

GAUTENG DEPARTMENT OF EDUCATION

SCHOOL-BASED ASSESSMENT

INFORMATION TECHNOLOGY

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1. Assessment in Grade 12

In Grade 12 assessment consists of two components: a Programme of Assessment which makes up 25% of the total mark for Information Technology and External Assessment which makes up the remaining 75%. This 75% is divided into 25% for the Practical Assessment Task (PAT) and 50% for External Examinations. The School Based Assessment (SBA) section of the Programme of Assessment for Information Technology comprises seven tasks which are internally assessed and externally moderated. The External Assessment section comprises two components: a PAT and two examination papers (one practical and one theory).

The following table shows the annual assessment plan for Information Technology:

Annual Assessment Plan for Information Technology in Grade 12

Assessment Tasks		Term One	Term Two	Term Three	Term Four	% of Learner Evidence (L.E) Mark	% of final promotio n mark
Tests		1	1			10	2.5
Examinations (Half Yearly & Preparatory – Practical & Theory)			1	1		70	17.5
Practical tasks:		1	1	1		20	5
	Practical Paper				1		20
External Assessment	Written Theory Paper				1	0	30
	Performance Assessment Task (PAT)		\\	> 1			25

LEARNER VIDENCE (L.E) (25%

1.1. External Assessment

The PAT is set externally, marked internally and moderated externally (at Cluster and Provincial level).

The National Senior Certificate (NSC) Examinations are set and marked externally. They consist of one three hour practical examination and one three hour theory examination (refer to Subject Assessment Guidelines (SAG)).

1.2. Internal Assessment (School Based Assessment)

This programme of assessment comprises seven tasks which forms the learner's Learner Evidence (L.E) and must cover all assessment standards.

1.2.1 **Tests**

Two of the assessment tasks should be tests written under controlled conditions at a specified time. A test should last at least 60 minutes and count a minimum of 50 marks. Tests should include:

PRACTICAL TEST 1 – Spreadsheets and databases

Using an applicable real life scenario complete a practical test on spreadsheets and databases (inclusive of integration)

Assessment Standards:

12.4.2; 12.4.18; 12.4.19; 12.4.20

Rubric Weighting:

Database (development & design) – 15 marks (30%) Database (display & presentation) – 5 marks (10%) Spreadsheets (formatting & charts) – 5 marks (10%) Spreadsheets (functions & formulae) – 15 marks (30%) Integration – 7 marks (15%) Data content – 3 marks (5%)

Total Marks:

50

PRACTICAL TEST 2 – Delphi and Databases

Using an applicable real life scenario complete a practical test on database and programming language (inclusive of connectivity)

Assessment Standards:

12.4.11; 12.4.12; 12.4.14; 12.4.17; 12.4.19

Rubric Weighting:

Database (development & content) – 10 marks (20%) Delphi code – 25 marks (50%) Delphi Forms and components – 10 marks (20%) Connectivity – 5 marks (10%)

Total Marks:

50

1.2.2 Assessment Tasks

The assessment tasks should be carefully designed tasks, which give learners multiple opportunities to research and explore the subject in exciting and varied ways. An assessment task must contain a topic / scenario that runs through the whole task.

Three assessment tasks are given for the year. These assessment tasks will contain topics related to assessment standards and should have different topics.

Assessment tasks topics are as follows:

TASK 1 - Hardware and Software Solutions

Using a scenario which includes a company's (or organisation) use of computers in providing solutions to issue(s) of National and/or International importance learners must:

- Suitably identify the problem and outline the specific needs of the company/organisation;
- Recommend a hardware solution including use of the latest technologies for their identified problem justifying their choices;
- Recommend an operating system for the hardware solution with valid and supporting reasons/advantages;
- Analyse the needs of the various end users and make recommendations of appropriate application software.

