A P E C

and Geoscientists of BC

THE ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF BRITISH COLUMBIA

Professional Practice Examination Guidelines

The policy and procedures indicated in this guide are subject to change without notice. (Revised August 2014)

ABOUT THE EXAMINATION

Every applicant for registration or licensure is required to pass this examination except for those who hold (professional engineer, professional geoscientist, ingénieur(e), géologue) memberships in good standing with other Canadian Associations/ordres. In certain circumstances, those attempting to resume active practising rights may be required to write this examination if not previously completed.

The Professional Practice Examination is offered once each quarter (January, April, July and October).

APPLICATION

Applicants who are required to write the Professional Practice Examination must either apply online via the website or submit the attached application for the examination which must be received before the application deadline and be accompanied by the examination fee and a confirmation that they have read and agree to be bound by APEGBC's Examination Misconduct Policy. (Pages 7-8 of this package)

All applications will be acknowledged on or before the application deadline for the session you wish to write in. An official confirmation of attendance email will be sent after the application deadline.

ELIGIBILITY

All applicants for this examination must be current EIT/GIT members of APEGBC or applicants for professional membership with APEGBC.

No applicant is permitted to attempt the examination until:

An application for membership has been received by APEGBC.

EXAMINATION VENUES

The examination normally commences at 9:00 a.m. Pacific time and the venues are as follows:

Lower Mainland: Downtown Vancouver (Candidates will be notified directly)

Victoria: University of Victoria, Victoria, BC (TBD)

Other: As arranged.

Where possible, arrangements will be made for an applicant to write the examination in locations other than in Lower Mainland or Victoria, provided that a suitable invigilator (proctor) is identified by the applicant. **This invigilator must be a professional engineer or geoscientist registered in North America**. However, only one invigilator will be selected for one location. If the invigilator nominated by you is not selected, then you will be responsible to report to the invigilator who is selected by the Association to write your examination. Candidates will also be responsible for all expenses incurred (e.g. courier, room booking, invigilation fees, etc.) if examinations are written outside Canada.

EXAMINATION FORMAT

The examination is a 3-hour closed book session, consisting of a two hour section of 100 multiple-choice questions and a one hour essay section.

EXAMINATION RESULT

Examination results will be communicated by <u>email</u> approximately 6 to 8 weeks after the completion of the examination. All results will be denoted as a "Pass" or "Fail" grade. The passing mark for the examination (approximately 65%) is one standard deviation below the mean score of each sitting.

Written examination papers <u>will not</u> be released to candidates for review. However, in the event of a failure, candidates will receive a detailed report showing a summary of results.

FEES

Examination Fee: Please refer to the fee schedule. This fee is non-refundable.

Candidates will be responsible for all additional expenses incurred (e.g. courier, room booking, invigilation fees, etc.) if examinations are written outside Canada. The examination fee and the examination application must arrive at the Association's office before the application deadline.

Please refer to http://www.apeg.bc.ca/reg/fees.html for the latest application fee.

Candidates must pay any other fees such as room booking and invigilation fees to the invigilator as applicable.

Change Fee:

A change fee of CDN \$52.50 will be charged for each change made by the applicant after the examination application deadline to write at a session other than the one originally applied for. A change will not be confirmed until the change fee has been received at the Association office. Each deferral of writing will incur an additional change fee. Changes may be made and confirmed with payment up to three days after the examination date, including the examination date, following which the entire examination fee will be forfeited by the applicant.



PROFESSIONAL PRACTICE EXAMINATION

EXAMINATION SYLLABUS (Part 1 of the Professional Practice Examination)

** This syllabus is common to both Engineering and Geoscience applicants. Effective July 2013

A. PROFESSIONALISM (10%)

- A.1 Definition and Interpretation of Professionalism and Professional Status
- A.2 The Roles and Responsibilities of Professionals in Society
- A.3 Engineering and Geoscience Professions in Canada; Definitions and Scopes of Practice
- A.4 The Value of Engineering and Geoscience Professions to Society
- A.5 The Roles and Responsibilities of Professionals to Management

B. ETHICS (20%)

- **B.1** The Role of Ethics in Society; Cultures and Customs
- **B.2** Classical and Modern Ethical theories and Principles
- B.3 Codes of Ethics of Professional engineers and Geoscientists in Canada
- B.4 Ethical Standards and Codes and Their Relationship to the Conduct of a Professional
- B.5 Common ethical issues and Dilemmas; Making Ethical Decisions

