

Integration Bee

30 minutes. 100 integrals. Solve as many as you can!

Only Freshers, On the spot team event.

Maximum 2 participants per team

Minimum 3 teams per pool

L3, 8pm-10pm, 1st Sept (Saturday).

Judges - Science Coffeehouse coordinators

Judging Criteria - The event will consist of 100 integration problems of varying difficulty, each having a weightage of 1 point. No partial points will be given, the full point is only awarded if the final answer is correct. For indefinite integrals, the final answer will be a function; full points will be awarded if and only if the provided function differentiates to the integrand. For definite integrals and improper integrals, the final answer will either be a number (real or complex) or infinity (positive or negative); full points will be awarded if and only if an exact answer in terms of known constants (the full list of allowed constants will be given with the question paper; it will include numbers like π , e and square root of 2). Numerical answers will not be given any points unless they are exact. (Thus, if the actual answer is e , the answer 2.718 will be given no points, but if the answer is $\frac{3}{5}$, full points will be awarded for the answer 0.6).

What If

(What-if scenarios are out! Go to next page)

Participants are required to give creative but scientifically sound answers to atypical "what if.." questions. There is no upper limit to the length of the answers. Minimum length 300 words. Points will be given for creativity, scientific accuracy and apparent absurdity. For a model of such questions and their solutions look up what-if.xkcd.com. Bonus points if the scenario ends in an apocalypse. Extra bonus points if it ends in a zombie apocalypse.

This is Open-to-all Individual On-line Event.

Minimum 2 entries per pool

Deadline- 2nd Sept, Noon.

Minimum length 300 words.

Send in entries at asahay@iitk.ac.in with subject "What-if_Pool name_Roll no."

Entries should be in Pdf format and should first mention the full scenario chosen in bold.

Judges - Science Coffeehouse coordinators (one from each pool)

Judging Criteria:

Creativity - 50%

Scientific Accuracy - 25%

Absurdity - 25%

The bonus points for apocalyptic ends will be up to 20% of the total points, depending on the originality of the apocalypse.

What-if Scenarios-

(Choose any one and get started!)

1. What if the intensity peak of the sun's radiation spectrum changes from Visible light to Microwaves spontaneously?
2. What if the entire human race spontaneously loses one of their ten fingers forever?
3. What if all the hair on the planet (in the entire Animal kingdom) spontaneously disappears?
4. What if everybody becomes high simultaneously for 15 minutes?
5. What if people suddenly become rational in the game theoretic sense, and understood the perfect play in any game?
6. What if birds could destroy buildings and pigs by hitting them?
7. What if mathematicians and physicists spontaneously went into extreme clinical depression?
8. What if it was possible to find a polynomial time algorithm for the travelling salesman problem?
9. What if all the asteroids in the asteroid belt spontaneously condensed into a new planet?

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