



HSC marking simulation videoconference: Information Processes and Technology



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Agenda

- Introduction
- Syllabus documents
- Structure of HSC examination paper
- The Journey of your exam paper
- Tips for answering the paper
- Marking process
- Examples of questions
- Resources
- Any Questions?



Syllabus Documents

- IPT Syllabus document
- Course Specifications Document
- HSC Course
 - Core
 - Project management (20%)
 - Information Systems and Databases (20%)
 - Communication Systems (20%)
 - Options – 2 to be completed (40%)
 - Transaction Processing Systems
 - Decision Support Systems
 - Automated Manufacturing Systems
 - Multimedia Systems



Structure of HSC Examination paper

- Length of Paper – 3 hours
- Section 1: 20 Multiple Choice (20 Marks)
 - Project management
 - Information Systems and Databases
 - Communication Systems
- Section 2: Q21 – 24 (40 Marks)
 - Project management
 - Information Systems and Databases
 - Communication Systems
- Section 3 Q25-28 Options (20 marks each)
 - 2 Questions only to be answered
 - Q25: Transaction Processing Systems
 - Q26: Decision Support Systems
 - Q27: Automated Manufacturing Systems
 - Q28: Multimedia Systems



The Journey of Your Exam Paper

- An Exam committee is established.
- The committee sets questions according to guidelines
- Draft of paper is assessed by teachers, the Supervisor of Marking, a syllabus validity assessor and various internal assessors such as copy editors
- Marking Guidelines and solutions are prepared
- Paper is finalised and proof read
- Paper checked before being printed.
- After Exam
 - Papers are collated and bundled and sent to marking centre.
 - Marking sheets scanned for onscreen marking



Tips for Answering the Paper -1

- Writing -needs to be clear and easy to read
- Pens – use black biro rather than blue
- Pencil – Use 2B pencil only
- Do not use liquid paper. Draw one clear line through error so that work can still be read
- Answer sheets – write within the borders of the pages. Get extra answer sheets if not enough space.



Tips for Answering the Paper - 2

- Timing
 - Leave time for checking
- One and a half minutes per mark
- OR
 - Section 1: 30 minutes
 - Q21-22: 30 minutes
 - Q23-24: 30 minutes
 - Option 1: 30 minutes
 - Option 2: 30 minutes
 - 30 minutes for checking



