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August 1936. SECTION A.—GURDAS RAM AND V. I. VAIDHIANATHAN: *Uplift Pressure and Design of Weirs with Two Sheet Piles*.—As the toe of a Weir is its vulnerable point, Weir design must commence from the downstream end, so as to control the exit gradient. T. R. SESHADRI AND P. SURYAPRAKASA RAO: *Geometrical Inversion in the Acids derived from the Coumarins. Part III*. Trans to Cis.—Heating with mercuric chloride in neutral aqueous solution has been found to be very satisfactory. T. R. SESHADRI AND P. SURYAPRAKASA RAO: *Reactivity of the Double Bond in Coumarins and Related α - β Unsaturated Carbonyl Compounds. Part II*.—Reaction of Mercury Salts on Coumarins.—It is established that mercuric acetate reacts with the double bond in the coumarins studied and further mercurates the benzene ring in positions 6 and 8 if they should be free. Mercuric chloride does not react with 6-nitro-coumarin. I. CHOWLA: *On Sums of Powers*. S. CHOWLA: *Note on Waring's Problem*. C. S.

VENKATESWARAN: *Polarisation of Raman Lines in Some Inorganic Acids*.—Nitric, iodic, sulphuric, selenic and selenious acids have been investigated, and their structural formulas discussed in detail. S. RAMACHANDRA RAO: *Magnetism and Cold Working in Metals. Part II*.—*Single Crystals of Bismuth, Zinc and Tin*.—Single crystals of Bismuth, Zinc and Tin were prepared by the method of slow cooling and the influence of cold working on the principal susceptibilities was investigated. R. ANANTHAKRISHNAN: *The Raman Spectra of Tri-Methyl-Amine and Some Compounds of Hydroxylamine and Hydrazine*.—The proper assignment of the Raman lines and the constitution of the salts have been discussed in detail with aid of polarisation data. S. PARTHASARATHY: *Ultrasonic Velocities in Organic Liquids. Part VI*.—*Related Compounds*. H. GUPTA: *Decomposition into Cubes of Primes (II)*. N. S. NAGENDRA NATH: *The Diffraction of Light by High Frequency Sound Waves: Generalised Theory. The Asymmetry of the Diffraction Phenomena at Oblique Incidence*.—A solution is attempted of the

difference-differential equation in Raman and Nath's papers IV and V. The idea of 'propagation' of light in a quasi-homogeneous medium is fundamental and preferable to the undefined idea 'reflection' in such a medium. P. K. RAMAN : *Studies in Atmospheric Radiation. A Discussion of Some Observations of Nocturnal Radiation made at Poona and Sinhagad.*

August 1936. SECTION B.—T. R. BHASKARAN : *Studies on the Mechanism of Biological Nitrogen Fixation. Part III.—Economy of Carbon during Fixation of Nitrogen by Azotobacter chroococcum Beij.*—The mechanism of nitrogen fixation in soil is different from that by Azotobacter alone in pure cultures. BAHADUR SINGH : *The Life-History of Ranunculus sceleratus Linn.*—The morphology of *Ranunculus sceleratus*, the most primitive species of the genus, has been reported. MAKUND BEHARI LAL : *A New Species of the Genus Levinsoniella from the Jack Snipe, Gallinago gallinula.* M. S. RANDHAWA : *Contributions to Our Knowledge of the Freshwater Algae of Northern India. I.—Oedogoniales.* JEHANGIR FARDUNJI DASTUR : *A Nematode Disease of Rice in the Central Provinces.*—A new disease caused by a nematode of the genus *Aphelenchoides* is described. C. R. HARIHARA IYER AND R. RAJAGOPALAN : *Estimation of Nitrogen by Fumeless Digestion. Part III.—Extension of Chromo-Sulphuric Acid Digestion to include Large Quantities of Nitrates.* B. M. JOHRI : *Studies in the Family Alismaceae IV. Alisma plantago L.; Alisma plantago-aquatica L. and Sagittaria graminæ Mich.*—An account of the embryo sac of 3 plants of the family Alismaceae is given. B. M. JOHRI : *The Life-History of Butomopsis lanceolata Kunth.*—From the embryological point of view, there is a close affinity between the Alismaceae and Butomaceae and their separation into two different orders is unnecessary. T. R. BHASKARAN AND V. SUBRAHMANYAN : *Studies on the Mechanism of Biological Nitrogen Fixation. Part IV.—Nitrogen Fixation by the Mixed Microflora of the Soil in Presence of the Acid Products of Anaerobic Decomposition of Carbohydrates.* NUGGEHALI KESHAV IYENGAR AND MOTNAHALI SREENIVASAYA : *Studies on Inulinase.*—Highly active preparations of inulinase can be obtained from a species of *aspergillus* grown on artichoke nutrient media. A definite relationship exists between the phosphorus content of the preparation and its inulinase activity.

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June 1936.—O. N. KUMARASWAMY AND B. I. MANJUNATH : *Chemical Examination of the Fixed Oil from the Seeds of Celastrus Paniculatus, Willd.* R. C. SHAH AND P. R. MEHTA : *C-Alkyl Resorcinols. Part II.—Synthesis of Poly-Alkyl Resorcinols.* JNANENDRA NATH MUKHERJEE, SUBODH GOBINDA CHAUDHURY AND KRISHNADHAN BHABAK : *Variation of the Cataphoretic Velocity of Colloidal Particles during Aggregation—Part I.* B. B. DEY, S. RENGACHARI AND M. V. SITHARAMAN : *Peroxidases. Part III.—A Potentiometric Method of Estimating their Activity.* PANCHANAN NEOGI AND SARAJIT KUMAR NANDI : *New Com-*

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