

ASSESSMENT AND EXAMINATIONS DIRECTORATE

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REPUBLIC OF SOUTH AFRICA, Website: www.ecdoe.gov.za

NSC 2015 CHIEF MARKER'S REPORT

SUBJECT	INFORMATION TECHNOLOGY PAPER 1
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DATE OF EXAMINATION:		DURATION:	3 HOURS
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SECTION 1:

(General overview of Learner Performance in the question paper as a whole)

A total number of 393 learners from 34 centres entered for the exam, of which four learners from 4 centres did not write the exam because they were absent. A total number of 289 scripts were marked and at least one script from each centre was moderated.

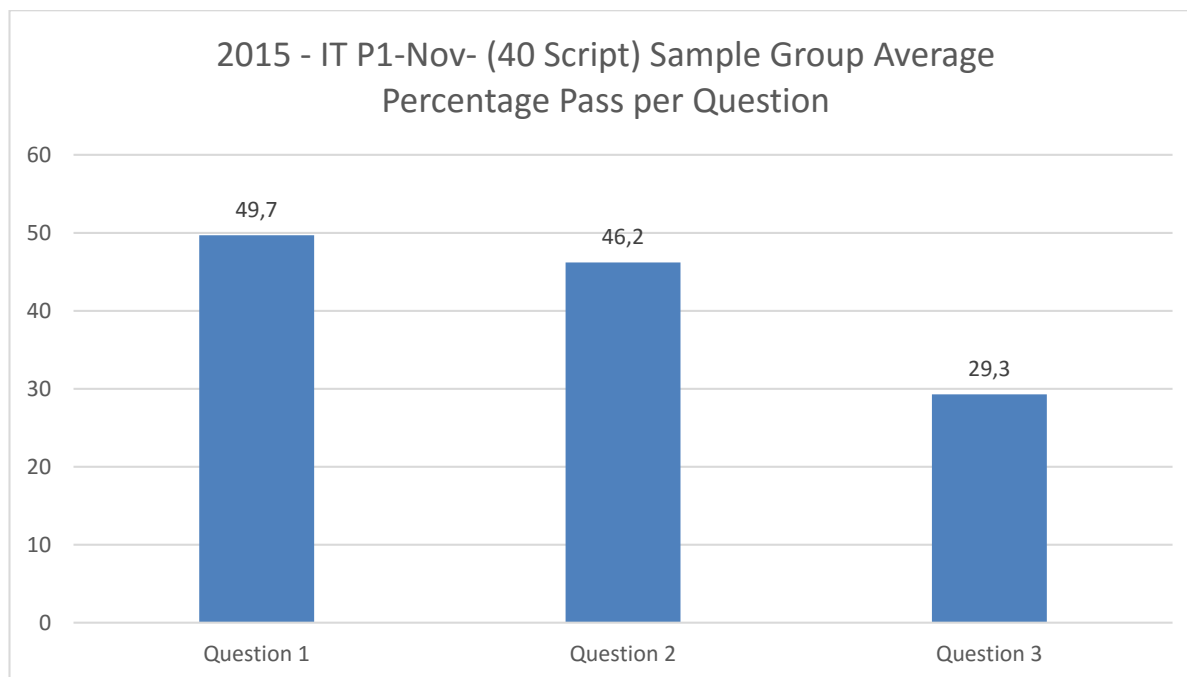


Figure 1: Analysis of questions

- Each question had sub-questions of lower, middle and higher order, but question 3 was poorly done due to the open ended-ness of the question.
- This format of the question paper was only introduced last year.
- As this is the second year of the CAPS National Exam, teachers are still grappling with the new requirements.
- Results of centres vary drastically and it is evident that the following factors have a tremendous effect on candidate results.
 - Inability to manage time
 - Input from educators
 - Motivation for the learners is very low
 - Resources like computers are not provided for home use for the learners doing the subject. Learners need to practice at home since teaching time is not enough, hence the need for a computer at home.
 - Enough practice is lacking for the learners needed to build confidence
 - Marking with a rubric, rather than a specific programming style
 - Experience on the part of the educator
- Principals and Governing Bodies need to empower their IT teachers with

