

**DEPARTMENT OF PHYSICS**  
**HENRY BAKER COLLEGE, MELUKAVU**  
**CERTIFICATE PROGRAMME**

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Programme Code: **HBC/PHY/CP04/2022-23**  
Title of the Programme: **MATHEMATICS FOR COMPETITIVE EXAMS**

Name of the Faculty in Charge: Ms. Neethu George  
Instructional Hours: **30**

**SYLLABUS**

**Objective:** To impart in students an understanding of Mathematical concepts & tricks that will help them to excel in competitive exams.

**Learning Outcome:** Students learn certain mathematical concepts that help them to solve questions in competitive exams.

**Module 1: Numbers, fractions, Decimals -basic operations** (7 hours)

Type of numbers, VBODMAS, Squares & Square roots, cubes & cube roots, LCM, HCF, Average, Type of Fractions, Decimals, Operations on fractions & Decimals

**Module 2: Algebra** (5 hours)

Identities, Problems on ages, Exponents, Percentage, Ratio and Proportions, Progressions

**Module 3: Some advanced concepts** (7 hours)

Profit and loss, Simple Interest, Compound Interest, Time & Work, Time & Distance, Pipe & Tanks, Boat & Streams.

**Module 4: Geometry** (6 hours)

*Triangles, Squares, rectangles, parallelograms, trapezium, circles etc. Perimeter and area, cube, cuboids, sphere etc., Volume*

**Module 5: Mental Ability** (5 hours)

Series, Odd one, Analogy, Direction test, Clock, Calendar, Relations, Position, Problems on Mathematical signs, Coding & Decoding.

**REFERENCES**

- 1) Christy Varghese, CSIR-NET General Aptitude- Anew Outlook, Lilly Publishing House, Changanacherry, Kerala
- 2) Degree Level Prelims & Mains Advanced Rank File, Lakshya Publications, Trivandrum.

# DEPARTMENT OF PHYSICS

HENRY BAKER COLLEGE, MELUKAVU

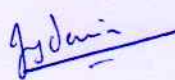
Certificate Programme 2022-23

Name of the programme: Mathematics for Competitive Exams

HBC/PHY/CP01/2022-23

## LIST OF STUDENTS ENROLLED

Sl. No.	Enrolment Id	Name of the student
1	21PH601	ASHKAR NOORUDHIN
2	21PH602	DARSANA SANOJ
3	21PH603	HALEEMA BEEVI K M
4	21PH604	NESEEM V S
5	21PH605	SUMAYYA P N
6	22PH601	ABHISHEK RAJU
7	22PH602	AUSTIN SABU

  
Jiny Devasia  
Head of the Department

  
Neelan George  
Course Coordinator

Principal

# HENRY BAKER COLLEGE, MELUKAVU

## SUMMARY REPORT

Programme Code: HBC/PHY/CP04/2022-23

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**Summary report of the program along with the outcome and assessment procedure:**

### DEPARTMENT OF PHYSICS

#### **Assessment procedures:**

To deliver the curriculum content, theory as well as problem sessions were carried out.

For assessment written exam was conducted.

#### **Summary report of the programme:**

The certificate programme 'Mathematics for Competitive Exams' aimed in imparting in students mathematical concepts and tricks that would help them excel in competitive exams. The 30 hour curriculum was designed in such a way that students gain knowledge of mathematical concepts required to perform well in various competitive exams. 7 students participated in the programme. The course included both theory and problem sessions. After delivering the course content a written examination was conducted for evaluation. Certificates are issued after the completion of the course.

#### **Outcome:**

On completion of the course, students gained a good knowledge of mathematical concepts and tricks that will help them in confidently appearing for competitive exams. This will also be useful in their daily lives and in their studies.





# HENRY BAKER COLLEGE

MELUKAVU, KOTTAYAM

Founded 1981

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A Christian Minority Educational Institution run by C.S.I East Kerala Diocese  
Affiliated to Mahatma Gandhi University, Kottayam

## CERTIFICATE PROGRAMME 2022-2023

### CERTIFICATE

This is to certify that Mr./Ms. Neseem U.S. of .....  
B.Sc Physics has successfully completed the certificate programme  
in Mathematics for Competitive Exams conducted by the Department of  
Physics with B Grade in the examination held in 18-05-2023

  
Head of the Department

  
IQAC Co-ordinator



  
Principal

Place: Melukavu  
Date of issue:



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## CERTIFICATE PROGRAMME 2022-2023

### CERTIFICATE

This is to certify that Mr./Ms. *Sumayya P.N.* of .....  
*B.Sc Physics* has successfully completed the certificate programme  
in *Mathematics for Competitive Exams* conducted by the Department of  
*Physics* with *B* Grade in the examination held in *18-05-2023*

*[Signature]*  
Head of the Department

*[Signature]*  
IQAC Co-ordinator



*[Signature]*  
Principal

Place: Melukavu  
Date of issue:



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## CERTIFICATE PROGRAMME 2022-2023

### CERTIFICATE

This is to certify that <sup>✓</sup>Mr./Ms. *Ashkar Noorudhin* of .....

*B.Sc Physics* has successfully completed the certificate programme  
in *Mathematics for Competitive Exams* conducted by the Department of  
*Physics* with *B* Grade in the examination held in *18-05-2023*

*[Signature]*  
Head of the Department

*[Signature]*  
IQAC Co-ordinator



*[Signature]*  
Principal

Place: Melukavu  
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## CERTIFICATE PROGRAMME 2022-2023

### CERTIFICATE

This is to certify that Mr./Ms. Haleema Bheeri K.M of .....

B.Sc Physics has successfully completed the certificate programme  
in Mathematics for Competitive Exams conducted by the Department of

Physics with A Grade in the examination held in 18-05-2023

  
Head of the Department

  
IQAC Co-ordinator



  
Principal

Place: Melukavu  
Date of issue:



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## CERTIFICATE PROGRAMME 2022-2023

### CERTIFICATE

This is to certify that Mr./Ms. Darsana Sanj of .....

B.Sc Physics has successfully completed the certificate programme

in Mathematics for Competitive Exams conducted by the Department of

Physics with A Grade in the examination held in 18-05-2023

  
Head of the Department

  
IQAC Co-ordinator



  
Principal

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## CERTIFICATE PROGRAMME 2022-2023

### CERTIFICATE

This is to certify that  Mr./Ms. Austin Sabu of .....

B.Sc Physics has successfully completed the certificate programme

in Mathematics for Competitive Exams conducted by the Department of

Physics with A Grade in the examination held in 18-05-2023

  
Head of the Department

  
IQAC Co-ordinator



  
Principal

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## CERTIFICATE PROGRAMME 2022-2023

### CERTIFICATE

This is to certify that Mr./Ms. Abhishek Raju of .....  
B.Sc Physics has successfully completed the certificate programme  
in Mathematics for Competitive Exams conducted by the Department of  
Physics with A Grade in the examination held in 18-05-2023

  
Head of the Department

  
IQAC Co-ordinator



  
Principal

Place: Melukavu  
Date of issue: