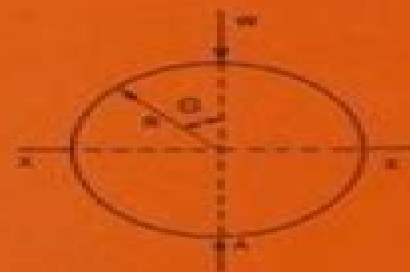


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# Civil Laboratory Manual

**Arnold Frederick Holleman**



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Lab Manuals, 2022-12-28 This laboratory manual is designed to acquaint the student with essential civil engineering experimentation works and various tests to be carried out on and offsite which is required by every civil engineer when he or she enters in a professional set up This lab manual covers various subjects like Mechanics of Solids in which compressive flexure and tensile strength testing is done Engineering Geology where geological properties important from civil engineering point of view are studied Building Material and Concrete Technology lab where testing of material is done Fluid Mechanics lab which is designed to examine the types and various parameters of fluid flow Applied Hydraulics lab where students study on the models of hydraulic machinery Surveying lab where students get to know about field surveying like chain and compass survey Theodolite Survey and Total Station Survey Transportation lab where bitumen and testing of aggregates used for road work construction is done Geotechnical lab where properties and the strength parameters of the soil are studied Environmental lab where the quality of water and waste water is checked various tests on solid waste samples are done and noise levels at various places are checked Each experiment starts with objectives to be achieved the experimental set up and the materials that are needed to perform the experiment and a stepwise procedure for conducting the experiment and a set of MCQ s at the end The students will note down their observations measurements and or calculations on the Results Sheets provided at the end of the experiment

**Laboratory Manual on Testing of Engineering Materials** Hamant. Sood, 2003 Primarily Written For The Students Of Civil Engineering And Practising Engineers Involved In The Testing Of Building Materials The Manual Describes In Straight Forward And Systematic Manner The Testing Of Engineering Materials Each Test Given In The Manual Outlines The Objectives Theory Apparatus Requirements Procedures Precautions Questions For Discussion And Observations And Calculations For All The Tests Specified The Procedure Is Based On The Relevant Indian Standard Code Of Practice Which Is The Usual Accepted Method Of Performing The Tests The Manual Can Be Used By Students And Field Engineers For Keeping The Record Of Tests Performed In The Laboratory Since Each Test Requires A Different Reference Of The Indian Standard Codes It May Not Be Practically Feasible In The Field Conditions And Therefore This Manual Comes Quite Handy For These Situations It Will Be Invaluable And Indispensable Manual For Imparting Effective Instructions To Diploma And Under Graduate Level Students As Also To Field Engineers

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