

CONSTRUCTION
Certificate II in General Construction (BCG20103)
MARKING KEY

VET Construction exam question mapping

Multiple-choice questions

	Draft sample paper 1	Draft sample paper 2
Question	Unit of competency	
1	BCGCM1001B	
2	BCGCM1002B	
3	BCGCM1003B	
4	BCGCM1004B	
5	BCGCM1005B	
6	BCGSF2004B	
7	BCGCO2003B	
8	BCGCM2004B	
9	BCGCM2005B	
10	BCGCM2006B	
11	BCGCM2008B	
12	BCGCM2008B	
13	BCGCM2009B	
14	BCGCM1001B	
15	BCGSF2004B	
16	BCGCM1002B	
17	BCGCM2003B	
18	BCGCM1003B	
19	BCGCM2004B	
20	BCGCM1004B	

Short Answers

	Draft sample paper 1	Draft sample paper 2
Question	Unit of competency	
1	BCGCM1001B	
2	BCGCM1003B	
3	BCGCM1005B	
4	BCGSF2004B	
5	BCGCM2001B	
6	BCGCM2005B	
7	BCGCM2006B	
8	BCGCM2009B	

Construction VET industry specific exam marking key

Multiple-choice

Question	Response	Mark
1	b	1
2	d	1
3	a	1
4	c	1
5	c	1
6	a	1
7	c	1
8	d	1
9	b	1
10	c	1
11	c	1
12	b	1
13	a	1
14	d	1
15	a	1
16	d	1
17	b	1
18	a	1
19	d	1
20	b	1

SECTION TWO: SHORT ANSWER

Question 1 Unit of competence: BCGCM1001B Follow OSH policies and procedures

a) 3 marks

Mark	Description
1	Candidate correctly defines 'hazard'
2 or 1	Explains two hazards or Explains one hazard

Answers could include the following

- Defn: A hazard is a potential source of harm where a person is exposed to a dangerous or harmful situation, physical or otherwise, which may effect the health and safety of that person
- Hazards: Safety—Work area, tools and equipment, working surface or materials Physical—Noise, vibration, thermal heat and cold, RSI, radiation.

b) 5 marks

Mark	Description
5	Correct definition of Chronic hazard and correct explanation of how it is different from a hazard with two detailed examples
4	Correct definition of 'chronic hazard with a general explanation of the difference with two examples
3	Definition of a chronic hazard with some attempt at a comparison with two examples
2	Definition of a chronic hazard with two examples
1	correct definition of a chronic hazard or an example of one

Answers could include the following

- Defn: A chronic hazard is one where long term exposure to the hazard will cause an injury or sickness. e.g. melanoma from extended exposure to the sun or slow poisoning from chemicals building up in the body system over a long period of time.
- Chronic hazard examples: Chemical—solids, dust fumes, liquids, mists, gases, vapours. Biological—insects, animals, micro organisms. Stress—stressful workplace situations.

c) 2 marks

Mark	Description
2	List All three elements (Fuel, heat, fire)
1	Any 2 elements listed

Question 2 Unit of competence: BCGCM1003B Plan and organise work

a) 7 marks

Mark	Description
Candidates need to provide 7 points that are required for a checklist 1 mark for each point.	
1	Provide an overview of the job. In order to pave the driveway a safe and efficient sequence of work must be followed and this is achieved by setting out a work method statement.
1	Were the instructions verbal, written or a drawing in a plan format. You need to make sure you understand the instructions.
1	check for a clear understanding of what is required and don't rely on memory.
1	Do the task/tasks follow a logical sequence of work?
1	Will the task be completed accurately and in good time?
1	rule when setting out work materials for cutting is 'measure twice – cut once'. Hence, time is saved and there is less waste.
1	Tools not in use are clean and safely located not obstructing walkways etc.

b) 3 marks

Mark	Description
1	faulty or damaged equipment
1	unsafe or dangerous behaviour
1	Lack of co-operation or assistance from other workers

Question 3 Unit of competence: BCGCM1005B Carry out measurements and calculations

a) 6 marks

Mark	Description	
1	length of driveway	$3\ 000 \times 7\ 500 =$ 22.500
1	two triangular sections	$.5 \times 2\ 000 \times 900 =$.900
1		$.5 \times 3\ 000 \times 1\ 500 =$ 2.250
1		Total: 25.650
1	bedding sand x 060 =	1.54
	compaction x 15% =	.23
1	cubic metres =	1.77 m3

b) 4 marks

Mark	Description		
1	length of driveway	$3\ 000 \times 7\ 500 =$	22.500
	two triangular sections	$.5 \times 2\ 000 \times 900 =$.900
		$.5 \times 3\ 000 \times 1\ 500 =$	2.250
1	Total:		25.650
1	Number of pavers pre square metre x 38 =		975
	waste x 10% =		98
1	Number of pavers =		1073

Question 4 BCGSF2004B Place and fix reinforcement materials**a) 6 marks**

Mark	Description
6	Describes accurately the properties and characteristics of concrete and steel
5	Describes generally the properties and characteristics of concrete and steel
4	Describes some of the properties and characteristics of concrete and steel
3	Describes accurately the properties and characteristics of concrete or steel
2	Describes the properties or characteristics of concrete and steel
1	Describes accurately the properties or characteristics of concrete or steel

Answers could include the following

- Concrete when first mixed is a workable state and needs to be confined in formwork until it cures. Concrete has excellent compressive strength but is limited when shear and tensile forces are applied. Placing steel reinforcement bonds with the concrete and increases its shear and tensile strength.
- Steel is iron in a modified form, artificially produced, containing a certain amount of carbon and possessing a hardness, elasticity and strength which vary with the composition and the heat treatment.

b) 4 marks

Mark	Description
1 mark for each of the points given	
1	▪ can be formed into different shaped rods and mesh (also called fabric) which can easily be embedded into concrete.
1	▪ possesses a high tensile strength
1	▪ low resistance to fire
1	▪ it is essential that an effective bond between the concrete and steel is achieved.

