BOARD OF STUDIES
NEW SOUTH WALES

2013 HSC Industrial Technology
Timber Products and Furniture Technologies
Marking Guidelines

Section I

Multiple-choice Answer Key

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

Section II

Question 11

Criteria	Marks
• Identifies TWO suitable timbers	2
• Identifies a suitable timber	1

Sample answer:

- Radiata Pine
- Hoop Pine
- Poplar
- Blackbutt

Answers could include:

- Caribbean Pine, Oregon

Question 12

Criteria	Marks
• Names a suitable manufactured board and provides relevant reasons for its selection	3
• Names a suitable manufactured board and provides a reason for its selection OR • Provides relevant reasons	2
• Provides a relevant reason OR • Names a suitable manufactured board	1

Sample answer:

Plywood — Uniform strength, minimal or no shrinkage, available in large sheets, light, available in thin sheets readily available

Answers could include:

MDF, Hardboard, Laminated boards

Question 13

Criteria	Marks
• Names a carcase joint and provides a quality sketch of a carcase joint	3
• Names a carcase joint and provides a poor sketch	2
• Names a carcase joint OR provides a sketch	1

Sample answer:

Rebate, Mitre, Dovetail, Dowelled, Domino or Biscuit joint

Answers could include:

Rebated mitre, Lapped dovetail, Pin or box joint, Tongue and trench, secret dovetail

Question 14

Criteria	Marks
• Provides in detail steps showing how to screw the plinth to the cabinet supported by a sketch	3
• Provides a main feature of how to screw the plinth supported by a sketch	2
• Provides a general feature of how to screw the plinth OR gives a sketch	1

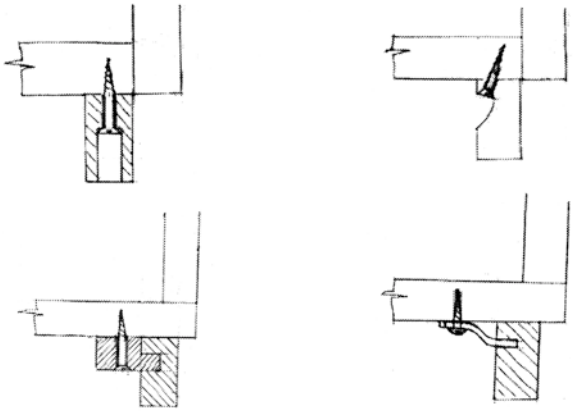
Sample answer:

Counterbored Screwing

Pocket Screwing

Wooden buttons

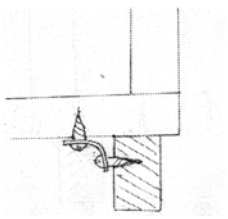
Metal buttons



Counterbored screwing — Choose a screw and mark the depth that would go into the rail. Drill a hole slightly larger than the head of the screw. Drill a thinner hole slightly larger than the shank of the screw inside the larger hole to allow for timber movement. Put at least two screws on each side of the plinth.

Answers could include:

Angle iron brackets



Question 15

Criteria	Marks
• Describes in detail the process for attaching the door to the carcase using butt hinges	4
• Provides a general description of the process for attaching the door to the carcase using butt hinges	3
• Outlines some features of the process of attaching the door to the carcase using butt hinges	2
• Identifies a basic element of attaching the door to the carcase using butt hinges	1

Sample answer:

Marking out – two marking gauges (one for width and one for depth) and a marking knife. Allow for both leaves of the hinge to be set in the carcase (full depth mortise) or one leaf in the carcase and one leaf in the door (half depth mortise). Use the hinge itself to mark out the length.

Using a chisel or a Tenon saw make a series of cuts, then remove small chunks of wood with a chisel or a jig and router.

Secure the hinge with a centre screw on both the door and the cabinet and check for a correct hang. Make adjustments if necessary and put the other screws in.

Section III

Question 16 (a)

Criteria	Marks
• Provides a detailed explanation of why it is important for a company to comply with safety standards	6
• Provides s sound explanation of why it is important for a company to comply with safety standards	4–5
• Provides a limited explanation of why it is important for a company to comply with safety standards	2–3
• Provides some relevant information	1

Sample answer:

It is important for a company to comply with safety standards for a number of reasons. Firstly, they are legally responsible for the safety of their employees and can be both financially and even criminally liable should the company be at fault for the injury or death of an employee. Another reason to comply with safety standards is to ensure that production is not disrupted. An industrial accident can cause a stop in production which in turn will result in financial losses on top of the financial losses to paying worker's compensation for an injured worker. Injured employees may also have to be replaced and this will also add to the cost of workplace injuries as it will be an extra wage to pay out. Morale and productivity could suffer as employees do not feel safe in the workplace and can even reach a point of production being stopped by employees until their right to a safe work environment is met.