Assessment Standards

12.1.8; 12.1.9; 12.1.11; 12.1.17; 12.3.9; 12.3.11

Rubric Weighting:

Provision of solutions – 8 marks (27%)

Justification of solutions – 16 marks (53%)

Word-processing (formatting and layout) – 6 marks (20%)

Total Marks:

30

TASK 2 - Online Help System

Learners must develop a Delphi program that will interface with a database adding questions and answers for an online help system.

- Categorise questions (and answers) into at least the following categories:
 - Computer performance
 - Standard troubleshooting procedures
 - Internet security
- The database must make use of multiple tables and relationships using suitable data types.
- The user must be able to enter keywords to query the database and see the result(s)
- An administrator of the system must be able to add more questions, answers and keywords.

Assessment Standards

12.1.3; 12.1.4; 12.2.6; 12.4.6; 12.4.12; 12.4.19; 12.4.21

Rubric Weighting:

Delphi code – 16 marks (40%) Multiple Delphi screens – 4 marks (10%) Database – 8 marks (20%) Question and Answer content – 12 marks (30%)

Total Marks:

40

TASK 3 - Survey on attitudes to software piracy and the use of Open Source software

(It is important for the learner to research types of software piracy and the use of Open Source Software as well as its effect on business and society)

- Research software piracy/Open Source software Using a wordprocessor learners must distinguish between software piracy and Open Source software and summarise their findings
- Compile survey form Using a word-processor learners must create a carefully planned set of survey questions/choices.
- Conduct the survey Learners must survey a suitable and random selection of people. The sample group must be of a suitable size and demographics that generate realistic results.
- Compute results Using a spreadsheet to tabulate calculate and deduce results by making use of formulae and charts.
- Draw conclusions and present results By integrating wordprocessing and spreadsheets learners must evaluate results and justify their findings and conclusions.

Assessment Standards:

12.2.5; 12.2.8; 12.3.2; 12.3.6; 12.4.2; 12.4.20

Rubric Weighting:

Research (findings & layout) – 9 marks (15%)
Survey form (content & layout) – 6 marks (10%)
Survey results (formatting & charts) – 12 marks (20%)
Survey analysis (formulae & functions) – 24 marks (40%)
Integrated presentation – 6 marks (10%)
Bibliography – 3 marks (5%)

Total Marks:

60

1.2.3 Half Yearly Examination

Grade 12 learners must complete another set of examinations, beside the preparatory examinations; these examinations are set internally, marked internally and moderated externally and should consist of two papers, which are as closely aligned to the final examinations as possible (depending when in the year they are written):

Practical Paper: The duration of the paper is 3 hours for 120 marks. The questions will be set in such a way that they cover the knowledge and skills of Learning Outcome 4.

Theory Paper: The duration of the paper is 3 hours for 180 marks. The questions will be set in such a way that they cover the knowledge and skills of all the Learning Outcomes.

Weighting of Learning Outcomes (LO) and Levels of Complexity of Questions in Papers 1 & 2 combined

Subject title:	Inforr	Information Technology						
Weighting of LOs:	LO1 : 20% LO2 : 10% LO3: 1		LO3: 10	%	LO4 :	60%		
	Weighting of levels:							
	1	2	3		4	5	6	7
Level % achieved:	0- 29	30-39	40-49	Ę	50-59	60-69	70-79	80-100
Level description:	-	Knowledge	Comprehension	t	plication to the amiliar	Analysis	Synthesi	s Evaluation
Constitution of questions by Level	10)% – 30%	15% - 25%	15%	% - 25%	5% - 15%	5% - 15%	15% - 25%
	Knowledge – Comprehension - Application			Higher order skills				
			60 %				40%	

