

BASIC BUILDING & CONSTRUCTION SKILLS

Answers to Activities and Exercises

Chapter 2: Working Effectively and Sustainably in the Construction Industry

Worksheet 1

Task: Read through the sections from *Identify and explain the construction work context* up to *Identify the scope and employment conditions in the construction industry*, then complete the following.

- 1 What are the three (3) factors that may influence the demand and supply of construction?
- 1 **interest rates**
 - 2 **tax changes**
 - 3 **changes in population**

(page 62, column 1, paragraph 3)

- 2 What is the percentage of people directly employed in the construction industry? (Circle the correct answer.)
- 1 5%
 - 2 7%
 - 3 **9%**
 - 4 12%
 - 5 15%
 - 6 18%
 - 7 21%

(page 62, column 1, paragraph 5)

- 3 What four (4) parts of the Australian economy are strongly linked to the construction industry?
1. **manufacturing**
 2. **wholesale trade**
 3. **retail trade**
 4. **finance and insurance**

(page 62, column 1, paragraph 4)

4 The building industry is divided into three main groups: the residential, non-residential and engineering sectors. List seven (7) types of structure that fit into the residential sector.

1. **dwelling of one to three storeys**
2. **flats**
3. **duplex dwellings**
4. **villas**
5. **townhouses**
6. **home units**
7. **boarding houses, guest houses and hostels**

(page 62, column 2, paragraph 2)

5 List four (4) types of structure that fit into the non-residential or commercial sector.

Selection of 4 from this list is required

- **shopping centres**
- **hotels**
- **schools**
- **office blocks**
- **hospitals**
- **multistorey and high-rise construction**

(page 62, column 2, paragraph 4)

6 List four (4) types of structure that fit into the engineering sector.

Selection of 4 from this list is required

- **bridge building**
- **road building**
- **tunnelling**
- **airport construction**
- **dam building**

(page 63, column 1, paragraph 3)

7 List two (2) types of buildings that would be found in the public or government sector.

1. **hospitals**
2. **schools**

(page 63, column 1, paragraph 4)

Worksheet 2

Task: Read through the sections from *Identify the scope and employment conditions in the construction industry* up to *Industrial relations* then complete the following.

1 What is the difference (in simple terms) between *direct* and *indirect* labour?

Direct labour is **where the worker paid weekly or fortnightly by his employer**

Indirect labour is **where the worker is paid as a contractor or subcontractor at the completion of the task or work period**

(page 64, column 1, paragraph 1)

2 List three (3) different trade categories or construction job roles.

Selection of 3 from this list is required

- **machine/plant operator**
- **demolition worker**
- **construction carpenter/formworker**
- **steel fixer**
- **concreter**
- **carpenter and joiner**
- **stonemason**
- **bricklayer/blocklayer**
- **painter and decorator**
- **plasterer (render and plasterboard)**
- **roof tiler**
- **wall and floor tiler**
- **metal worker**
- **plumber/drainer/gas fitter**
- **electrician**
- **dogger/dogman**
- **rigger**
- **scaffolder**
- **waterproofer**
- **glazier**
- **carpet layer**
- **trade assistant/labourer**

(page 64 Table 2.1: Construction job roles)

3 In the building industry today technological trends are having a massive impact on the way building is carried out. List four (4) areas discussed in this book where technology has had an impact.

1. **improved tools, plant and equipment**
2. **materials and composite materials**
3. **building methods**
4. **improved computer software**

(page 64, column 1, paragraph 4)

4 What has been the result of all this technological advancement within the building industry?

Technological advancements have allowed buildings to be constructed more quickly and efficiently than ever before, but have also created a need for tradespeople to be trained both formally and informally on the work site.

(page 64, column 1, paragraph 5)

5 List three (3) materials that have been affected by changing technology.

Selection of 3 from this list is required

- **suspended steel floor framing** (steel)
- **reinforced concrete slab-on-ground** (concrete)
- **pre-cast tilt-up slab walling systems** (concrete)
- **autoclaved aerated concrete blocks and panels** (concrete)
- **light-weight timber trusses** (timber)
- **concrete tiles** (concrete)
- **Terra-cotta roof tiles** (clay products)
- **Colorbond metal sheeting** (steel)

(page 65, column 1, paragraph 2)

6 When did timber-framed cottages clad in asbestos cement start to be built in Australia? (Circle the correct answer.)

- 1 about 1945**
- 2 about 1950
- 3 about 1955
- 4 about 1960
- 5 about 1965
- 6 about 1970
- 7 about 1975

(page 65, column 2, paragraph 3)

7 What were two (2) technological advancements that allowed the Eureka Tower to be built?

Selection of 2 from this list is required

- **invention of the elevator**
- **advent of steel-reinforced concrete**
- **improvements in glass manufacture**

(page 66, column 1, paragraph 4)

8 What do the following building computer software acronyms mean?

1 CAD

Computer Aided Design

2 BIM

Building Information Modelling

(page 66, column 1 bottom & column 2 top)

Worksheet 3

Task: Read through the sections from *Industrial relations* down to *Legal and ethical obligations of businesses*, then complete the following.

1 What is the meaning of the term industrial relations?

Industrial relations is **'the relationship between management and workers in industry'**

(page 67, column 1, paragraph 1)

2 What is the name of the national Act introduced in 2009 that allows all private sector employees to be covered by one national workplace relations system?

