

SPECIALTY TRADE PROJECT MANAGER

EXAMINATION SPECIFICATION

This examination will be developed based on the following format:

<u>SECTION I</u>	<u>VALUE</u>
1. 90 Multiple Choice Items	90%
A. Items – Fundamental Skills	32%
B. Items – Tendering Functions	12%
C. Items – Pre-Construction/Post-Award Functions	16%
D. Items – Project Coordination	28%
E. Items – Post Construction	12%
 <u>SECTION II</u>	
(1) Communication	10%
 TOTAL VALUE	100%

SECTION: FUNDAMENTAL SKILLS**VALUE: 32%****Subsection: Communication**

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
1 2 items	Communicate clearly with own forces, owner, client, consultant, regulatory agencies and other contractors. (30)	<ul style="list-style-type: none"> a) Ability to communicate the various types of contracts to field staff. b) Ability to produce written correspondence and reports. c) Ability to make oral presentations. d) Ability to electronically communicate by phone, Internet, etc. e) Ability to free-hand draw. f) Ability to maintain good relations with owner, client and consultants. g) Knowledge of the architect's/ consulting engineer's role. h) Knowledge of the contractual responsibilities of the owner, client and consultant. i) Knowledge of authority and legal responsibilities of government inspectors. j) Knowledge of code requirements. k) Knowledge of contract documents and progress information usually required by owner/client/consultants. l) Ability to use computer software packages. m) Ability to respect the company's policies and procedures and understand the levels of authority.
2 2 items	Conduct an internal job start-up meeting. (56)	<ul style="list-style-type: none"> a) Ability to evaluate staff requirements in relation to: size, duration and complexity of job; and type of client. b) Ability to select key personnel. c) Ability to establish contract milestones and project strategy for construction. d) Knowledge of material handling techniques. e) Knowledge of factors that limit or foster productivity. f) Knowledge of union regulations on crew composition, if applicable. g) Knowledge of the schedule requirements. h) Knowledge of contract requirements. i) Ability to clearly state contract objectives. j) Knowledge of alternative methods of construction. k) Ability to chair a meeting. l) Ability to take minutes. m) Ability to schedule a meeting. n) Ability to identify critical operations on the project requiring extra cooperation or special attention.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
3 2 items	Conduct an external job start-up meeting. (58)	a) Ability to conduct a meeting. b) Ability to take minutes. c) Ability to schedule meetings. d) Ability to establish contract milestones and contract strategy for construction. e) Ability to communicate contract documents to all parties. f) Ability to review contract schedule g) Ability to establish contract objectives. h) Ability to allow all parties to discuss all issues. i) Ability to introduce all players of the construction project. j) Ability to identify critical operations of the project requiring extra cooperation or special attention.
Subsection: Administration		
4 2 items	Assist financial management to implement cost coding system. (31)	a) Knowledge of typical cost code subdivisions of an operations budget. b) Knowledge of importance of balancing usefulness of information against cost and effort required to collect.
5 2 items	Consult and/or prepare project budget for construction operations and forward to financial management. (38)	a) Knowledge of financial forecasting. b) Knowledge of budget components. c) Knowledge of the importance of having a sound budget and realizing the impact of budgeting on the construction operations. d) Knowledge of spreadsheets.
6 1 items	Maintain project work records. (40)	a) Knowledge of the legal implications of properly kept records. b) Ability to prepare a daily project(s) work record. c) Knowledge of key entries.
7 2 items	Ensure a list of acceptable suppliers, carriers, and rental companies is maintained. (43)	a) Ability to assess the reliability of service. b) Ability to evaluate the cost in comparison to reliability.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
8 2 items	Analyzing project in detail to realize cost savings through redesign. (48)	a) Knowledge of design methods of construction. b) Knowledge of alternative methods of construction. c) Knowledge of alternative products and materials. d) Knowledge of drawings and specifications.
9 2 items	Assist general management in drafting long-range plan for target market, services to be added, deleted or strengthened, and in developing a bidding strategy. (156)	a) Analyze the marketplace. b) Develop business on behalf of the company. c) Analyze award results and compare results to company bidding strategy.
Subsection: Human Resources		
10 2 items	Oversee work of project coordination staff. (32)	a) Ability to organize staff b) Ability to coordinate staff. c) Ability to manage staff. d) Ability to motivate staff. e) Ability to maintain team morale. f) Ability to lead staff.
11 2 items	Ensure a safety program is implemented. (33)	a) Ability to ensure safety monitoring is assigned to staff. b) Ability to develop a safety monitoring policy for the project. c) Knowledge of health and safety legislation. d) Ability to research and have appropriate safety education made available. e) Knowledge of company's safety policy. f) Knowledge of contractual safety requirements.
12 2 items	Reviewing and recommending the hiring or dismissal of operations staff. (34)	a) Ability to assess technical qualifications, education, work attitudes, and personality of applicants. b) Ability to review performance of staff. c) Knowledge of legal responsibilities of employer to employs. d) Knowledge of the inter-relationships between the various parties involved in a construction project.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
13 2 items	Assist in the planning and initiation of a management-training program for operations personnel. (35)	<ul style="list-style-type: none"> a) Knowledge of orientation program for new employees. b) Ability to train/develop needs of operations staff. c) Knowledge of available courses/ seminars. d) Ability to spot shortcomings of staff and take remedial action.
14 2 items	Coordinate (where applicable) labour agreements. (37)	<ul style="list-style-type: none"> a) Knowledge of local labour agreements of construction trades and suppliers. b) Knowledge of the role of provincial labour relations board. c) Knowledge of mediation and arbitration procedures. d) Knowledge of employment standards. e) Knowledge of contract negotiations.
15 2 items	Identify and resolve potential labour conflicts involving own forces and offer advice and assistance to subcontractors having labour difficulties. (41)	<ul style="list-style-type: none"> a) Ability to maintain cooperative relations with union business agent. b) Knowledge of contractual and legal responsibilities of employer and employee (union and non-union). c) Knowledge of jurisdictional practice of trade union locals.