Practical Examination

SECTION	DESCRIPTION	MARK S
A	Database questions This section contains questions on the database application package. Examples of questions include: • The development of a database using data provided • The development of queries and reports using given databases • Given database tables develop appropriate relationships and then design queries and reports	≈ 40
В	Programming language questions This section contains questions on software development using an object-oriented programming language. Examples of questions could include the following: • Given a simple specification, learners develop a solution using the programming language they have studied and/or debug a given program in terms of both syntax and logical errors. • Given a simple specification, learners develop a solution using the programming language they have studied. • Given a partially completed program and a problem specification, learners complete the program by adding additional functionality • Given a problem, learners develop a program to solve the problem; the solution may include some higher-order skills	≈ 80

Theory Examination

SECTION	DESCRIPTION	MARKS
Α	MULTIPLE-CHOICE QUESTIONS: A range of multiple-choice questions covering all Learning Outcomes	≈ 10
В	HARDWARE AND SYSTEM SOFTWARE: The questions in this section are linked to a scenario and the questions are, by and large, related to the scenario. Questions relating to computer architecture and hardware, operating systems and system software and data communication and networks are asked in this section.	≈ 60
С	APPLICATIONS AND IMPLICATIONS: This section is also scenario-based and is aligned to Learning Outcomes 2 and 3. The section contains a number of short questions on e-communications and social and ethical issues. The questions on e-communications concentrate on the uses of computer networks and not on the actual hardware configurations, etc., as these will have been covered in Section B.	≈ 20
D	PROGRAMMING AND SOFTWARE DEVELOPMENT: This section is scenario-based and is aligned to Learning Outcome 4. It evaluates the learner's understanding of the theoretical basis of programming, program design and algorithmic development. Questions relating to data structures and program development and testing are asked in this section.	≈ 40
E	INTEGRATED SCENARIO: This section is based on a single large- scale scenario and will be aligned to all the Learning Outcomes. It contains a number of shorter questions.	≈ 50

1.2.4 **Preparatory Examination**

The preparatory examinations for Grade 12 are set externally, marked internally and moderated externally and consist of two papers:

Paper 1 (Practical): The duration of the paper is 3 hours for 120 marks. The questions will be set in such a way that they cover the knowledge and skills of Learning Outcome 4.

Paper 2 (Theory): The duration of the paper is 3 hours for 180 marks. The questions will be set in such a way that they cover the knowledge and skills of all the Learning Outcomes.

Summary of Programme of Assessment Tasks

				MARK out of	MARK
	Task 1	LO AS 12.1.8 12.1.9 12.1.11 12.1.17 12.3.9 12.3.11	Hardware and Software Solutions Using a scenario which includes a company's (or organisation) use of computers in providing solutions to issue(s) of National and/or International importance.		
	Practical Test 1	LO AS 12.4.2 12.4.18 12.4.19 12.4.20	Spreadsheets and databases Using an applicable real life scenario complete a practical test on spreadsheets and databases (inclusive of integration)	≈ 50	
OF ASSESSMENT TASKS	Task 2	LO AS 12.1.3 12.1.4 12.2.6 12.4.6 12.4.12 12.4.19 12.4.21	Online Help System Learners must develop a Delphi program that will interface with a database adding questions and answers for an online help system.		
ASSE	Examination	LO 4	Practical Examination 3 hours	120	
		LO 1 – 4	Theory Examination 3 hours	180	
PROGRAMME	Practical Test 2	LO AS 12.4.11 12.4.12 12.4.14 12.4.17 12.4.19	Delphi and Databases Using an applicable real life scenario complete a practical test on database and programming language (inclusive of connectivity)	≈ 50	
	Task 3	LO AS 12.2.5 12.2.8 12.3.2 12.3.6 12.4.2 12.4.20	Survey on attitudes to software piracy and the use of Open Source software (It is important for the learner to research types of software piracy and the use of Open Source Software as well as its effect on business and society)	≈ 60	
	Preparatory	LO 4	Practical Examination Examination set externally 3 hours	120	
	Examination	LO 1 – 4	Theory Examination Examination set externally 3 hours	180	
то	TAL (SBA TASK	S)			

2. What is Learner Evidence (L.E)?

Learner Evidence (L.E) is a collection of a learner's work and is determined by the Subject Assessment Guidelines (SAG) the School Based Assessment (SBA) document for Grade 12.