Fair Work Act 2009

(page 67, column 1, paragraph 4)

3 Name three (3) areas of change covered by this new Act.

Selection of 3 from this list is required

- **national employment standards**
- **national minimum wage**
- **unfair dismissal laws**
- **modernisation of existing awards or modern awards**

(page 67, column 1, paragraph 4)

4 Name four (4) of the ten National Employment Standards (NES). Refer to **Student activity 2.1**.

Selection of 4 from this list is required

- **1. Maximum of 38 weekly hours of work**
- **2. Requests for flexible working arrangement**
- **3. Parental leave and related entitlements**
- **4. Annual leave**
- **5. Personal/carer's leave and compassionate leave**
- **6. Community service leave**
- **7. Long service leave**
- **8. Public holidays**
- **9. Notice of termination and redundancy pay**
- **10. The right to access the Fair Work Information Statement**

(Accessed online refer to 'Student Activity 2.1' p. 72)

5 What is an enterprise agreement?

An enterprise agreement is **the contract that has been negotiated and determined between the employer and an employee of a particular workplace**

(page 68, column 1, paragraph 1)

6 What is the legal definition of unfair dismissal?

Unfair dismissal is **when an employee is dismissed from their job in a harsh, unjust or unreasonable manner**

(page 68, column 1, paragraph 1)

7 If someone believes that they have been unfairly dismissed, within how many days must they notify the Fair Work Commission?

If someone believes that they have been unfairly dismissed they may notify the Fair Work Commission *within 21 days* after their dismissal.

(page 67, column 2, paragraph 3)

Worksheet 4

Task: Read through the sections from *Legal and ethical obligations of businesses* and up to *Health and safety requirements* then complete the following.

1 What does quality control mean?

Quality control is the system that is used to test a product by sampling and then checking it against set specifications.

(page 68, column 1, bottom of page)

2 What does quality assurance mean?

Quality assurance is preserving or keeping a set level of quality in the overall finished product

(page 68, column 2, paragraph 2)

3 Which Australian and New Zealand Standard covers quality assurance?

AS/NZS ISO 9001 Quality management systems – Requirements.

(page 69, column 1, paragraph 3)

4 Name four (4) of the eight key principles of quality control.

Selection of 4 from this list is required

- **1. All systems exhibit variation**
- **2. High quality does not cost anything – it pays for itself (in the long run)**
- **3. People work within systems**
- **4. Everyone serves a customer**
- **5. Improvements should be plan-driven, not event-driven**
- **6. Improvement should be a way of life**
- **7. Management should be controlled by facts and Data**
- **8. Control the process, not the output**

(page 69, column 1, paragraph 4)

5 What is the difference between an internal and an external customer?

internal – the person who receives your work next in the work process, e.g. frames by carpenter received by brickworker

external – the person who buys goods and services, e.g. the client or owner of the building.

(page 69, column 1, paragraph 5)

6 Which Australian Standard should be used by carpenters who are erecting wall frames?
AS **1684 Residential timber-framed construction**

(page 69, column 2, paragraph 2)

7 What is the full name of the program through which corporations and businesses provide employees with counselling and psychological support?

Employee assistance programs

(page 70, column 1, paragraph 5)

8 List three (3) items that are considered *adverse actions* under the *Fair Work Act 2009*.

Selection of 3 from this list is required

- race
- colour
- sex
- sexual preference
- age
- physical or mental disability
- marital status
- family or carer responsibilities
- pregnancy
- religion
- political opinion
- nationality
- social origin

(page 70, column 1, paragraph 6)

9 What does the acronym EEO stand for?

Equal Employment Opportunity

(page 70, column 2, paragraph 5)

Worksheet 5

Task: Read through the sections from *Bullying and harassment* and up to *Identify responsibilities of individual for own workload* then complete the following.

1 In what way is bullying a risk to health and safety?

Workplace bullying is a risk to health and safety because it may affect the mental and physical health of workers.

(page 70, column 2, paragraph 6)

2 What is harassment?

Harassment is **any of form of unwanted physical or verbal behaviour that offends or humiliates a person.**

(page 71, column 1, paragraph 1)

3 Who is responsible for providing and maintaining equipment and safety in relation to work health and safety requirements? (Circle the correct answer)

PCBU/employer	Worker/employee
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(page 71, column 1, paragraph 9)

4 Who is responsible for *not* interfering with or misusing any item provided for the health, safety or welfare of people on a work site? (Circle the correct answer.)

PCBU/employer	Worker/employee
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(page 71 column 2 Paragraph 3)

5 Who is responsible for providing information, instruction, training and supervision in relation to work health and safety? (Circle the correct answer.)

PCBU/employer	Worker/employee
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(page 71, column 1, paragraph 10 – 14)

6 List three (3) items that are included as part of site amenities.

1. **toilets**
2. **drinking water**
3. **washing and eating facilities**

(page 72, column 1, paragraph 2)

7 List three (3) items that are included as part of emergency procedures.

1. **evacuation planning, process and practice**
2. **fire control planning, training and practice**
3. **first aid provision – being adequate and available to workers on the job site.**

(page 72, column 1, bottom)