[From: Construction Curriculum Consortium, TAFE Queensland. (1997). *NBC1006: Basic construction materials* (p. 160). Retrieved, May, 2009, from http://www.atpl.net.au/sample/pdf/atpsample_1577.pdf]

Question 5 BCGCM2001B Read and interpret plans and specifications

a) 8 marks

Mark	Description
8	Gives a definition of a specification ,provides details of its purpose and gives at least 6 detailed reasons as to why they are used
7	Gives a definition of a specification ,provides some explanation of its purpose and gives at least 6 reasons as to why they are used
6	Gives a definition of a specification ,provides details of its purpose and gives at least 5 reasons as to why they are used
5	Gives a definition of a specification ,provides details of its purpose and gives at least 4 reasons as to why they are used
4	Gives a definition of a specification ,provides details of its purpose and gives at least 3 reasons as to why they are used
3	Gives a general explanation of its purpose and gives 3 at least reasons as to why they are used
2	Gives a general explanation of its purpose and gives 3 at least reasons as to why they are used
1	Gives a general explanation of its purpose and gives 3 at least reasons as to why they are used

Answers could include the following

- A specification is an extension to a working drawing and both documents complement each other.
- A certain amount of written information is unavoidable on drawings but from a point of view of both drafter and user, the less written detail on a drawing the better.
- Drawings show shape, location and dimensions of space and objects, which need to be identified by their names or titles. Definitions and explanations are shown elsewhere; namely in the specifications.
- Specifications are the written instructions to the builder/contractor containing all the information pertaining to the materials, quality of work, fabrication dimensions, colour and finishes supplementary to that appearing on the working drawings.
- Working drawings and specifications need to be examined thoroughly as both documents contain specific information; therefore what information is not contained in one document, should be within the other.

b)

Mark	Description
2 marks for all 4 correct. 1 mark for 3 or 2 correct	A - timber B -concrete C - brickwork D - earth

Question 6 BCGM2005B Use construction tools and equipment

a)

Mark	Description
6	At least 5 items given with reasons
5	4 items given – all with reasons
4	4 items given – some with reasons
3	3 items given – with reasons
2	2 items given
1	1 items given

Answers should include the following

- Portable Generator (no power)
- Plate compactor (soft soil)
- Power saw/generator (formwork timber to be cut)
- Concrete mixer and wheel barrow (concrete needs to be mixed)
- Concrete vibrator (concrete needs to be dense)

b)

Mark	Description
4	Provides at least 5 items
3	Provides 4 items
2	Provides 3 items
1	Provides 2 items

Answers should include the following

- Safety helmet
- Safety boots
- Safety glasses
- Gloves
- Ear muffs
- Circuit breaker fro electric tools

Question 7 BCGCM2006B Apply basic levelling procedures

a) 4 marks

Mark	Description
1 mark for each correct answer	i) 1.250 ii) 1.100 iii) 1.060 iv) 880

b) 2 marks

Mark	Description
1	Correctly indicates that the reading is lower
1	Explains that the lower the reading taken from the datum point the reverse occurs and it is higher

c) 4 marks

Mark	Description
4	Gives at least one advantage and one disadvantage of using the dummy in comparison to the laser level
3	Gives one advantage or disadvantage of using the dummy in comparison to the laser level
2	Gives one advantage and one disadvantage of using the dummy
1	Gives one advantage or one disadvantage of using the dummy

Answers could include the following

- the dummy level requires two people; one holding the staff while the other person takes the reading through the instrument.
- the laser level only needs one person to operate to take levels as the laser level reacts, sending a signal beep to the staff when level.

[From: West Coast College of TAFE. (n.d.). *BCG2004A: Carry out levelling* [Worksheets]. Joondalup, WA: West Coast College of TAFE]

Question 8 BCGCO2003B Carry out concreting to simple forms

a) 2 marks

Mark	Description
2	Correctly and precisely defines the term formwork
1	Generally provides a definition

Answer to include:

Formwork is the temporary construction that gives form to and supports the freshly placed concrete

b) 8 marks

i)

Mark	Description
2	Gives 4 reasons for the need for accuracy
1	Explains 2 reasons

ii)

Mark	Description
2	Gives 3 reasons for the need for rigidity
1	Gives 2 reasons for the need for rigidity

iii)

Mark	Description
2	Gives 3 reasons for the need for tightness in joints
1	Gives 2 reasons for the need for tightness in joints

iv)

Mark	Description
2	Gives reasons for at least two differing surface finishes
1	Gives reasons for one differing surface finish

Answers could include the following

- i) Accuracy: The plasticity of fresh concrete allows it to be moulded into any desired structural or architectural shape. It is therefore essential that forms be designed and constructed accurately so the desired size, shape, position and finish of the concrete structure are obtained.
- ii) Rigidity: Formwork should be a substantial construction to prevent distortion when supporting wet concrete. It should be sufficiently rigid to prevent bulging, sagging and movement.
- iii) Tightness of joints: Joints between intersecting members in direct contact with the concrete during placement must be tight enough to prevent leakage of the concrete paste. Leakage of concrete paste will form unsightly fins and a honey comb surface to the concrete.
- iv) Finish: There are several surface finishes which can be obtained by treating the surface of the form. Industrial buildings generally require a smooth finish, however, simulated wood grain finishes can be produced by exposing the grain of timber forms by sand blasting.