Learner Evidence (L.E) is also defined as an ongoing systematic collection of products that represent milestones in the learner's journey towards excellence. It should **always** be available in the classroom, so that the learners can work on it whenever they find it necessary to do so. This collection of tasks represents the whole curriculum and shows how the learner's journey has progressed towards completion of the curriculum. Learner Evidence (L.E) enables the educator to find out more about the learner as an individual, but the learners also find out more about themselves.

It is emphasised that Learner Evidence (L.E) is an arrangement of the characteristics of authentic assessment. It makes school based assessment possible and includes a rich variety of items as evidence of that which the students know and can do. The content of Learner Evidence (L.E) can be created within realistic contents. In addition, it can also be a reflection of the process of product development. It provides an excellent opportunity to transform assessment into a learning experience. Think of the Learner Evidence (L.E) as a mechanism whereby a story is told – a story that will communicate something about the learner to the reader.

3. Purpose of Learner Evidence (L.E)

The primary reasons for using Learner Evidence (L.E) as a collection of evidence include:

- authentic assessment of the learner's accomplishment of learning outcomes;
- authentic assessment of the quality of learner's sustained work;
- allowing learners to turn their own special interests and abilities into a show-case;
- encouraging the development of qualities such as pride in quality workmanship, ability to self-evaluate, and ability to accomplish meaningful tasks;
- providing a document learners may use in the future for college or university application and job seeking; and
- documenting improvement of learner's work.

4. Evaluating Learner Evidence (L.E)

Periodic evaluation of Learner Evidence (L.E) should be conducted at a time predetermined by the educator and his learners. Logical times for evaluation would be at the conclusion of a project, the end of a programme or unit, term or academic year.

The educator must make sure that every assessment task is marked and captured. Marks on the educator's record sheets must correspond with the marks in the learners' Learner Evidence (L.E). Moderation of the assessment tasks should take place at three levels during the year.

LEVEL	MODERATION REQUIREMENTS				
School	The Programme of Assessment should be submitted to the subject				
	head and School Management Team before the start of the				
	academic year for moderation purposes. Each task which is to be				
	used as part of the Programme of Assessment should be submitted				
	to the subject head for moderation before learners attempt the task.				
	Educator Portfolios and evidence of learner performance should be				
	moderated twice a year by the head of the subject or her/his				
	delegate.				
Cluster/	Educator Portfolios and a sample of evidence of learner				
District	performance must be moderated twice during the first three terms.				
Provincial/	Educator Portfolios and a sample of evidence of learner				
National	performance must be moderated once a year.				

5. Content of an Educator's Portfolio

It is required from the Department of Education that an educator's portfolio should accompany the Learner Evidence (L.E)s. This Learner Evidence (L.E) shall include the following:

- A contents page;
- Record mark sheets for each class (Addendum F).
- The formal Programme of Assessment;
- The seven tasks (in order as per Programme of Assessment) including:
 - the requirements of each of the assessment tasks (eg practical tasks, tests and examination papers);
 - the tools used for the assessment of each assessment task (eg memoranda, checklists, rubrics); and
 - a model answer for each assessment task.
- Control sheet for educator and Learner Evidence (L.E) assessment (Addendum B)
- Proof of moderation at:
 - School level (Addendum C); and
 - o Cluster level (Addendum D and Addendum E).

6. Content of the Learner Evidence (L.E)

The Learner Evidence (L.E) should be well planned, organised and presented in a neat manner, for example, a file. It shall include the following:

- a contents page including the learner's name and a summary of marks and the declaration by the learner (Addendum A);
- evidence of moderation (school and cluster);
- the tests, examinations and assessment tasks, each clearly separated from the next, in accordance with the Programme of Assessment;
- In the case of Applications Software and Programming Languages an electronic copy of work on one CD (or DVD) is required.



