

ACADEMIES AND SOCIETIES

Indian Academy of Sciences:

May 1939. SECTION A.—SIR C. V. RAMAN AND V. S. RAJAGOPALAN: *The Structure and Optical Characters of Iridescent Glass*. A study of numerous specimens and of 30 photomicrographs of the same shows that the structures in decomposed glass may be divided into six categories exhibiting distinct optical phenomena. The colours of decomposed glass actually become more striking when the material is covered by liquid. K. G. KRISHNAN: *Dispersion of Ultrasonic Velocity in Liquids*. There is no definite evidence of acoustic dispersion over the frequency range 1.5 to 7 mc. in the cases of xylol, benzene, carbon tetrachloride, carbon disulphide and water. L. A. RAMDAS, B. N. SREENIVASIAH AND P. K. RAMAN: *Variation in the Nocturnal Radiation from the Sky with Zenith Distance and with Time during the Night*. The equivalent black body temperature of night sky as a whole as calculated from thermopile measurements agrees within 2° with that measured with a Pyrogeometer. C. R. MEHTA: *Chemical Investigation of the Seed-Oil of Oroxylum indicum Vent.* A yellow crystalline substance (m.p. 274°) and a fatty oil have been isolated and examined. H. GUPTA: *Analogues of Bauer's Theorems*. H. GUPTA: *On a Problem of Arrangements*. K. BAPAYYA: *Effect of Temperature on the Characters of the Wings accompanying the Rayleigh Lines in Liquids*. In the cases of chloroform and benzene, different portions of the continuous wings are found to be depolarised to the same extent, viz., 0.86, both at room temperatures and high temperatures. Depolarisation of the total scattering, however, in benzene diminishes from 0.44 at room temperature to 0.11 at 260°C. S. MINAKSHI SUNDARAM: *On an Infinite System of Non-Linear Integro-Differential Equations*. S. CHOWLA: *On a Problem of Arrangements*. K. NAGABHUSHANA RAO: *Diffraction of Light by Supersonic Waves—Part I*. The amplitude expressions for the diffracted orders are worked out *in extenso*. B. R. SETH: *Potential Problems Concerning Curved Boundaries*.

May 1939. SECTION B.—P. R. PARUKUTTY: *On a collection of Algæ from Assam*—Twenty-six forms out of which ten belong to the Chlorophyceæ and sixteen to the Myxophyceæ have been described. One variety and five forms are new. G. W. CHIPLONKER: *Echinoids from the Bagh Beds—Part II*. The examination of fossils from the various exposures, leads to the conclusion that the different constituents of the Bagh Beds must be assigned to a single geological age, the observed differences being due to only lithological facies. The echinoids from the Beds must be regarded to mark the Cenomanian and very probably the lower Cenomanian age. ALI MOHAMMAD AND ABDUR RASHID KHAN: *Root Development of Certain Oilseed Crops of the Punjab*. A Study of the Root Habits of Representative Types of Toria, Sarson, raya or rai and taramira. S. JONES: *On the external gills of Acentrogobius viridipunctatus (Day)*. External gills are unknown in Teleo-

stei and those in *A. viridipunctatus*, the origin, structure and degeneration of which are described in this paper, are the first of their kind. B. P. PAL AND B. B. MUNDKUR: *Studies in Indian Cereal Smuts—I. Cereal Smuts and their Control by the Development of Resistant Varieties*.—An introductory paper to a series dealing with the results of investigations on the relative resistance of strains of wheat, oats and barley to their respective smuts. M. K. SUBRAMANIAM: *Studies on the Structure of the Golgi Apparatus—V. The Idiosome in the Pancreas of the Toad and its Possible Relation to the Ergastoplasm*. The Golgi apparatus and mitochondria were studied in acinar, duct and islet cells of the pancreas, and the suggestion of Subramaniam and Gopala Aiyar that the idiosome may form a core to the Golgi apparatus is substantiated. P. N. MEHRA AND H. L. MEHRA: *Life-history of Stephensoniella brevipedunculata Kash.* MAHESHWAR SINGH SOOD: *A peculiar case of Caudal Abnormality in Hemidactylus flaviviridis Rüppel*.

National Academy of Sciences:

March 1939.—V. L. VARMA AND S. DUTT: *Indigoid dyestuffs derived from Chrysoquinone*. K. B. MATHUR AND G. R. TOSHNIWAL: *F-Region Ionization in June 1938 at Allahabad*. R. BEHARI: *Osculating quadrics of a ruled surface*. B. P. PANDE: *On the Trematode Genus Lyperosomum Looss, 1899 (Dicrocoeliidae) with a description of two new species from India*. B. P. PANDE: *Two new species of trematodes from Anhinga melanogaster, the Indian Darter or Snake-Bird*.

Indian Association for the Cultivation of Science:

February 1939.—M. N. SAHA AND K. B. MATHUR: *The propagation and the total reflection of electromagnetic waves in the ionosphere*. BHOLANATH ROY: *Raman spectra of co-ordination compounds*. JAGATTARAN DHAR: *Crystal structure of diphenylamine, Part I*. M. F. SOONAWALA: *The internal pressure in liquids*. D. SUBRAHMANYAM: *A new theory of Lapse Rate*. R. R. BAJPAI AND B. D. PANT: *Further Studies of F-region at Allahabad*.

Indian Chemical Society:

March 1939.—MATA PRASAD AND D. M. DESAI: *The effect of the addition of non-electrolytes and of temperature on the times of setting of some transparent inorganic gels*. SISIR KUMAR GUHA: *Dyes derived from acenaphthenequinone—Part VII. 2-(5-Chloro)-thionaphthene-acenaphthyleneindigos*. M. N. RUDRA: *Manganese content of Indian foodstuffs and other materials*. N. L. VIDYARTHI AND M. NARASINGA RAO: *Chemical examination of the wax from sugarcane*. DUHKHAHARAN CHAKRAVARTY AND NIRANJAN CHAKRAVARTY: *Constitution of halogenated resaceto- and propiophenones*. DUHKHAHARAN CHAKRAVARTY AND BROJESWAR MAJUMDAR: *Limit-ed applicability of Kostanecki's reaction. The influence of Halogen atom on the reaction*. S. RANGASWAMI: *A note on methyl-β-resorcylate*. M. NARASIMHAM AND S. N. PAL: *A note on the analysis of certain algæ*.