

$$\sin \alpha = BC = \frac{a}{c};$$

$$\sin 2\alpha = 2 \sin \alpha \cos \alpha;$$

## MATHEMATICS OPTIONAL

### TEST SCHEDULE 2022

The background image shows a chalkboard filled with mathematical content. On the left, there are handwritten notes:  $\text{ctg } \alpha = \frac{c}{b} = \frac{a}{b}$ ,  $\alpha^\circ = \frac{180}{\pi} \alpha$ ;  $\alpha = \frac{\pi}{180} \alpha^\circ$ ;  $360^\circ = 2\pi$ ;  $180^\circ = \pi$ . In the center, there are trigonometric identities:  $\sin^2 \alpha + \cos^2 \alpha = 1$ ;  $\frac{\sin \alpha}{\cos \alpha} = \text{tg } \alpha$ ;  $\sin \alpha \cdot \text{csc } \alpha = 1$ ;  $\frac{\cos \alpha}{\sin \alpha} = \text{ctg } \alpha$ . On the right, there is a graph of a sine wave  $u = A \sin(\omega t + \varphi)$  with amplitude  $A$  and period  $\frac{2\pi}{\omega}$ . At the bottom left, there is a graph of a parabola  $y = ax^2 + bx + c$  with  $\Delta > 0$  and two real roots  $A$  and  $B$ . At the bottom center, there is a logo for Shankar IAS Academy, featuring a stylized 'S' in a red circle with a gold border, and the text 'SHANKAR IAS ACADEMY' and 'SINCE 2004'. To the right of the logo, the text 'SHANKAR IAS ACADEMY' is written in large red letters, with 'TM' to the right. Below this, the text 'The Best IAS Academy in India' is written in a smaller black font.



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## **MATHEMATICS - TEST SERIES - SCHEDULE - 2022**

### **FIRST TIMERS**

<b>TEST NO.</b>	<b>DATE</b>	<b>TOPICS</b>
<b>Unit tests</b>		
1	25/6/2022	Calculus and Real Analysis
2	02/7/2022	Complex Analysis and Vector Analysis
3	09/7/2022	ODE and PDE
4	16/7/2022	Physics : Statics, Dynamics, Hydrodynamics and mechanics
5	23/7/2022	Modern Algebra + Linear algebra
<b>Sectional Tests</b>		
6	30/7/2022	Paper 1: Section A
7	06/8/2022	Paper 1: Section B
8	13/8/2022	Paper 2: Section A
9	20/8/2022	Paper 2: Section B
<b>Full Length Tests</b>		
10	27/8/2022	Paper 1 full
11	05/9/2022	Paper 2 full
12	08/9/2022	Paper 1 and Paper 2



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<b>Paper 1</b>	<b>Paper 2</b>
<b>Section A</b> Linear Algebra Calculus Solid geometry or 3D	<b>Section A</b> Modern Algebra Real Analysis Complex analysis Linear programming problems
<b>Section B</b> Ordinary Differential Equations (ODE) Statics and Dynamics Vector Analysis	<b>Section B</b> Partial Differential Equations(PDE) Numerical Analysis Mechanics and Hydrodynamics

### Features:

Mathematics optional test series contains 5 unit test, 4 sectional tests and 3 full length paper tests

1. Unit wise tests, helps in revisiting important topics in each unit and giving more time for covering basics. This may not be possible when we do sectional tests as syllabus covered will be more in this. Focused part in these unit wise tests is the way of presentation of your solution in the test.
2. Sectional Tests, helps in strengthening the topics and time management while writing the paper.
3. Full length paper, is the depiction of actual UPSC Mathematics paper.
4. Test discussion will be held after the test and date and time will be informed accordingly. For Physics test detailed solution will be provided instead of discussion.

<b>Schedule</b>	:	<b>Updated</b>
<b>Mode</b>	:	<b>Offline cum Online</b>
<b>Orientation</b>	:	<b>None</b>
<b>Evaluation</b>	:	<b>Available</b>
<b>No. of Tests</b>	:	<b>12</b>
<b>Timings</b>	:	<b>9 am to 12 pm.</b>



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**Begins on** : 25.06.2022

**Fees** : Rs.9,000/-

- **Evaluation Time frame is 10 days maximum from the date of submission.**
- **Answer Sheets Must be submitted within 3-5days from the date of test as on schedule.**
- **We Appreciate Aspirants who submitted their answer sheets on the same day at the most.**
- **Late submission of Answer sheets will not be strictly entertained.**
- **Detailed Answer Key will be provided in Pdf format.**
- **Question Paper will be mailed to the students on the date of the Test for Online Students.**
- **Individual feedback will be given for each test.**