SECTION: TENDERING FUNCTIONS**VALUE: 12%**

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
16 2 items	Advise estimating at tendering stage on construction methods to be used, and indirect costs of construction. (50)	<ul style="list-style-type: none"> a) Ability to assess requirements for supervision and indirect costs. b) Ability to keep abreast of new cost-effective methods of construction. c) Ability to interpret plans and specifications. d) Ability to maintain a current library of codes and regulations.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
17 3 items	Conduct a pre-construction site inspection in conjunction with management team. (51)	a) Ability to assess existing structure, utilities, storage space, obstructions, site access, etc. b) Ability to conduct a job site analysis (notes, pictures, reports). c) Ability to analyze the competition. d) Knowledge of who is bidding the project.
18 3 items	Solicit competitive prices for rental or lease/ purchase of equipment. (53)	a) Knowledge of availability, application, cost effectiveness and capacities of various types of equipment. b) Knowledge of cost implications of lease vs. purchase. c) Knowledge of negotiating considerations.
19 3 items	Review and finalize bid submissions in consultation with management team. (23)	a) Knowledge of the bid strategy. b) Knowledge of requirements for bonds, insurance, permits, etc. c) Knowledge of special contract conditions such as out-of-town conditions, etc. d) Knowledge of new methods of construction. e) Knowledge of the types of contracts, contract partners and local conditions. f) Ability to assess overhead requirements. g) Ability to analyze construction methods h) Ability to assess accessibility to site. i) Ability to assess travel requirements and lodging. j) Ability to assess climate conditions. k) Ability to analyze local labour availability and productivity. l) Ability to perform on-site analysis of work and methods. m) Ability to conduct a risk analysis of accepting the project. n) Ability to assess construction methods and systems to be used for the project.