Tips for Answering the Paper - 3

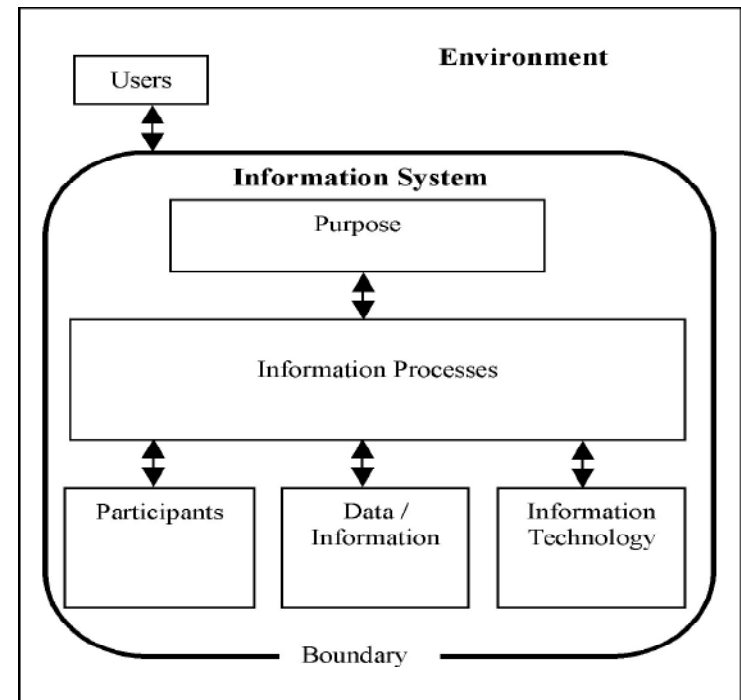
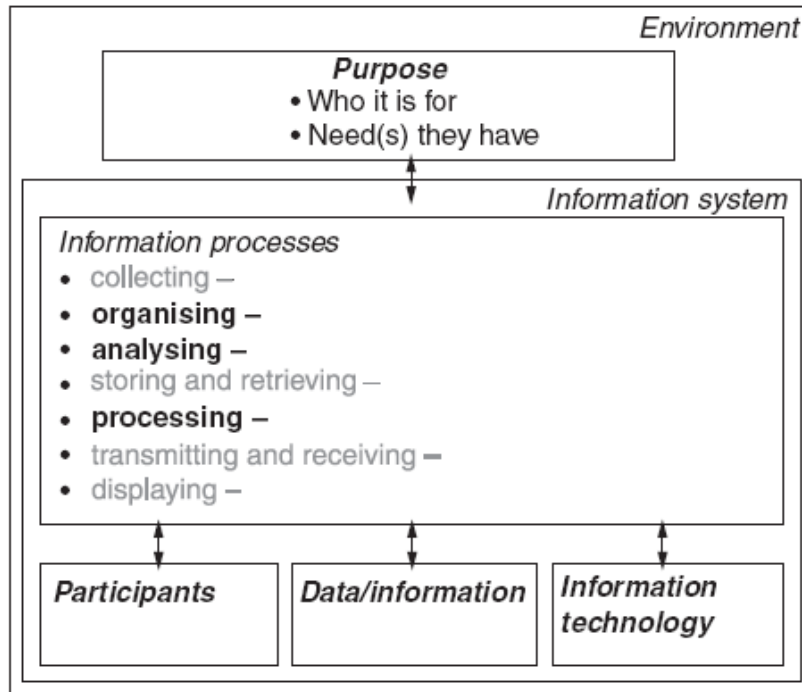
- Check your MC answers, only change them if you are convinced that you made an error in your initial answer
- What to write in your answer
 - Do not rewrite the question as part of your answer
 - Know what the key verbs mean e.g. analyse, describe
 - Use the allocation of marks as a guide to answering the question
 - To maximise marks you should:
 - State a fact (or facts)
 - Explain the fact in more detail
 - Give an example relating to the scenario



Tips for Answering the Paper - 4

- Information System There are often questions on the relationship between participants, information technology and data/information

Information System Diagram



Marking Process

- Questions address a syllabus outcome

Question	Mark	Content	Syllabus Outcomes
1	1	Communication systems	H1.1, H3.1
2	1	Information systems and databases	H1.1
3	1	Information systems and databases	H2.1

- Answers are marked as a whole
- Answers are marked according to marking guidelines



Example of Question in 2007 Paper

Question 21.

A family of five people has dial-up internet access at home. They plan to upgrade to cable internet access. The family wants to send text-based email and download podcasts, radio, television and music online. The family has the following table of information about plans offered by an internet service provider.

<i>Upload speed</i>	<i>Monthly data allowance</i>	<i>Monthly price</i>	<i>Plan name</i>
128 kbps	800 MB	\$29.95	Cable Light
256 kbps	800 MB	\$34.95	Cable Light Plus
128 kbps	2 GB	\$39.95	Cable Extra
256 kbps	7 GB	\$49.95	Cable Max

...(c) The family is considering the Cable Light Plus or Cable Extra plans. Which would be the better plan for this family? Justify your answer.
(3 marks)



Sample Answers

The family should choose the cable light plus plan.

The family should choose cable extra because it has more data. It's tricky to decide because although it has more data, its speed is lower, so the family would have to wait longer and the computer would be tied up for longer and there might be fights. I would pay the extra 10 bucks myself and get the cable max plan.

Cable light plus plan - higher upload speed so you get music and TV faster.

Cable extra

- more download needed because the files the family is downloading are large, especially video
- upload speed is less relevant because they're only sending text-based email - small files

Marking Guidelines

Response recommends one of the two plans the family is considering and provides a credible justification. Better responses will provide a thorough justification or provide more than one appropriate reason with justification for their recommendation	2–3
Response provides a weak justification for either plan or states the cable extra plan	1



From the Marking Centre...

c) Better responses recognised that upload speed was not a significant requirement for the family in the scenario but monthly download allowance was a more important feature. These responses clearly explained the large file sizes associated with downloading podcasts, radio, television and music online.

