



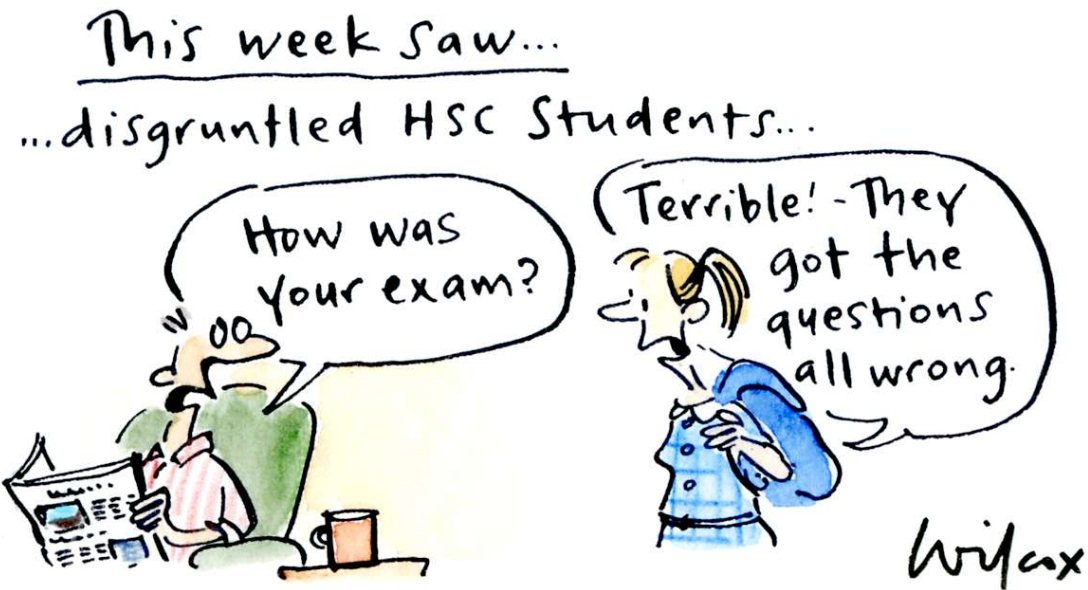
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Developing quality test items

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# BOSTES and HSC examinations

(Board of Studies, Teaching and Educational Standards)



## Examining and Testing branch is responsible for

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- determining the form of tests and examinations
- developing Higher School Certificate examinations (currently 124 separate examinations)
- appointing and training Chief Examiners, committee members and reviewers
- developing and monitoring procedures to ensure the implementation of the marking guidelines produces valid results
- producing examination support and feedback materials
- responding to issues raised regarding HSC exams
- developing and producing modified examinations in accordance with the Disability Provisions program, including large print, modified and Braille papers
- devising and monitoring procedures for the effective, valid and reliable conduct and marking of the performance and practical examinations.

## When are the examinations developed?

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- Process starts with the selection of Chief Examiners and committee members – (July – October)
- Committees develop an exam brief and then draft the examination – (November – April)
- Examination is reviewed (March – April)
- Committee meets to consider all the reviews (April – May)
- Audit is carried out to ensure that process has been followed appropriately
- Examination is finalised – (June)
- Examination prepared for printing (July)

# Who develops the HSC Legal Studies examination?

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- Examinations are developed by examination committees (made up of teachers and academics) working under the leadership of a Chief Examiner
- Lots of other people play a part in the development – E&T senior project officers, Inspector HSIE, Supervisors of Marking, assessors, language reviewers and editors

## Who can be on an examination committee?

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- Experienced teachers who have taught the course to HSC students BUT who are NOT teaching that course to Year 12 in the year of the examination

*Note: Additionally, you cannot be on an examination committee if you are tutoring Year 12 students in the course, have a child doing the course, a partner teaching the course, or if you have written textbooks that are being used in NSW classrooms for the course .*

# What do examination committees develop?

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- Examination brief
- Examination paper
- Marking guidelines
- Sample answers
- Mapping grid

# What is considered throughout the development of the examination?

- The syllabus – outcomes and content
- The examination specifications
- The BOSTES endorsed *Principles*
- The performance bands
- Feedback from the previous examination – phone calls, emails, letters, feedback from marking centre during and after marking  
(*Notes from the Marking Centre*)



# What makes a quality examination?

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- It is valid
- It produces reliable results
- It allows for appropriate discrimination to be achieved
- The items and tasks provide students with the opportunity to demonstrate their knowledge and understanding of a course

# Validity

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Valid assessment measures the outcomes that it is intended to measure.