SECTION: PRE-CONSTRUCTION/POST-AWARD FUNCTIONS**VALUE: 16%**

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
20 1 items	Secure contract award documents. (158)	<ul style="list-style-type: none"> a) Ability to secure letter of intent. b) Ability to secure purchase order. c) Ability to secure CCDC2. d) Ability to secure insurance forms. e) Ability to issue letter of intent to subcontractors and suppliers. f) Ability to secure a copy of the building permit. g) Ability to secure documents from government authorities.
21 1 item	Participate in post-tender negotiations. (29)	<ul style="list-style-type: none"> a) Knowledge of negotiating skills. b) Knowledge of unit costing. c) Prepare and expedite alternative material and equipment approvals from consultant/ owner. d) Expedite subcontractors and suppliers in conjunction with construction team.
22 1 item	Advise administration to arrange insurance and bonding. (57)	<ul style="list-style-type: none"> a) Knowledge of performance bonds, labour and material bonds, post-construction insurance and other forms of insurance available to contractors. b) Knowledge of typical contract requirements for insurance and bonding. c) Ability to assess risk exposure. d) Knowledge of forms of construction, contract insurance and bonding.
23 1 item	Implement company cost control system to project. (59)	<ul style="list-style-type: none"> a) Ability to analyze contract size and complexity, critical construction operations and contractual requirements for reporting costs/progress.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
24 3 items	Review contract documents. (60)	<ul style="list-style-type: none"> a) Knowledge of standard forms of construction contracts. b) Knowledge of principles of law of contract between owners (or their agents), general contractors, subcontractors and suppliers. c) Knowledge of different types of construction contracts (unit price, lump sum, turnkey, design build, alliance, value, etc.). d) Ability to detect early determination of any discrepancies, ambiguities, omissions, etc. in contract documents. e) Ability to study drawings and specifications early in the job. f) Knowledge of performance requirements (accelerated schedule, etc.) g) Ability to be aware of any environmental conditions of the contract. h) Ability to understand the liability of errors or omissions in drawings and noting such to management and owner/ consultant. i) Knowledge of document hierarchy.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
25 1 item	Manage purchasing system. (89)	<ul style="list-style-type: none"> a) Knowledge of negotiating considerations. b) Ability to assess reliability, quality, etc. of subcontractors. c) Ability to determine scope of work. d) Knowledge of contract requirements. e) Ability to issue and confirm purchase orders for materials, equipment and miscellaneous supplies. f) Ability to evaluate supplier/ manufacturer quotations for conformity with material specifications/ standards. g) Knowledge of consideration in negotiating terms of payment and delivery. h) Knowledge of on-site and off-site handling techniques. i) Knowledge of sales tax, customs duties, brokerage fees, typical discounts, etc. j) Knowledge of insurance coverage (loss, theft, damage) for special orders. k) Knowledge of cost and delivery effects of alternative modes of transportation. l) Knowledge of cost implications of lease vs. purchase of equipments. m) Ability to provide supplier/manufacturer with clear written instructions on delivery dates, packaging, identification of materials, etc. n) Knowledge of types of purchase orders (spot, blanket, project, contract). o) Assist in negotiating, modifying, awarding subcontracts, and supplier contracts (purchase orders). p) Ability to assess reliability, qualify, and financial capability of subcontractors and suppliers. q) Ability to procure equipment for project. r) Ability to procure materials for project. s) Knowledge of contracts for subcontractors. t) Ability to organize and manage a field purchasing system. u) Ability to organize and manage an on-site purchasing system.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
26 2 items	Oversee preparation of construction operations plan. (62)	<ul style="list-style-type: none"> a) Knowledge of project schedule/ b) Knowledge of project equipment requirements. c) Knowledge of project labour requirements. d) Knowledge of project material requirements. e) Knowledge of project specialty requirements. f) Ability to plan site layout and temporary services in conjunction with supervision and in consultation with subcontractors. g) Ability to plan effective location of job site office, material storage, access routes, hoarding, security, etc. h) Ability to guard against damage to existing property. i) Ability to prepare job equipment list in conjunction with superintendent and equipment management. j) Knowledge of applications, cost effectiveness and capacities of various types of equipment. k) Ability to coordinate plans and specifications with field work of all construction forces in project. l) Knowledge of construction decisions requiring approval/ review of owner's representative. m) Ability to assess the interests of other contractors on-site. n) Ability to advise project coordination on cost of material, availability of materials, inspection requirements, delivery problems, etc. and their potential impact on schedule. o) Ability to keep abreast of long-range cost and availability of material through trade publications, information from suppliers, etc. p) Ability to liaise with estimating on trends in cost and availability of materials.
27 1 item	Direct preparation of construction schedule by project coordination. (64)	<ul style="list-style-type: none"> a) Knowledge of bar chart, network diagramming (CPM, PERT) and other diagrammatic methods of scheduling. b) Knowledge of resources levelling throughout project. c) Ability to maximize cash flow through life of project. d) Ability to determine latest possible date for switching to another supplier. e) Ability to use computer-scheduling software.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
28 1 item	Consult with cash flow schedule in conjunction with financial management. (65)	a) Knowledge of payment schedule. b) Knowledge of contractual and legal hold back provisions. c) Knowledge of project accounting procedures. d) Knowledge of the importance of progress billing either submitted to a general contractor or received from a subcontractor. e) Ability of assessing the need of cash flow requirements.
29 1 item	Arrange for permits. (66)	a) Knowledge of types of permits and information required by regulatory agencies. b) Knowledge of federal, provincial and municipal by-laws affecting construction.
30 1 item	Arrange for required inspection/testing. (67)	a) Knowledge of testing requirements included in contract documents. b) Knowledge of procedures for inspection/ testing. c) Knowledge of private testing agencies. d) Ability to arrange for on-site consulting requirements. e) Ability to recognize the items requiring engineering. f) Knowledge of liability issues associated with on-site consulting requirements.

