Books Received

Tradition, Science and Society
S Balachandra Rao
Navakarnataka
1990, Rs.15.

A Textbook of Biology - Volume 2
P K G Nair, K P Achar, M J Hegde and S G Prabhu
Himalaya Publishing House
1996, Rs.150.

Indus Script - Its Nature and Structure
B V Subbarayappa
New Era Publications.
1996, Rs.230.

Information and Announcements

The 37th International Mathematical Olympiad

As has already been announced in these pages earlier (***Resonance***, Vol.1, No.1, 1996), India is hosting the 37th IMO from 5 July to 17 July, 1996 in Mumbai. (The venue was shifted from New Delhi to Mumbai in March.) About 75 countries are expected to participate.

The problems posed in the final paper are selected through an interesting procedure. Each participating country (except the host) submits upto six problems to the *problem short-listing committee* of the host country. The committee receives about 120-150 problems from which it prepares a short-list of about 30 problems taking care to see that all the areas — algebra, combinatorics, geometry and number theory — are represented. The most important single criterion for a problem to be short-listed is that it should be new and not have been published anywhere. This is a very hard thing to ensure.

The jury which consists of leaders of all the participating countries arrives three days

ahead of the contestants and the deputy leader to select the final six problems that go into the IMO paper from the short-list. Thus each country participates in the making of the IMO paper.

The opening ceremony is on 9 July and the contests will be held on July 10-11. The closing ceremony where the medals are awarded will take place on 16 July.

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Indian Statistical Institute

It began as a small room in Presidency College, Calcutta in 1931 and is now one of India's major academic institutions. The Indian Statistical Institute was founded by Prasanta Chandra Mahalanobis, a physicist, who realised the importance of statistics when he was completing his Tripos in Cambridge, England in 1915. He established a statistical laboratory in the Physics Department of Presidency College, Calcutta in the 1920's; this laboratory later became the Indian Statistical Institute, registered as a learned society in 1932. From then on, it grew in size and stature and today it is one of the leading institutions of its kind. It has a strength of over 250 faculty members and over 1,000 supporting staff. It is a major presence in Calcutta, Delhi, Bangalore and other cities, as a research and educational institution and as a project and consultancy centre. It was declared an institution of national importance by an act of Parliament in 1959 and was vested with powers to award degrees and diplomas in statistics. Recently, by an amendment of this act, it was also vested with powers to award degrees and diplomas in mathematics, computer science and quantitative economics and such fields related to statistics.

Early in his career, Mahalanobis realised the key role statistics can play in scientific investigations and national development. He realised from his own work, and from developments elsewhere in the world, that the then young subject of statistics was a potentially fertile area for research in theory, methodology and applications. He was of the opinion that relevant statistical theory and methodology can develop only in an environment where statisticians were both aware of its applications and participated in them. Thus he believed that in addition to researchers trained in statistical theory a statistical institute must have natural and social scientists engaged in quantitative research in their own areas. This would help the natural and social scientists get statistical expertise to design their studies and analyse their data, and the statisticians to understand and work on theoretical and methodological problems of a genuine nature. With this point of view, he established a number of science units in the institute.

The headquarters of the Institute are in Calcutta, with centres in Delhi and Bangalore. A variety of research, training and project activities take place in Calcutta and the other centres. The institute has units in the cities of Baroda, Bombay, Coimbatore, Hyderabad, Madras, Pune and Thiruvananthapuram, which offer services to the industry in quality control, operations research and management.

The Institute has been offering formal courses in statistics and related fields leading to certificates and diplomas since the 1930's. Since 1960, the Institute has also been offering courses leading to B.Stat., M.Stat. and Ph.D. degrees. M.Tech. courses in computer science and quality, reliability and operations research have been introduced subsequently. An M.S. programme in quantitative economics is being introduced in 1996. Admissions to these courses are based on academic records and performance in All-India selection tests and interviews. The selection tests are generally conducted in May and advertisements for these appear in late January in major national newspapers. Only very meritorious candidates get admission into these courses and all of them carry stipends. The B.Stat. programme is offered only at the Calcutta centre. An idea of the level of the selection tests for B.Stat. can be obtained by consulting the booklet prepared by the Indian Statistical Institute titled "Test of Mathematics at the 10+2 level" (New Delhi: Affiliated East-West Press Ltd., Price Rs.49). The M.Stat. programme is offered at the Bangalore, Calcutta and Delhi centres. The Ph.D. programmes in economics, mathematics and statistics are offered at Bangalore and Delhi and the Ph.D. programmes in computer science, economics, mathematics and statistics are offered at Calcutta.

In the statistics degree programmes run by the Institute, the mathematical and theoretical bases of statistics are established. In addition, the practical relevance of the methods are also emphasized by means of practical work, projects and statistical analysis of live data, from a variety of real-life situations. The students are also trained in modern computer work. At the end of their courses in the Institute, students are equipped to join an academic or scientific research programme or in service in the public or private sector dealing with applications of statistics, mathematics, economics and computer science in a variety of fields.

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Haldane's view ... J B S Haldane was once asked what the study of biology could tell one about the Almighty. "I'm really not sure," said Haldane, "except that He must be inordinately fond of beetles." There are thought to be at least 300,000 species of beetles. By contrast, there are only about 10,000 species of birds. (From *Lessons from Biology* by Francis Crick. *Natural History* 11/88).