PROGRAMME OF ASSESSMENT TASKS

ADDENDUM A

LEARNER'S CONTROL SHEET FOR SUBMISSION OF LEARNER EVIDENCE (L.E): 2008

NAME:						Grade: 12	
	SCHOOL: _						
						MARK out of	MARK
			TASK TITLE	LEARNER'S SIGNATURE	DATE		
တ္သ	Task 1	LO 1, 3				± 60	
PROGRAMME OF ASSESSMENT TASKS	Practical test 1	LO 4				± 50	
MENT	Task 2	LO 1, 2, 4				± 40	
SSESS	Half yearly Examination	LO 4				120	
OF A		LO 1 – 4				180	
\MME	Practical Test 2	LO 4				± 50	
ROGR/	Task 3	LO 2, 3, 4				± 30	
<u>F</u>	Preparatory	LO 4				120	
	Examination	LO 1 – 4				180	
то	TOTAL (SBA TASKS)						
	Learner:						
	Declare that t	hese proje	ects are my own, original wo resource(s) without given t	rk and than no			een
	Learner:			Date:			
	Educator: Date:						
	Cluster mode	rator:		Date:			
	Official moderator: Date:						

ADDENDUM B



CONTROL SHEET FOR EDUCATOR & LEARNER LEARNER EVIDENCE (L.E) ASSESSMENT: 2008

NAN	/IL			
SCH	100L: _			
		Educator Portfolio Assessment Grid	Yes	No
Cont	ents Page	: (Y/N)		
Reco	ord Mark S	Sheets (Addendum F) (Y/N)		
Form	nal Progra	mme of Assessment? (Y/N)		
File i	n logical a	nd easily accessible order (Y/N)		
ks	Is the as	signment brief clear? (Y/N)		
Tas	Are asse	ssment criteria listed? (Y/N)		
jı.	Are perfo	ormance indicators listed? (Y/N)		
eme	Is the ma	arking grid / rubric included? (Y/N)		
)SS(Is the ma	arking grid / rubric relevant to the assessment task?		
Is the assignment brief clear? (Y/N) Are assessment criteria listed? (Y/N) Are performance indicators listed? (Y/N) Is the marking grid / rubric included? (Y/N) Is the marking grid / rubric relevant to the assessment task? Memorandum / possible answers included				
Proo	f of Schoo	I Moderation? (Y/N)		
Proo	f of Cluste	r Moderation? (Y/N)		
		Lasaran Fridanca (L. F.) Assassant Orid		
		Learner Evidence (L.E) Assessment Grid	Yes	No
	ents Page	: Name, Marks & Declaration A (Y/N)		
Inde	x in file? ((/N)		
File i	n logical a	nd easily accessible order (Y/N)		
Assi	gnments	Soft copy included of all practical tasks, on CD/DVD? (Y/N)		
		Print out of completed Task OR Exam/Test Script? (Y/N)		
		Is the marking grid / rubric included? (Y/N)		
<u></u>		SIGNATURE	DATE	-

