

**Ollscoil na hÉireann, Gaillimh**  
**National University of Ireland, Galway**  
**SECOND SEMESTER EXAMINATIONS, 2000**  
**Third Civil Engineering Examination**  
**CONSTRUCTION OPERATIONS II**

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Mr. P. Ridge  
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Time Allowed: Two hours. Answer three questions  
Use separate answer books for each question

1. a) Explain the following,
    - i) Snags
    - ii) Practical Completion
    - iii) Liquidated and ascertained damages
    - iv) Dayworks
  - b) List the reasons why practical completion is so important in construction projects.
  - c) What is a variation and who has the authority to issue one?
  - d) What does the Final Account mean for the Contractor?
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2. a) List three types of excavating plant  
For each type listed:
    - i) Give examples of the types of tasks for which they could be used on a civil engineering project.
    - ii) Describe how the excavation is carried out.
    - iii) Draw a simple sketch labelling the main features.
  - b) i) List the functions of diaphragm walls.  
ii) Describe with the aid of a simple sketch the *bentonite-slurry* method of constructing diaphragm walls.

P.T.O.

3. a) Outline EU Procurement Policy, its purpose, types of procedures and general requirements.  
Name three relevant directives.
- b) Answer two only of the following four sub-questions
- i) Give the reasons for the introduction of *Condoc* and give general examples of the contract elements it attempts to control and regulate.
  - ii) Broadly describe the purpose of a Planning Authority's Statutory County Development Plan, including general objectives and what is defined as development under the Planning Acts.
  - iii) Define Strategic Planning and list the main elements in a strategic plan
  - iv) Discuss the implications of Public Private Partnerships for Civil Engineering Projects
4. a) List and discuss briefly five of the major impediments to ensuring health and safety on construction sites
- b) In reference to the *Safety, Health and Welfare at Work (Construction) Regulations, 1995*, discuss the approach taken to safety management during the entire construction process and outline the new responsibilities placed particularly on clients, designers and contractors.
- c) Identify the usual appointees to the roles of project supervisor at design and construction stages of civil engineering projects in this country
- d) Identify the hazards associated with the activities listed below and describe control and preventative measures required to avoid accidents
- i) Working at heights
  - ii) Scaffolding
  - iii) Excavation

**END**