C. PROFESSIONAL PRACTICE (27%)

- C.1 Professional Accountability for Work, Workplace Issues,
- Job Responsibilities and Standards of Practice
- C.2 Relations with Other Professionals and Non-professionals; Business Practices
- C.3 Statutory and Non-Statutory Standards and Codes of Practice
- C.4 Insurance, Risk Management and Quality Management; Due Diligence
- C.5 Environmental Responsibilities and Sustainable Development
- C.6 Use of Software, Computers and Internet-based Tools; Liability for Software Errors
- C.7 Documentation Authentication and Control
- C.8 Duty to Inform; Whistleblowing

D. COMMUNICATION (1%)

- D.1 Legal, Ethical and Practical Aspects of Communication
- D.2 The Professional Relationship
- **D.3** Communication Skills

E. LAW FOR PROFESSIONAL PRACTICE (23%)

- E.1 The Canadian Legal System
- E.2 Contract Law Elements, Principles, and Applications
- E.3 Tort Law Elements, Principles, and Applications
- E.4 Civil Code in Quebec and Common Law in Rest of Canada
- E.5 Business, Employment, and Labour Law
- **E.6** Arbitration and Alternative Dispute Resolution (ADR)
- E.7 Intellectual Property Patents, Trademarks, Trade Secrets, Software Issues, Copyright
- E.8 Expert Witness
- E.9 Construction Liens
- E.10 International Law
- E.11 Environmental Law
- E.12 Workers Compensation and Occupational Health & Safety
- E.13 Human Rights and Privacy Legislation

F. PROFESSIONAL LAW (8%)

- F.1 The Acts Regulations and Bylaws Provincial and territorial Acts
- F.2 Codes of Ethics; Conflicts of Interest
- F.3 Admission to the Professions
- F.4 Illegal Practice; Enforcement Against Unlicensed Practice and Misuse of Title
- F.5 Professional and Technical Societies

G. REGULATION & DISCIPLINE PROCESSES (11%)

- **G.1** Discipline and Enforcement Procedures
- G.2 Professional Inspection; Practice Reviews of Individuals
- **G.3** Response to Complaints
- G.4 Licensing Corporations and Practice Review of Firms
- G.5 Response to Unethical or Incompetent Practice; Consequences of Unethical Practice
- G.6 Canadian and International Mobility
- **G.7** Continuing Professional Development
- G.8 Use of Seals and Stamps

The examination is closed book and two hours in duration. The 100 multiple-choice questions are broken down into the above distribution. All questions are common to the professions of engineering and geoscience. The pass mark is 65%*. The examination is graded as a "pass" or "fail" with a report available in each area on your specific performance in each area in the event of failure. The grade is final.

^{*} Pass marks may be slightly adjusted for individual sessions based on valid psychometric factors designed to ensure that over time, and among groups of candidates, pass-fail decisions are made on a consistent basis.



PROFESSIONAL PRACTICE EXAMINATION RECOMMENDED STUDY MATERIALS

** These recommended materials are common to both Engineering and Geoscience applicants.

The following texts are available for purchase at the APEGBC office, University or other Commercial Bookstores or at Public Libraries. To order study materials from APEGBC, please visit the Online Store.

- 1. Canadian Professional Engineering and Geoscience: Practice and Ethics: Fifth Edition Gordon.C.Andrews (2013)
- Practical Law of Architecture, Engineering, and Geoscience, Second Canadian Edition (2011)
 Brian M. Samuels and Doug R. Sanders
- 3. Industry Canada Booklets
 - (i) A Guide to Patents
 - (ii) A Guide to Trade-Marks
 - (iii) A Guide to Industrial Designs
 - (iv) A Guide to Copyrights

Industry Canada, Canadian Intellectual Property Office Tel: (819) 953-5054 or download from http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/home

4. The Engineers and Geoscientists Act, Bylaws and Code of Ethics *

Association of Professional Engineers and Geoscientists of British Columbia download from

https://www.apeg.bc.ca/Resources/Governance-Documents/The-Act,-Bylaws-and-Other-Governance-Documents



PROFESSIONAL PRACTICE EXAMINATION SAMPLE QUESTIONS

** All questions are common to both Engineering and Geoscience applicants.

- According to the Code of Ethics, which of the following activities by professional member would be considered UNETHICAL?
 - (a) Not charging a fee for presenting a speech.
 - (b) Signing plans prepared by an unknown person.
 - (c) Reviewing the work of another member with that member's consent.
 - (d) Providing professional services as a consultant.

"B" is correct. It is unethical for professionals to sign plans not prepared by themselves or under their direct supervision.

- 2. Which of the following is an example of a fraudulent, contractual misrepresentation?
 - (a) A party is coerced into signing a contact by means of intimidation.
 - (b) A party knowingly makes false statements to induce another party into a contract.
 - (c) A party induces his son-in-law to sign an unfair contract.
 - (d) A party unknowingly provides false information about a portion of a contract.

"B" is correct. Knowingly providing false information to induce a contract is fraudulent misrepresentation.