- What am I testing?
- Does this have a clear relationship to syllabus content and outcomes?

# Reliability

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Reliable assessment consistently and accurately measures the student's ability to answer a question.

- How am I testing this outcome?
- Does every student have the same opportunity to answer the question?

# Reliability

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- Unambiguous wording
- Appropriate language
- Appropriate overall length
- Appropriate overall difficulty

# Principles for setting examinations in a standards-referenced framework

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- The BOSTES has endorsed a set of principles for setting examinations and developing marking guidelines in a standards-referenced framework.
- The principles are designed to ensure that examinations allow students to demonstrate their achievement of the course, and that marks awarded are commensurate with performance.

# What is the job of the examination committee?

- To develop a high quality examination paper and marking guidelines, both conforming to the BOSTES *Principles ...*

The image displays two screenshots of the BOSTES website. The top screenshot shows the page 'Principles for setting examinations' with a breadcrumb trail: Home > HSC > HSC Exams > HSC Exam people, papers, and processes > Principles for setting examinations. The bottom screenshot shows the page 'Principles for developing marking guidelines in a standards-referenced framework' with a breadcrumb trail: Home > Manuals and Guides > HSC > Principles for developing marking guidelines in a standards-referenced framework. Both screenshots include the BOSTES logo, navigation menu, and search bar.

# The BOSTES Principles

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- There are 22 principles (endorsed by the Board of Studies) that guide the setting of examinations
- Each principle relates to an aspect of validity and reliability

# Principle 1

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The examination will test a representative sample of knowledge, understanding and skill outcomes ...

The intention ... is to avoid predictability.



## Principle 6

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The level of difficulty of a paper should be maintained consistently from year to year.

## Principle 10

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Questions will be set simultaneously with marking guidelines and sample answers, and will allow for marks to be awarded commensurate with performance.

# Principle 11

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The mark allocation and space provided to answer questions will be appropriate for the anticipated range of responses.

## Principle 14

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The language used in questions will be accessible to all candidates so that it will be clear to all students what they are expected to do.

## Principle 16

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Stimulus material will only be provided when it is essential to answering the question.

- Is the stimulus really necessary to answer the question?

## Principle 20

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Where verbs such as ‘describe’, ‘analyse’, ‘synthesise’ and ‘evaluate’ are used, they will be used consistently and appropriately.

- ... but not exclusively
- Consider ‘why’, ‘how’ or ‘to what extent’ when formulating an item

# Principles for developing marking guidelines

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## Principle 3

- Marking guidelines will reflect the nature and intention of the question and will be expressed in terms of knowledge and skills demanded by the task

## Principle 7

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- Marking guidelines are to incorporate the generic rubric ... as well as aspects specifically related to the question



## Principle 8

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- The language of marking guidelines will be clear, unambiguous and free of jargon, to ensure consistency of marking

# Principle 10

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- Marking guidelines will indicate the quality of response required to gain a mark or sub-range of marks

# What level of performance is the item targeting?

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## Targeted performance bands

What does that mean?

- 1 mark items – generally over two bands
- Short-answer items- may cover two bands or entire range
- Extended responses – generally cover entire range

# Targeted performance bands - definitions

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For single mark items

- The targeted performance band indicator should comprise:  
The lowest band that DOES have the necessary skills, knowledge or understanding to indicate the correct response, AND  
the band below that (i.e. the highest band that MAY NOT have the necessary skills, knowledge or understanding)

For example Band 3-4

indicates that Band 4 students have the necessary skills to indicate the correct response, but Band 3 students may not

# Item design

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What constitutes an 'item'?

- question
- marking guidelines ie marking criteria and sample answer
- syllabus content and outcome
- targeted performance bands

## Quality issues to consider

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- How does the question relate to the syllabus?
- Is the question clear?
- Is the mark value appropriate?
- Is the stimulus required?
- How will it be marked?
- Does it allow for the range of bands targeted?

