



**ST. XAVIER'S COLLEGE, MAPUSA GOA**

**Report of Activity conducted in the Academic Year 2026-27**

|                                                       |                                                                               |
|-------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Name of Activity</b>                               | Summer Course on the topic "Countable and Uncountable Sets"                   |
| <b>Date/Duration</b>                                  | 17 <sup>th</sup> June 2026 & 18 <sup>th</sup> June 2026                       |
| <b>Venue</b>                                          | St. Xavier's College                                                          |
| <b>Name of organizing Department/Cell</b>             | Mathematics                                                                   |
| <b>In collaboration with</b>                          |                                                                               |
| <b>Name/s of Faculty Coordinator</b>                  | Mr. Swapnil Belekar                                                           |
| <b>Stratum of Event</b>                               | College Level                                                                 |
| <b>Name &amp; details of Resource Person/s If any</b> | Faculties from the Department:<br>1) Mr. Rahul Naik<br>2) Mr. Swapnil Belekar |

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| <b>Report</b>                                   | <p>The Department of Mathematics organised a two-day Summer Course on "<b>Countable and Uncountable Sets</b>" for the S.Y.B.Sc. (Mathematics) students on 17<sup>th</sup> and 18<sup>th</sup> June 2026. A total of 8 students participated in the programme.</p> <p>The main objectives of the course were</p> <ol style="list-style-type: none"> <li>1) To introduce students to the concepts of finite, countably infinite, countable and uncountable sets.</li> <li>2) To develop an understanding of cardinality and the comparison of infinite sets.</li> <li>3) To familiarize students with one-to-one correspondences and countability arguments.</li> <li>4) To study important examples of countable and uncountable sets.</li> <li>5) To encourage logical thinking and rigorous mathematical proof writing.</li> <li>6) To prepare students for advanced studies in Real Analysis, Set Theory, and Abstract Mathematics.</li> </ol> <p>The sessions were conducted through lectures and interactive discussions, encouraging students to actively engage with the concepts being presented. Emphasis was placed on understanding the theoretical foundations of finite and infinite sets. The programme was successfully conducted and served as a valuable academic enrichment activity for the participants.</p> |
| <b>Brochure/Poster</b>                          | NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Photographs</b>                              | <a href="https://xavierscollegegoa.ac.in/wp-content/uploads/2026/07/images-of-Summer-Course-on-the-topic-Countable-and-Uncountable-Sets.pdf">https://xavierscollegegoa.ac.in/wp-content/uploads/2026/07/images-of-Summer-Course-on-the-topic-Countable-and-Uncountable-Sets.pdf</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>List of participants<br/>With signatures</b> | <a href="https://xavierscollegegoa.ac.in/wp-content/uploads/2026/07/Attendance-of-Summer-Course-on-the-topic-Countable-and-Uncountable-Sets.pdf">https://xavierscollegegoa.ac.in/wp-content/uploads/2026/07/Attendance-of-Summer-Course-on-the-topic-Countable-and-Uncountable-Sets.pdf</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Certificate</b>                              | NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