Answers could include:

- Duty of care
- Government legislation
- Financial security
- Marketability of a product
- Good will of company
- Ethical issue

Question 16 (b)

Criteria	Marks
• Provides a detailed assessment of strategies a company could implement to establish and maintain a safe work culture	9
• Provides an assessment of strategies a company could implement to establish and maintain a safe work culture	7–8
• Relates strategies a company could implement to establish and maintain a safe work culture	4–6
• Attempts to provide strategies a company could implement to establish and maintain a safe work culture	2–3
• Provides some relevant information	1

Sample answer:

A range of methods could implement to establish and maintain a safe work culture are; establish a WHS committee, erect clear signage, and train employees.

Establishing a WHS committee ensures that all members of the work place are represented and participate in risk assessments, site maintenance and site inspections. This method is very effective in ensuring communication of WHS requirements is clearly spread between all levels of the work force. It provides the opportunity for different perspectives on work place safety to be considered. A WHS committee also spreads responsibility for workplace safety across the entire company, which ensures everyone applies a consistent approach to safe work practices and management practices and fosters a positive and safe work place culture.

Erecting clear signage that utilises graphical information, over complex written policies, allows for both a reminder of safe work practices in hazardous areas and clear communication of safe work practices to workers with limited literacy. Signage is an excellent method to maintain a safe workplace culture as they are quick to recognise and serve as constant reminders of safe work practices and hazards to people who may not have any training eg visitors to the workplace. Signage is particularly useful in the event of new safety requirement or hazard. It is far quicker to erect a slippery floor sign over a spill than send a memo out to all staff.

Training is another excellent method to ensure and maintain a safe workplace culture. It directly communicates safe work practices to employees and can ensure each employee is assessed as to how well they understand safety requirements or the correct procedure to work with hazardous materials, machinery or environments. It gives the employees a chance to clarify their understanding of the safe work practices as well as possibly develop their own skills in the use of machinery. When it is registered what an employee is trained to do, it is easier for management to ensure the employees are placed appropriately in a production line to ensure the employees own safety and the safety of others.

Answers may include:

Assess a range of methods that could implement effectively to establish and maintain a safe work culture.

- Establish a WHS committee (Risk assessments / Site maintenance + inspection)
- Improve signage so that people who can't read can understand what is required
- Train employees re: WHS procedures eg evacuation
- Practice evacuation procedures once every 6 months
- Improve communication — meetings, posters, emails, message boards
- Train employees — in service and keep a register of trained personnel to identify training required
- Keep and maintain a register of incidents
- Monitoring
- Maintenance
- Supply PPE
- Site meeting
- Risk assessments

Industrial Technology
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2013 HSC Examination Mapping Grid

Section I

Question	Marks	Content	Syllabus outcomes
1	1	Processes, tools and machinery – marking tool	H1.2
2	1	Processes – finishing	H4.3
3	1	Processes, tools and machinery	H1.2
4	1	Processes, tools and machinery – power tool	H1.2
5	1	Framing joints — halving	H4.3
6	1	Processes – nailing	H1.2
7	1	Processes – calculation – scale	H4.3
8	1	Timber selection considerations	H4.3
9	1	Planning – Processes – materials list	H2.1, H3.2
10	1	Planning – Processes – finishing – calculation	H3.2, H5.1

Section II

Question	Marks	Content	Syllabus outcomes
11	2	Material – Timber selection	H4.3
12	3	Manufactured boards	H2.1, H6.1
13	3	Carcase joints	H3.1, H4.3
14	3	Fittings and allied materials – screwing methods	H2.1, H3.1
15	4	Fittings and allied materials – hinges	H1.2, H6.2

Section III

Question	Marks	Content	Syllabus outcomes
16 (a)	6	OHS (WHS)	H2.1, H6.1, H7.1, H7.2
16 (b)	9	OHS (WHS)	H2.1, H7.1, H7.2