiation spectra; uses of various radiations. (X- Rays, ultrasounds, microwaves, radio waves etc).

SECTION-C

Current Electricity, Principle of electrical energy generation and its transmission, Energy. meter, Fuse, Types of Fuses, Essential components of wiring, safety precautions while using electricity.

SECTION-D

Heating effect of current and its use in household devices, magnetic effect of current and its use in electric motor, grinder etc.

Books recommended:

1. Avery House Physics.
2. Fundamentals of Physics Halliday Resnick, Walker.
3. N.C.E.R.T. Books of Physics For XI and XII

Bachelor of Science (Honours) Home Science (CBGS) (Semester System)
(SYLLABUS FOR THE BATCH FROM YEAR 2025 TO 2029) SEMESTER-VI

APPLIED PHYSICS (Practical)

Course Code : BHSM-4396 (P)

Time: 3 Hours

Max Marks: 20

Pass Mark: 7

Credits: 0-0-1 (2 Hours/ week)

Instructions to Practical Examiner

Question paper is to be set on the spot jointly by the external and internal examiners. Two copies of the same to be submitted for the record to COE office, Kanya Maha Vidyalaya, Jalandhar

General Guidelines for Practical Examination

I. The distribution of marks is as follows: **Marks: 20**

i) One experiment 7 **Marks**

ii) Brief Theory **5 Marks**

iii) Viva-Voce **4 Marks**

iv) Record (Practical file) **4 Marks**

II. There will be one session of 3 hours duration. The paper will have one session.

Paper will consist of 8 experiments out of which an examinee will mark 6 experiments and one of these is to be allotted by the external examiner.

III. Number of candidates in a group for practical examination should not exceed 12.

IV. In a single group no experiment is to be allotted to more than three examinees in any group.

List of Experiments

1. Demonstration of light spectrum through prism.
2. Demonstration of repair/replacement of fuse in different household devices.
3. Demonstration of replacement of a capacitor in fan, starter in tube light, changes of a capacitor in fan.
4. To trace rays through a prism and prove that
 $\sin i + \sin e = \sin A + \sin D$.
5. To find refractive index.