# How could the following marking guidelines be improved?

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What are the benefits of good customer service? 5 marks

## Criteria

Provides a wide range of benefits of good customer service 5

Provides a range of benefits of good customer service 4

Provides some benefits of good customer service 2-3

Makes a general statement about customer service 1

# How could the following marking guidelines be improved?

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*What criteria can an employer use when evaluating the work performance of employees?*

*3 marks*

Demonstrates a sound understanding of evaluating work Performance and the relationship with employees 3

Demonstrates a general understanding of the work Performance of employees 2

Provides a basic understanding of work performance 1



## How could the following sample answer be improved?

*Discuss actions that a sales assistant could take in response to a customer returning a faulty product. 5 marks*

### Sample Answer

The sales assistant could offer a range of alternatives. This could include an offer to replace, refund or repair the product. A credit note could also be given to the customer. The product could be exchanged in accordance with legislation, store policy and conditions of warranty.

## Does the question match the sample answer?

- Where are the characteristics of 'discuss'? The sample answer reflects a list of actions.

# Sample answers

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- For all questions worth up to 8 marks
- Minimum requirement for full marks
- Correspond to the mark value
- Correspond to space provided
- Reflect quality and not quantity
- Should reflect depth of response
- Answers could include ... only for questions worth more than 8 marks

# Definitions

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Item:	A question requiring interpretation
Stimulus:	The subject matter which is the focus of the questions
Stem:	Lead-in question
Options:	Includes both the distractors and the key in multiple choice items
Distractors:	In objective type questions, they are plausible but incorrect responses
Key:	The answer

## Parts of a multiple-choice item

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**Stimulus** A waitperson asks a customer, ‘what sauce would you like with your steak?’

**Stem** Which type of questioning technique is the waitperson using?

**Options**

- (A) Open
- (B) Closed
- (C) Reflective
- (D) Rhetorical

← Key  
Distractors

## Multiple-choice items

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- Should assess something worth assessing
- Should not be guessable by a non-specialist or a clever MC analyst
- Sensible, plausible distractors

Present a single, clearly formulated  
problem in the stem of the item

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Tasmania

- (A) is an island.
- (B) produces good cheese.
- (C) is a popular tourist destination.
- (D) has a wonderful botanical garden.

What is this question asking?

## Ensure there is one correct or clearly best answer

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Which is the odd one out?

- (A) Motels
- (B) Bed and breakfast accommodation
- (C) Youth hostels
- (D) Resorts



## Express the item in simple, clear language

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A succinct, concise response which covers the integral elements of the problem and may, on occasions, but not always, be substantial and could vary in the amount of detail required, best describes which of the following types of test items?

- (A) Short answer
- (B) True-false
- (C) Multiple choice
- (D) Essay

Ensure that the item is free of offensive sexual, cultural, racial and/or ethnic content or stereotyping

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Jane was not particularly good at using power tools, so she asked her friend Dave to help her ...

## Make the optional responses grammatically consistent with the stem

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An example of a naturally poisonous food is a

- (A) Cooked rice
- (B) Uncooked beef
- (C) Green potato
- (D) Oyster mushrooms

## State the stem in positive form wherever possible

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Which of the following statements is NOT correct?

- (A) You can't get decent service at BOSTES.
- (B) The BOSTES website is not easy to navigate.
- (C) Training days are always awful.
- (D) Writing examinations is never dull.

Include in the stem any words that might otherwise  
be repeated in the options

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What should be used on an electrical fire?

- (A) A foam fire extinguisher
- (B) A water fire extinguisher
- (C) A wet chemical fire extinguisher
- (D) A carbon dioxide fire extinguisher

A preferred option:

Which type of fire extinguisher should be used on an electrical  
fire?

## Make the distractors plausible and attractive

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In a retail environment, a wet floor sign may help a customer to

- (A) see the hazard.
- (B) hear the hazard.
- (C) forget the hazard.
- (D) ignore the hazard.

# Make the options the same length wherever possible

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Some frozen fish have been delivered and their temperature is being checked.

What criteria is being assessed?

- (A) Size
- (B) Weight
- (C) Quantity
- (D) Whether they are fresh enough to sell

## Avoid similarity in wording in both the stem and the correct answer

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What are the Three Sisters?

- (A) A singing group
- (B) Three rock formations found in the Blue Mountains
- (C) An online booking agency
- (D) A famous Bed and Breakfast



Make sure that options are not overlapping,  
inclusive or synonymous with one another

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How would you describe the temperament required for those wishing to work in the hospitality industry?

