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**DEPARTMENT OF GEOLOGY & GEOPHYSICS**

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*Letter of recommendation for Mr. Ritwick Sen*

I have known Ritwick for a period of just over one year and four months, of which one year was entirely virtual owing to the Covid situation in our country and campus. He joined this department in July 2020 as a student aspiring to a M.Sc. degree in Geology. In the previous semesters, I have interacted with him in courses on Igneous Petrogenesis, Igneous Petrogenesis Laboratory and Advanced Structural Geology. My opinion about him is therefore based on my experience both during online interactions with him in these courses, and also in person as he is currently in campus, doing his M.Sc. dissertation under my supervision.

Ritwick has a first class Bachelor's degree in Geology from Jadavpur University, Kolkata, and secured an excellent CGPA of 8.37. His subsequent admission to the M.Sc. course of the Indian Institute of Technology was through a national-level competitive examination, the Joint Admission test to M.Sc. (JAM). Qualifying is an achievement in itself, considering the toughness of the entrance examination and the low admission to application ratio. The examination identifies students with above average knowledge of the Earth Sciences from all over India, and our courses are designed to equip a student with the ability to diversify towards either academia or industry. Ritwick had a rank of 35, which is very good indeed. He is doing extremely well at IIT Kharagpur with a CGPA of 9.59, which is among the best in his class. Even in the online classes, I was impressed with the nature of the questions he asked, and his interest in Igneous Petrogenesis clearly came through.

What is most impressive is his focus towards magmatism on earth and other planets, which I would like to think is a result of the Igneous Petrogenesis course, during which the relevance of many of the mechanisms of rock formation were related to those on the Moon and other planets. This has happened partly because of my current involvement in projects on the Indian lunar mission Chandrayaan-2, and also my past work on analogue sites on Mars, which I invoke frequently to get students interested in rocks, particularly through the banal effects of online teaching. Even in these very trying circumstances, Ritwick did two online courses with scientists who are actively involved in planetary geology research at the Physical Research Laboratory, Ahmedabad and IIT Kanpur. His desire to work on magmatism in relation to a planetary geology problem was extremely strong, which is why I assigned him a project on floor fractured craters on the moon, in collaboration with one of my post-doctoral students. He is actually extremely diligent, and seeing his enthusiasm and my own current inability to accommodate any more students in my laboratory, I advised him strongly to apply to universities abroad. I am happy to see that he has applied to one of the leading institutes in the field, world-wide.

Ritwick's English is good, and I can anticipate no communication problems. He is also a recipient of a very prestigious school scholarship, which testifies to his sound academic background throughout. Even in this trying Covid situation, I therefore have no hesitation whatsoever in recommending his name as a prospective Ph.D. student in the Dual Doctoral Program between IIT Kharagpur and the University of Manchester.

*Saibal Gupta*

(SAIBAL GUPTA)  
Professor  
Dated 3<sup>rd</sup> March 2022.