CASE STUDY

Coordinator: Jatin Khare

Nakshatra, the Astronomy Society of *IIT Bhubaneswar* is organizing a case study as the part of the Innovation Challenge'19. This event would be testing the students' analytical as well as verbal skills.

Rules and Regulations:

1. **Team Size**: The maximum number of members in a participating team is 3.
2. **Time Limit**: The presentation should not exceed 10 minutes.
3. **Judging Criteria**: After the presentation, our professor **Dr. Chandrasekhar Bhamidipati** (Judge), the judging team and other participants will ask questions to the presenting team. Also, marks will be awarded to the teams that ask relevant questions.
   Marking Scheme: (out of total 20 marks)
   PPT content - 5 marks
   Presentation - 5 marks
   [The presentation should be in Microsoft Powerpoint format (.pptx, .ppt) and the teams are instructed to mail the presentation to secysnt.sg@iitbbs.ac.in a day before the event.]
   Question and Answer session - 5 marks
   Report submission - 5 marks
   [Each team has to submit a report (not more than 2 pages and with font size 12-14) as a hardcopy, on the day of presentation]

Each team can choose one of the following topics, and each presentation must contain at least the points mentioned in the topic.
(Additional content may be added, but keeping the Rule 2 in mind)

1. **The Twin Paradox**
   - The Statement
   - Earth's perspective
   - Travelers' perspective
   - The Flat Spacetime
   - Conclusion

2. **Cosmic Microwave Background Radiation**
   - The Origins
   - The Anamoly
   - Polarization

- Conclusion

3. **Milankovitch Cycles**
    - What are Milankovitch Cycles?
    - The 3 Factors
    - Climate prediction
    - Conclusion

4. **Death of Kepler**
    - What are Exoplanets?
    - Kepler's methods
    - The reason behind Kepler's death
    - Other ground methods for Exoplanet Detection

5. **Science behind Interstellar**
    - Plot Overview
    - The Wormhole
    - The Gargantua
    - 4th and 5th Dimension
    - The Climax