Mid-range responses were able to identify *Cable Extra* as *the most appropriate plan but their justification needed greater depth with regard to the files sizes involved in the downloading process.*

Weaker responses often mixed the concepts of uploading and downloading and chose the *Cable Light Plus plan*



Example of Question in 2008 Paper

Question 21.

The Pet Electronic Tracking System (PETS) contains a database used to identify stray pets. Dog and cat owners can have a microchip implanted in their pets. The microchip has a unique identification number and is inserted by a vet. The vet then records the identification number, name of the pet, owner's details and whether or not a fee for this service has been paid. The vet then emails this information to PETS. An email confirmation is sent back to the vet.



Example of Question in 2008 Paper-Contd

Study the following data dictionary for the PETS database.

<i>Field Name</i>	<i>Data Type</i>	<i>Field Size</i>
ID_Number	Number	6
Pet_Name	Text	15
Owner_Last_Name	Text	15
Owner_First_Name	Text	15
Owner_Address	Text	50
Owner_Telephone_Number	Text	10
Paid	Boolean	1

... (c) The database administrator wishes to modify the database structure to include the name, address and telephone number of the vet who implants the microchip in each pet.

Explain the most appropriate way to modify the database structure to include the new information. You may use a diagram to support your answer.

(4 marks)

Sample Answers

ID_Number

Pet_Name

Owner_Last_Name

Owner_Address

Owner_Telephone_Number

Paid

Vet_Last_Name

Vet_First_Name

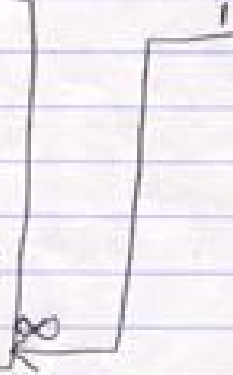
Vet_Telephone_Number

Pet Table

ID_Number (Primary key)
Pet_Name
Owner_Last_Name
Owner_Address
Owner_Telephone_Number
Paid
Vet_ID

Vet Table

Vet_ID (Primary key)
Vet_Last_Name
Vet_First_Name
Vet_Telephone_No



A relational database will minimise data redundancy as vet's details will only need to be entered once. It will also decrease memory storage.

Marking Guidelines

<ul style="list-style-type: none">• Demonstrates a clear understanding of relational databases by providing a multi-table solution with a clear indication of how the tables are related• Better responses will provide a reason for the solution	3-4
<ul style="list-style-type: none">• Demonstrates a limited understanding by providing a flat-file solution• Better responses provide a multi-table solution without indicating how the tables are related	1-2



From the Marking Centre...

c) Better responses provided multi-table solutions. The candidates clearly identified entities, appropriate attributes as well as identifying key fields and relationship types. These responses explained the cause and effect of utilising a relational database.

Mid-range responses supplied a schematic diagram with appropriate entities and attributes and identified the relationships between the tables.

In weaker responses, candidates provided a flat file solution with no explanation.



Resources - 1

- Board of Studies
 - Syllabus documents
 - http://www.boardofstudies.nsw.edu.au/syllabus_hsc/ipt.html
 - Past HSC Examination papers
 - http://www.boardofstudies.nsw.edu.au/hsc_exams/
 - Academic Resource Centre
 - <http://arc.boardofstudies.nsw.edu.au/go/home/>
 - Standards packages
 - Online Multiple Choice questions
- HSC On-line
 - <http://www.hsc.csu.edu.au/>



Resources - 2

- TALE (Teaching and Learning Exchange)
 - <http://www.tale.edu.au/tale/live/parents/>
 - Search for laptops
- Textbooks – updated book
 - Information Processes and Technology: HSC Course
 - Sam Davis, Parramatta Education Centre
 - <http://www.pedc.com.au/ipt.php>
- Study Guides
 - EXCEL HSC - Information Processes and Technology NEW EDITION
 - <http://www.pascalpress.com.au/Information-Processes-and-Technology-p/9781741253597.htm>



Any Questions?