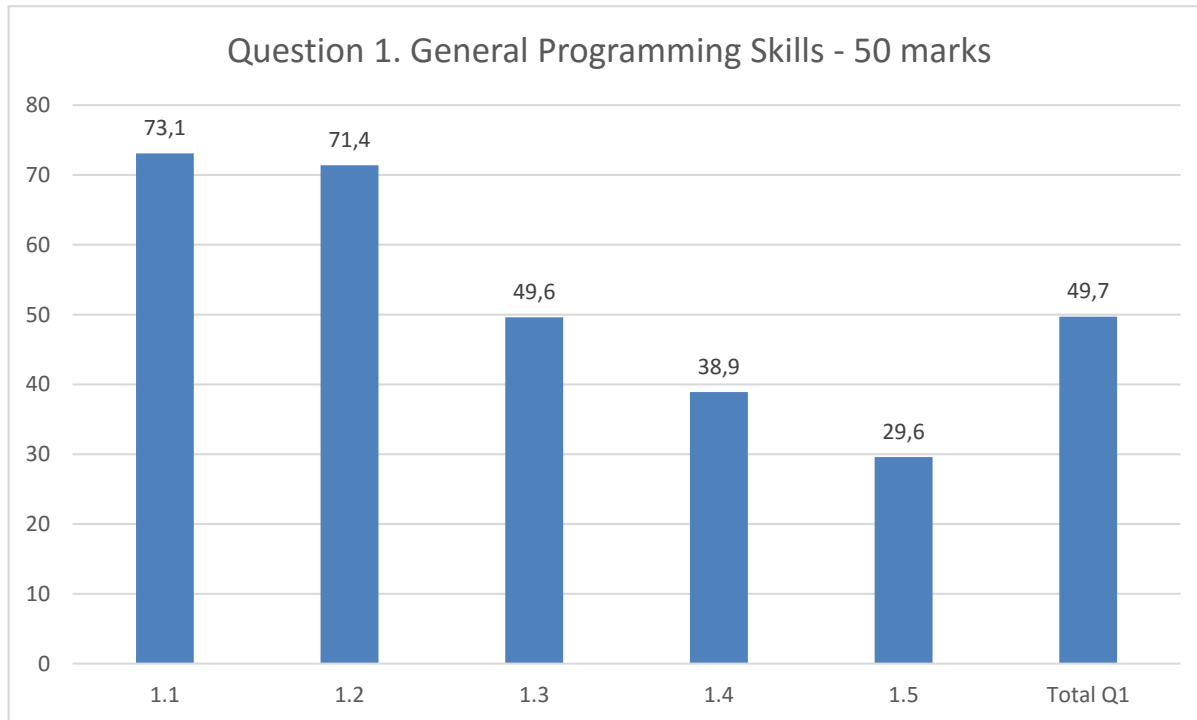
SECTION 2:

Comments on candidates' performance in individual questions.

QUESTION 1.

(a) General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?

General comment on the performance of learners in the specific question.



Was the question well answered or poorly answered?

- The average for this question for the sample group was 49.7%
- In general the candidates who answered this question performed well in the general programming minimum requirements. Questions 1-3 were answered fairly well but the questions 1.4 and 1.5 required a lot of creativity on the part of the learners.
- The learners amongst the sample, who did not attempt this question was 7.5%

(b) Why was the question poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions

Reasons why the questions were poorly answered and specific examples of common errors and misconceptions:

- Question 1.1
 - Most of the candidates lost marks in:
 - Converting both extracted values to double or real



- Not formatting the BMI to 5 decimal places
- Using the if statement correctly with ranges making provision for all three categories (<18.5), (≥ 18.5 to ≤ 25) and (>25), they failed to do the (≥ 18.5 to ≤ 25) part.
- Question 1.2
 - This was well done by those who attempted it, however a few failed to increase the counter and decrease the weight.
- Question 1.3
 - Most candidates lost marks in:
 - They failed to initialize an empty string
 - This lead candidates to try to delete the vowels from the name, which most who tried this method failed to come up with a string without vowels.
 - Some of the learners could not generate a random number WITHIN THE RANGE REQUIRED (1 to 9).
- Question 1.4
 - Errors were found in the sections
 - Random generation of a number (which was to include the 20 members) to choose a member was not done properly
 - The conditional loop to find the second member was not done properly
 - Which meant that validating and ensuring the gender was also not done correctly because they were linked to each other.
- Question 1.5
 - This was a higher order question, most of the learners were able to do the sorting part but were not able to display the members with and without allergies. The reason being that they understood that they must re-sort the array. Re-sorting (which was a bit more complex) was not necessary, they simply needed to read the sorted array in a way that they displayed the ones with allergies first.

(c) Provide suggestions for improvement in relation to Teaching and Learning

- Some of the candidates could not even answer any questions, very disturbing, maybe grade 10 should be used for basic algorithms in Delphi.
- Teaching of Delphi programming seems to be non-existent in some centres
- Marking according to a rubric should be encouraged for teachers.
- Educators need expertise in the programming language for them to be able to teach this to learners.

(d) Describe any other specific observations relating to responses of learners

- Some learners were writing pseudo-code instead of the Delphi code

(e) Any other comments useful to teachers, subject advisors, teacher development etc.