SECTION: PROJECT COORDINATION VALUE: 28%

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
31 2 items	Ensure an inventory of materials is maintained. (42)	<ul style="list-style-type: none"> a) Knowledge of the components of an inventory system. b) Knowledge of the importance in keeping accurate inventory records and costs.
32 2 items	Review periodic reports on cost forecast to completion. (86)	<ul style="list-style-type: none"> a) Ability to identify cost overruns and take corrective action. b) Ability to prepare periodic labour and equipment forecasts to completion. c) Ability to assess labour and equipment required. d) Ability to determine reasons for excessive variance. e) Knowledge of budget and schedule constraints. f) Knowledge of the effects of introducing overtime and shift work. g) Ability to analyze the relationship between safety and costs. h) Ability to monitor the schedule.
33 3 items	Process contemplated change notices and change orders. (82)	<ul style="list-style-type: none"> a) Ability to identify work that is not specified in contract documents. b) Ability to consult with supervision, project coordination and trade contractors on impact to change on cost and schedule. c) Ability to negotiate and obtain approval of change. d) Ability to keep accurate change-orders log. e) Ability to keep project site informed. f) Ability to price change orders. g) Ability to record all changes in plans and costs of changes. h) Ability to keep records of change order approvals.
34 2 items	Assist general management and administration in preparing liens. (74)	<ul style="list-style-type: none"> a) Knowledge of provincial lien legislation. b) Knowledge of what can be liened. c) Knowledge of the lien period.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
35 2 items	Assist general management, administration, and legal advisor in assembling and preparing construction claims/back charges. (76)	<ul style="list-style-type: none"> a) Ability to properly document contract claims. b) Ability to identify potential contract claim situations. c) Ability to understand the claims resolution procedures for the contract. d) Ability to present claims. e) Ability to coordinate and document back charges in conjunction with project coordination. f) Ability to identify potential claims and take timely action. g) Ability to identify potential third party claims and take timely action (environmental, etc.). h) Knowledge of the company's obligation to provide a healthy and safe work environment for own forces and subcontractors. i) Ability to protect company's interests against potential legal liability.
36 3 items	Finalize contract value and carry out transfer of project to owner. (78)	<ul style="list-style-type: none"> a) Ability to assemble finalization documents (guarantees, as built, warranties, etc.) b) Knowledge of impact of partial take-over (liabilities, warranties, hold back). c) Ability to ensure accounting has been supplied with all necessary cost information to finalize contract value. d) Knowledge of the project documents required (guarantees, as built, warranties, quality control.) e) Knowledge of transfer procedures required (commissioning, instruction for equipment use, labelling, etc.). f) Ability to ensure client's employees are trained.
37 2 items	Expedite preparation, delivery and approval of required shop drawings. (80)	<ul style="list-style-type: none"> a) Ability to recognize the need for shop drawings. b) Knowledge of how shop drawings are linked to the schedule. c) Knowledge of procedures for expedition preparation and preparation, delivery and approval of shop drawings.
38 1 items	Manage a quality control program. ((84)	<ul style="list-style-type: none"> a) Knowledge of construction standards established in code, contract documents and company policy. b) Capability of ensuring inspection of custom-made materials at place of manufacture and material when delivered on-site. c) Ability to produce periodic construction quality reports. d) Knowledge of typical quality control procedures.

