

2017 HSC Industrial Technology

Timber Products and Furniture Technologies

Marking Guidelines

Section I

Multiple-choice Answer Key

Question	Answer
1	D
2	A
3	D
4	C
5	A
6	C
7	B
8	B
9	D
10	B

Section II

Question 11

Criteria	Marks
<ul style="list-style-type: none"> Identifies correct portable power tool 	1

Answers could include:

Reciprocating saw, jigsaw, router.

Question 12

Criteria	Marks
<ul style="list-style-type: none"> Provides a detailed description of benefits of using recycled timber in furniture production 	2
<ul style="list-style-type: none"> Outlines an advantage of using recycled timber 	1

Answers could include:

- Quality old seasoned timber for working
- Aesthetic look – old seasoned timber (rustic)
- Less deforestation/environmental impact
- Carbon footprint
- Stable boards
- Native timbers.

Question 13

Criteria	Marks
<ul style="list-style-type: none"> Provides a clear description of the practices used to minimise the environmental issues associated with timber finishing 	3
<ul style="list-style-type: none"> Provides a description of the practices used to minimise the environmental issues associated with timber finishing OR <ul style="list-style-type: none"> Provides a detailed description of ONE practice used to minimise the environmental issues associated with timber finishing 	2
<ul style="list-style-type: none"> Provides a basic understanding of practices used to minimise the environmental issues associated with timber finishing 	1

Sample answer:

- Discarded varnish, turpentine, finish to be disposed of at an approved chemical waste facility
- Discarded newspaper, rags, brushes to be disposed of at an approved waste facility
- Using water-based varnish eg polyurethane for a less negative impact on the environment
- Spray booths have filtering systems to catch hazardous environmental chemicals.

Question 14

Criteria	Marks
<ul style="list-style-type: none"> Provides a clear description of TWO benefits of using dovetail joints in drawer construction 	4
<ul style="list-style-type: none"> Provides a description of TWO benefits of using dovetail joints in drawer construction 	3
<ul style="list-style-type: none"> Provides a limited description of TWO benefits of using dovetail joints in drawer construction OR <ul style="list-style-type: none"> Provides a detailed description of ONE benefit of using dovetail joints in drawer construction 	2
<ul style="list-style-type: none"> Outlines a main feature of ONE benefit of using dovetail joints OR <ul style="list-style-type: none"> Provides a basic understanding of dovetail joints 	1

Answers could include:

- Mechanical strength – allows for continual opening and closing of drawer without relying on strength of glue
- Aesthetic quality of dovetail joint
- Can be hand and/or machine produced.

Question 15

Criteria	Marks
• Provides a detailed description of the process to produce a laminated curved component of a rocking chair	5
• Provides a sound description of the process to produce a laminated curved component of a rocking chair	3–4
• Provides a limited description of the process of producing a laminated curved component in general terms	2
• Provides some relevant information in producing a laminated component	1

Sample answer:

- Rip timber strips on table saw
- Produce a former/template of curve
- Dry clamp to check curve
- Glue one side of each strip
- Clamp strips around former/vacuum bag
- Remove excess glue
- Check curve/twist slip square etc
- Leave to dry/cure
- Remove clamps from former
- Finish curved piece.

Section III

Question 16 (a)

Criteria	Marks
<ul style="list-style-type: none"> • Demonstrates detailed understanding of the importance of training opportunities for a worker in the timber industry • Uses an appropriate example 	5
<ul style="list-style-type: none"> • Demonstrates some understanding of the importance of training opportunities for a worker in the timber industry • Uses an appropriate example 	3–4
<ul style="list-style-type: none"> • Indicates how training impacts on a worker 	1–2

Sample answer:

If a worker engages in training opportunities this will present positive future opportunities.

Training opportunities are increasingly available for the focus industry worker. Training opportunities may include a small onsite two-hour demonstration, a full day workshop, a TAFE course or an online university course.

These training opportunities allow workers to accelerate themselves in a leadership and management position, which provides them with an increased salary that would allow a greater amount on the leisure spending.

For example: a timber industry worker may complete a project management course one night a week for six months at a training institution. On completion of this course, this would indicate to the employer that the worker is dedicated and committed to being promoted to project management, which attracts a higher salary. Perhaps this qualification is an industry requirement for being promoted to project management, the effect of this would allow the worker to be promoted as a ‘fill in’ for this position if the need arose in the short term, thereby the worker gains experience in this position.

For example: if a multimedia worker was given the opportunity to train in software design by the employee, this would indicate a positive opportunity for a number of reasons. First of all such an opportunity would allow the worker free training and possibly some work time to study in. Secondly it would suggest that if the worker completed the training, the employer would wish to retrain the worker adding security to their position. Training in software design is valuable in the multimedia industry and therefore the effect would suggest higher salary as well.

Question 16 (b)

Criteria	Marks
<ul style="list-style-type: none"> Provides a detailed analysis of the effect of the technical factors and detailed implications for the efficiency of production in the timber industry Provides a logical and cohesive response that include industry terminology and specific industry examples 	10
<ul style="list-style-type: none"> Provides an analysis of the effect of the technical factors and implications for the efficiency of production in the timber industry Provides a logical response that includes industry terminology and industry examples 	8–9
<ul style="list-style-type: none"> Provides some explanation of the technical factors and the implications for the efficiency of production in the timber industry Provides a response that includes industry terminology and industry examples 	5–7
<ul style="list-style-type: none"> Attempts to provide some explanation of technical factor(s) and the effect they have on production Communicates information using industry example(s) 	3–4
<ul style="list-style-type: none"> Provides some relevant information of technical factor(s) or production 	1–2

This question requires the candidate to *draw out and relate* how *components of technical factors affect/have implications* for the efficiency of production.

Answers could include:

- CAM > waste minimisation > minimise effects on the environment
- Robots > WHS > healthier workforce / less sick leave
- Mass production > labour costs > 24/7 production without any overtime costs
- Mechanism (mechanical engineering) > production rate / quality control > more units per hour / all at required minimum standard
- Mechanisation
- Automation
- Specialisation
- New emerging technologies.

2017 HSC Industrial Technology Timber Products and Furniture Technologies Mapping Grid

Section I

Question	Marks	Content	Syllabus outcomes
1	1	Materials	H1.2
2	1	Materials	H1.2
3	1	Processes, tools and machinery	H2.1
4	1	Materials	H1.2
5	1	Processes, tools and machinery	H2.1
6	1	Processes, tools and machinery	H4.1
7	1	Processes, tools and machinery	H4.1
8	1	Processes, tools and machinery	H5.1
9	1	Processes, tools and machinery	H2.1
10	1	Processes, tools and machinery	H2.1

Section II

Question	Marks	Content	Syllabus outcomes
11	1	Processes, tools and machinery	H1.2
12	2	Materials	H4.3
13	3	Processes, tools and machinery	H2.1
14	4	Processes, tools and machinery	H2.1
15	5	Processes, tools and machinery	H1.2

Section III

Question	Marks	Content	Syllabus outcomes
16 (a)	5	Personnel issues	H1.1, H7.1
16 (b)	10	Technical considerations	H1.2, H2.1, H6.2, H7.2