ADDENDUM C

EVIDENCE OF GRADE 12 SCHOOL MODERATION: 2008

DISTRICT OFFICE:			
SUBJECT			VTE
GRADE			
NAME OF SCHOOL			
NAME OF EDUCATOR (S)			
NAME OF HOD			30 Like
DATES			STANCIAL GOVERNMEN
STANDARD OF ASSESSMENT TASK	YES	NO	COMMENTS
Does the task reflect the CO's, LO's and AS's			
for the grade?			
Is the duration of the paper indicated?			
Are the instructions clear?			
Is the mark allocation in accordance with			
Subject Assessment Guideline Document?			
Does the paper cater for a variety of			
questions? ASSESSMENT TOOLS	YES	NO	COMMENTS
Are the assessment tools for every	IES	NO	COMMENTS
assessment task included in the educator's			
Portfolio file e.g. rubric, memoranda,			
checklists ,etc.			
Are the marks appropriately allocated?			
MARKING	YES	NO	COMMENTS
Is marking done according to the assessment			
tool?			
Are the marks correctly added?			
RECORDS	YES	NO	COMMENTS
Is the subject working mark sheet			
included in the educator's portfolio file? Are the learners' marks corresponding with			
the mark sheet?			
Are the marks correctly converted according to			
Subject Assessment Guideline Documents			
Is there evidence of cluster moderation?			
Number of activities completed			Specify:
	NO		
NAMES OF LEARNERS WHOSE LEARNER EVIDER	NCE (L.E)S WERE MC	DERATED
1.			
2.			
3.			

	AREAS OF GOOD PRACTICE					
		CI	HALLENGES			
		RECO	MMENDATIONS			
HOD/ SUB	JECT HEAD	_	SIGNATURE		DATE	
EDUCATO	PR	-	SIGNATURE		DATE	
		SC	HOOL STAMP			
	PRIM	ICIPAL'S SI	GNATURE	DATE		

ADDENDUM D

EVIDENCE OF GRADE 12 CLUSTER MODERATION: 2008

District Office:				UTE
Subject				
Name Of School				A COLOR
Name Of Educator(S)				TO MCIAL GOVERNINE
Name Of	MODERATION 1	MODERATION 2	N	ODERATION 3
Moderator				
Moderation Dates				

	MODERATION 1	MODERATION 2	MODERATION 3
e ed	1.	1.	1.
es (erat ner enc	2.	2.	2.
m ode ari	3.	3.	3.
Na Mo Fe	4.	4.	4.

	MODERATION 1	MODERATION 2	MODERATION 3
-			
ies atec			
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Aci To⊓			

The following section must be filled in during each cluster moderation and kept in the educator's portfolio. Use a tick to indicate your choice(\boxdot).

STANDARD OF ASSESSMENT TASK		ATION 1	MODER	ATION 2	MODERATION 3				
		NO	YES	NO	YES	NO			
Does the task reflect the CO's, LO's									
and AS's for the grade?									
Is the duration of the paper indicated?									
Are the instructions clear?									
Is the mark allocation in accordance									
with Subject Assessment Guideline									
Document?									
Does the paper cater for a variety of									
questions?									
ASSESSMENT TOOLS									
Are the assessment tools for every									
assessment task included in the									
educator's portfolio file e.g. rubric									
,memoranda, checklists, etc.									
Are the marks appropriately allocated?									
MARKING									

STANDARD OF ASSESSMENT TASK	MODERATION 1	MODERATION 2	MODERATION 3							
le marking dans asserding to the	YES NO	YES NO	YES NO							
Is marking done according to the										
assessment tool?										
Are the marks correctly added?										
RECORDS										
Is the subject working mark sheet										
included in the educator's portfolio file?										
Are the learners' marks corresponding										
with the mark sheet?										
Are the marks correctly converted										
according to Subject Assessment										
Guideline Documents										
Is there evidence of school										
moderation?										
Number of activities completed	NO	NO	NO							
-	NO	NO	NO							
Comments	- Moderation	1								
Moderator Signature										
Comments	- Moderation 2	2								
Moderator Signature										
Comments	- Moderation	1								
Moderator Signature										
-										
EDUCATOR	SIGNATURE		DATE							
CLUSTER LEADER S	SIGNATURE		DATE							

Record Sheet		Practic Tests	cal	Tasks			Exam		Preparatory Exam			P	AT	
	First Name	Surname	Test 1	Test 2	Task 1	Task 2	Task 3	Practical	Theory	Practical	Theory	SBA Mark	Research	Practical
			2.5%	2.5%	2%	2%	6%	2%	3%	2%	3%	25%	25	5%
1														
2														
3														
4														
5														
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