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
39 2 items	Review reports on equipment use, construction progress and subcontractor progress. (85)	<ul style="list-style-type: none"> a) Ability to keep accurate records of equipment use and construction progress. b) Knowledge of methods for measuring construction in place. c) Knowledge of subcontractor's methods and procedures of work.
40 2 items	Monitor construction safety. (87)	<ul style="list-style-type: none"> a) Knowledge of all safety legislation. b) Knowledge of good safety practices. c) Knowledge of accident investigation and reporting procedures. d) Ability to evaluate loss time accidents. e) Ability to ensure public safety.
41 2 items	Ensure deficiency lists are periodically created and reviewed. (88)	<ul style="list-style-type: none"> a) Ability to inspect all work completed under contract. b) Knowledge of methods and procedures for constructing the work. c) Knowledge of the relationship between deficiencies and acceptance.
42 2 items	Initiate the substantial completion process. (79)	<ul style="list-style-type: none"> a) Ability to contact owner and request completion. b) Ability to communicate with field staff to ensure contract is ready for completion. c) Ability to ensure the in-house deficiency list is rectified. d) Ability to secure documentation from owner recognizing substantial completion. e) Secure the release of all final payments.

SECTION: POST-CONSTRUCTION**VALUE: 12%**

TASK NO. & VALUE	TASK DESCRIPTION	SUPPORTING KNOWLEDGE AND ABILITIES
43 2 items	Conduct post-construction review in collaboration with construction team. (91)	<ul style="list-style-type: none"> a) Ability to determine strengths and weaknesses in estimating, planning or implementation of contract. b) Ability to reassess project's role in the strategic plan of company. c) Ability to evaluate subcontractors, suppliers, personnel, etc. d) Ability to work with labour productivity factors to validate company productivity levels.
44 4 items	Evaluate and process warranty claims/ items. (92)	<ul style="list-style-type: none"> a) Knowledge of contractor's liability under warranties. b) Ability to provide proper documentation and preparation of claims to subcontractors, suppliers, etc. c) Ability to determine if warranty claim is legitimate.
45 5 items	Work with labour productivity factors. (93)	<ul style="list-style-type: none"> a) Knowledge of on-site analysis of work and methods. b) Ability to analyse cost reports and other statistics. c) Ability to assess, in consultation with field supervision, construction methods and systems. d) Knowledge of reference sources on labour factors. e) Ability to obtain from supervision, feedback on company's tables of labour productivity. f) Knowledge of how unit labour costs are calculated.