- 3. Contractual disputes of a technical nature may be more expeditiously and effectively solved through:
 - (a) A lawsuit
 - (b) Court appeals
 - (c) Contract renegotiations
 - (d) Arbitration

"D" is correct. Arbitration provides an effective expeditious resolution to technical disputes.

- 4. Which type of original work below is automatically protected by copyright upon creation?
 - (a) Paintings
 - (b) Inventions
 - (c) Clothing designs
 - (d) Signatures

"A" is correct. Of the works listed, only a painting is protected by copyright law.

- 5. In order for compensation to be awarded to a plaintiff in a tort liability case, the defendant must have:
 - (a) Caused injury to the plaintiff.
 - (b) Been wilfully negligent.
 - (c) Signed a contract of performance.
 - (d) Performed under supervision.

"A" is correct. Injury is one of three criteria that must be met for compensation to be awarded in a tort liability case.

- **6.** The professional's standard of care and skill establishes the point at which a professional:
 - (a) May or may not charge a fee for services.
 - (b) Has the duty to apply reasonable care.
 - (c) May be judged negligent in the performance of services.
 - (d) Has met the minimum requirements for registration.

"C" is correct. The standard of care is used to judge whether or not a professional has been negligent in the performance of services.

Registration

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Examination Misconduct Policy

PURPOSE

APEGBC is committed to the prevention, detection and investigation of potential examination misconduct by applicants, members and licensees and the maintenance and enforcement of the Association's policies and procedures regarding examinations.

CREATED

BY: DATE: REFERENCE: COUNCIL September 13, 2013 CO-13-105

POLICY:

This policy is in effect for all Association Examinations held after September 13, 2013.

All APEGBC Examination candidates ('examinees') must confirm on their Application to Write Examinations that they have read and agree to be bound by this Policy.

Prevention and detection measures may include monitoring and surveillance of examinations through personal and/or video invigilation, checking and copying of examinees' identification, assignment and recording of seating, photos of the examination room and examinees, and statistical analysis.

Inappropriate behavior during or following an examination may result in actions being taken by the invigilators or testing centre or APEGBC. Inappropriate behavior and academic misconduct include but are not limited to:

- copying, producing, reproducing, removing exam questions and/or responses (in any format) or taking notes about the exam from the exam room or outside the exam room
- disclosing exam questions or responses, in whole or in part, in any form or by any means (orally, in writing, electronically, on the Internet, "brain dumping," "discussion boards" or otherwise such as but not limited to Facebook, Twitter or other forms of social media)
- c. giving or receiving assistance of any kind during the examination, including copying the answers of another examinee
- d. taking the examination for someone else or having the examination taken for the examinee by someone else
- e. using prohibited aids such as cell/mobile phones, hand-held computers or other electronic devices, recording or photographic devices, watches, etc.
- f. using prohibited study aids (test preparation materials or study materials, textbooks, notebooks, classroom notes, etc.) during the examination or accessing or attempting to access such study aids at any time after the start of the exam including but not limited to washroom breaks

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g. seeking help in answering questions (in person, by phone, text, by e-mail, etc.), engaging in disruptive disturbances or causing disturbances of any kind, and/or failing to follow invigilator instructions.

Investigations of potential academic misconduct may include requiring examinees to attend an interview by APEGBC or its representative(s) and requiring examinees to provide sworn evidence as authorized by subsection 17(2) of the *Engineers and Geoscientists Act*.

Candidates who engage in inappropriate behaviour or academic misconduct may, at the sole discretion of APEGBC, be subject to any one or more of the following:

- i. reassignment by the invigilators before or during an examination of a candidate's seat or examination place
- ii. ejection from the examination place
- iii. confiscation of any material or personal belonging in the breach of the APEGBC Academic Misconduct Policy
- iv. withholding of examination results of those candidates involved until a determination has been made by APEGBC whether academic misconduct occurred
- v. cancellation of the score(s) of part or all of the candidate's examination and recording of a 'fail' result for the examination
- vi. special conditions imposed by APEGBC at its discretion for subsequent attempts at the examination or other future assessments of the candidate, including costs for special administration of subsequent examinations for the candidate.
- vii. denial of permission to participate in future APEGBC assessments for a period of time (examinations, interviews or other assessments of credentials)
- viii. denial of registration or licensure by APEGBC
- ix. reporting of the misconduct to the test provider, other appropriate professional regulatory and/or legal authorities
- x. the exercise of all available legal remedies by APEGBC and/or the test provider including cost recovery for the investigation and/or for the creation of new questions, general and special damages and injunctive relief.

APEGBC reserves the right to cancel an assessment or examination administration if it has been determined that the security of the assessment has been violated.

APEGBC reserves the right to delete from scoring any test item which is found to have been exposed to one or more candidates before the examination administration.