

Year 13 A2 ICT Checklist

NAME _____ GROUP _____

MODULE 5 – “Information: Policy, Strategy and Systems”

CRITERIA for 14.1		
Policy and Strategy Issues	Understand the need for an information technology policy.	
	Understand the strategic implications of software, hardware and configuration choices for an organisation.	
	Appreciate the range of needs of different users.	
Methods of Enhancing Existing Capabilities and Future Proofing	Discuss the reasons why organisations may wish to upgrade hardware/software provision - factors could include hardware/software development, organisation ethos, task driven change, software change.	
	Understand that hardware and software exists which allows packages to run on different platforms and the advantages and disadvantages of these approaches.	
Backup Strategies	Describe the different options available for backup systems and understand the implications and limitations of their use.	
	Understand the strategies for backup scheduling and storage of backups.	

CRITERIA for 14.2		
Software		
Evaluation of Software	Describe the mechanisms/procedures for software evaluation e.g. establish client/user needs, establish software capabilities and match.	
Evaluation Criteria	Understand the need for establishing evaluation criteria; these include: <ul style="list-style-type: none"> • Agreed problem specification • Functionality • Performance – use of benchmarks • Usability and human-machine interfaces • Compatibility with existing software base • Transferability of data • Robustness • User support • Resource requirements including hardware, software and human • Upgradability • Portability • Financial issues – <ul style="list-style-type: none"> ○ development cost ○ development opportunities. 	

Evaluation Report	Understand the function of an evaluation report and know that the content will include: <ul style="list-style-type: none"> • methodology used • actual evaluation • recommendations • justification. 	
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CRITERIA for 14.3		✓
Database Management Concepts		
Explain the purpose of a database management system (DBMS).		
Explain the role of the database administrator.		
Explain what is meant by data consistency, data integrity, data redundancy and data independence.		
Decribe what is meant by entity relationships and data normalisation.		

CRITERIA for 14.4		✓
Communication and Information Systems	Describe the use of networked systems for various applications.	
	Describe the network infrastructure required to support the World Wide Web, e.g. the role of routers and servers.	
Applications of Communication and Information Systems	Select and justify an appropriate networked system for a particular application.	
Distributed Systems	Understand that distribution can apply to both data and control.	
	Describe the uses of distributed databases and understand the advantages and limitations of such distribution.	
Client/Server Systems	Describe the concept of a client/server database	
	Recall the relevant advantages of a client/server database over a non-client/ server database.	

CRITERIA for 14.5		✓
Networks		
Network Security, Audit and Accounting	Understand the particular security, audit and accounting problems associated with networks, and recall the steps which can be taken to preserve security.	
	Describe the measures taken to protect network traffic against illegal access.	
	Understand the reasons for using audit software in providing a network service.	
	Understand the reasons for using accounting software in providing a network service.	
Network Environments	Understand how a network environment affects the user interface provided: security, control of software, control of files - access rights.	

CRITERIA for 14.6 Human / Computer Interaction		✓
Describe the psychological factors that affect human/computer interaction; user friendly, give help to novices, provide short cuts for experts, make use of human long term memory to maximise efficiency.		

CRITERIA for 14.7 Human / Computer Interface		✓
Recall different approaches to the problem of communication with ICT systems and discuss the resource implications of sophisticated HCI.		
Discuss the implications for customising software to develop a specialist HCI.		

CRITERIA for 14.8 Software Development		✓
Understand that there are different ways of providing software solutions to specialist applications: - user written, internal development team/department - external software house to specification.		
Describe the possible criteria for selection of software solutions to specialist applications and their place within the corporate strategy.		

CRITERIA for 14.9 Software Reliability		✓
Describe methods of ensuring that software is reliable: Alpha testing, Beta testing, agreements between software houses and purchaser for testing.		
Understand the reasons why fully tested software may fail to operate successfully when implemented as part of an information technology system.		
Understand the need for maintenance release(s).		

CRITERIA for 14.10 Portability of Data		✓
Protocols and Standards	Explain the need for portability of data, e.g. ease of transferring numerical, graphical and textual data between applications.	
	Describe the need for standards for interchanging numerical, graphical and textual data between different hardware and software platforms.	
Communication Standards	Know of the existence, benefits and limitations of standards.	
	Understand the protocols and addressing mechanisms used to support the World Wide Web.	
Emergence of Standards	Recognise the existence of de facto standards based on historic precedent and sales success in comparison to formal standards.	