- (A) patient and empathetic
- (B) rude and unintelligent
- (C) not patient or clever
- (D) grumpy

## Present options in some logical or systematic order

A retailer reduces all stock by 35%

What is the sale price of an item originally marked at \$80?

- (A) \$128
- (B) \$45
- (C) \$52
- (D) \$62

## Avoid specific determiners (always/never/all/none)

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Achievement tests help students improve their learning by

- (A) encouraging them all to study hard.
- (B) informing them of their progress.
- (C) giving them all a feeling of success.
- (D) preventing any of them from neglecting their assignments.

# What is wrong with these multiple-choice questions?

John steals money from a petrol station. What punishment is he most likely to receive?

- (A) good behaviour bond
- (B) 12 months imprisonment
- (C) Home detention
- (D) Suspended sentence

Wayne is the owner of a successful multinational company. He owns seven factories in the Asia-Pacific area, two of which are in NSW. The Sydney factory has state of the art equipment and technology. Last night the Sydney factory was deliberately destroyed by a petrol bomb. This is an example of what type of crime?

- (A) offences against the person
- (B) economic offence
- (C) public order offence
- (D) drug offence

## The Australian Constitution

- (A) is a document that outlines the authority to govern of the NSW parliament, including the role of ministers and a list of the portfolios that must be included.
- (B) was written in the late 1890's to provide the authority for the way the fledgling Australian government would govern. It includes the specific powers of the commonwealth government, the residual powers of the state governments and provision for the high court.
- (C) provides strict rules for each state parliament and the federal parliament as to how all the states, territories and federal government will be governed, including how courts will operate.
- (D) provides the basis for how all the civil and criminal, state and federal courts throughout Australia will operate, including the tenure of judges and the role of juries.

The Treaty of Westphalia was signed in

- (A) 1770.
- (B) 1648.
- (C) 1066.
- (D) 1215.

Sometimes the court finds it necessary to use a mild form of punishment. When this occurs, which of the following should not happen?

- (A) The accused should be guilty
- (B) The accused should understand the reason for the punishment
- (C) The accused should realise that they, not the court, control the punishment
- (D) The accused should appreciate that they have been given a second chance



A person is only obliged to answer police questions in relation to

- (A) at a police station.
- (B) with an adult present.
- (C) motor vehicle accidents.
- (D) when sober.

What has been the major achievement of the Convention on the Rights of the Child ?

- (A) All sovereign states who have signed have followed its principles
- (B) Children in all parts of Australia now have good access to health care
- (C) Signatories have a greater obligation to adopt its guidelines
- (D) The rights of all children globally have improved

How would you describe Eleanor Roosevelt?

- (A) Compassionate, visionary and determined
- (B) Uncompassionate, lacking vision and determination
- (C) Neither compassionate, visionary or determined
- (D) Not very nice

## Some useful guidelines for multiple-choice questions:

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- design each question to measure an important learning outcome
- present a single clearly formulated problem in the stem of the question
- state the stem of the question in simple, clear language
- put as much wording as possible in the stem of the question
- state the stem in positive form wherever possible
- ensure the intended answer is correct or clearly the best

## Some useful guidelines for multiple-choice questions (cont.):

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- in general, questions should be arranged in increasing order of difficulty
- make all alternatives grammatically consistent with the stem of the question
- avoid cues that might enable students to select the correct answer
- make the distractors plausible and attractive to the uninformed
- avoid using 'all of the above' and 'none of the above'
- vary the position of the correct answer randomly
- place options in alphabetical, logical or numerical order

# Advice for students

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- Don't assume that exactly the same topics or types of questions will be asked every year
- Answer the question that is asked
- Read all the alternatives in a m/c question before you choose an answer
- The mark allocated and the answer space are an indication of how much should be written
- Question may ask you to respond by integrating knowledge, skills from across the course
- **ONLY** answer the option you have studied!!! And don't do bits of different options

## In summary

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- Plan
- Map to the syllabus outcomes and content
- Write questions with sample answers and marking guidelines
- Have a range of question types and difficulties
- Follow the basic rules for developing multiple-choice items

## Contact details

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### NOTE:

Applications for 2017 Chief Examiner, committee member and assessor positions open towards the end of June. Forms and information will be on the BOSTES website.