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Nota di contenuto	Preface -- Units and Symbols -- Part A: Illustrative Worked Examples - Questions and Answers -- Introduction -- Geological setting -- Stress -- In situ rock stress -- Strain and the theory of elasticity -- Intact rock: deformability, strength and failure Fractures and hemispherical projection -- Rock masses: deformability, strength, failure and Permeability -- Anisotropy and inhomogeneity -- Testing techniques -- Rock mass classification -- Rock dynamics and time dependency -- Rock mechanics interactions and rock engineering systems -- Excavation principles -- Rock reinforcement and rock support -- Foundations and slopes - instability mechanisms Design of surface excavations -- Underground excavation instability mechanisms Design of underground excavations -- Part B: Questions Only -- The questions in Part A are repeated here without the answers for those who wish to attempt the questions without the answers being visible -- Questions 1.1-1.5: Introduction. Questions 2.1-2.10: Geological setting. Questions 3.1-3.10: Stress. Questions 4.1-4.10: In situ rock stress. Questions 5.1-5.10: Strain and the theory of elasticity. Questions 6.1-6.10: Intact rock. Questions 7.1-7.10: Fractures and hemispherical projection. Questions 8.1-8.10: Rock masses. Questions 9.1-9.10: Permeability. Questions 10.1-10.10: Anisotropy and inhomogeneity.

Questions 11.1-11.10: Testing techniques. Questions 12.1-12.10: Rock mass classification. Questions 13.1-13.10: Rock dynamics and time dependency. Questions 14.1-14.10: Rock mechanics interactions and rock engineering systems. Questions 15.1-15.10: Excavation principles. Questions 16.1-16.10: Rock reinforcement and rock support. Questions 17.1-17.10: Foundations and slopes - instability mechanisms. Questions 18.1-18.10: Design of surface excavations. Questions 19.1-19.10: Underground excavation instability mechanism. Questions 20.1-20.10: Design of underground excavations. -- Appendix 1. 3-D stress cube model -- Appendix 2. Hemispherical projection sheet -- Appendix 3. Rock mass classification tables: RMR and Q -- References -- Index

Sommario/riassunto

Engineering Rock Mechanics Part II: Illustrative Worked Examples can be used as an independent book or alternatively it complements an earlier publication called Engineering Rock Mechanics: An Introduction to the Principles by the same authors. It contains illustrative worked examples of engineering rock mechanics in action as the subject applies to civil, mining, petroleum and environmental engineering. The book covers the necessary understanding and the key techniques supporting the rock engineering design of structural foundations, dams, rock slopes, wellbores, tunnels, caverns, hydroelectric schemes and mines. There is a question and worked answer presentation with the question and answer sets collated into twenty chapters which match the subject matter of the first book