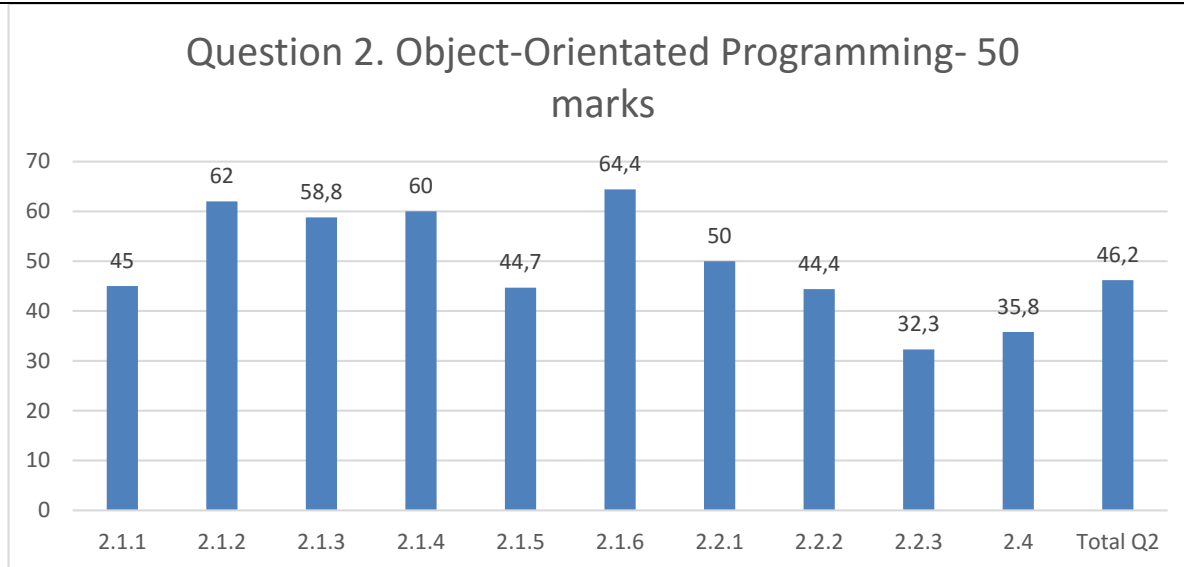
- Despite the low marks, the majority of the learners who got high marks came from very few centres, good teaching practices need to be shared.
- Learners should be exposed to higher level questions at an early age in grade 10.



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QUESTION 2.

(a) General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?



Was the question well answered or poorly answered?

- The sample group average was 46.2%
- To most candidates who attempted the questions, some sub questions were fairly easy and could have served as encouragement for the candidates to attempt the question.
- The last two sub questions were higher order questions hence fewer learners were able to get marks.
- Unfortunately the number of learners who did not even attempt this question increased as well to 12.5%

(b) Why was the question poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions

Reasons why the questions were poorly answered and specific examples of common errors and misconceptions:

- Question 2.1.1
 - Learners lost marks in this question because:
 - They could not extract the year value from the date (YYYY/MM/DD) parameter
 - They went on to loose marks for incrementing the value.
- Question 2.1.2



- In this question, marks were lost because the learners did not use the **determineExpDate** method correctly, or not at all.
- Question 2.1.3
 - The candidates who performed badly for this question did not know difference between an mutator and a accessor method. A mutator method (procedure) was required.
- Question 2.1.4
 - Errors came when the candidates did treated this method as a function, it is easier understood if they used **increasesessionsCompleted** a procedure.
- Question 2.1.5
 - In this procedure, most who got it wrong did no do the following:
 - Put a correct parameter definition
 - Use the parameter to divide.
 - Return the percentage completed with a % sign at the nd.
- Question 2.1.6
 - Incorrect attributes for the toString method
 - Wrong of methods in the return statements
 - Incorrect return statement.
- Question 2.2.1
 - Those who had problems dialed to instantiate the trainee object.
- Question 2.2.2
 - Those who tried it mostly did not the setSessionsCompleted method
 - Extracting the date was not done carefully
 - calling the **increaseSession** method was not done at all
- Question 2.2.3
 - **increaseSession** method not called
 - the difference between the APPEND, RESET, REWRITE was not clear to the learners hence the use of reset and rewrite by some of the learners when they are supposed to use APPEND in this instance.
- Question 2.2.4
 - Most candidates did not convert the parameter required to number from the textbox

(c) Provide suggestions for improvement in relation to Teaching and Learning

- Object oriented programming is a very difficult concept for learners to grasp so it must be introduced as early as possible for the learners not to shun it.
- Practice with higher order synthesis questions is required.

(d) Describe any other specific observations relating to responses of learners

- Very few learners reused the methods in the class except the constructor and the toString methods.
- Its essential that learners learn the benefits of object oriented programming.
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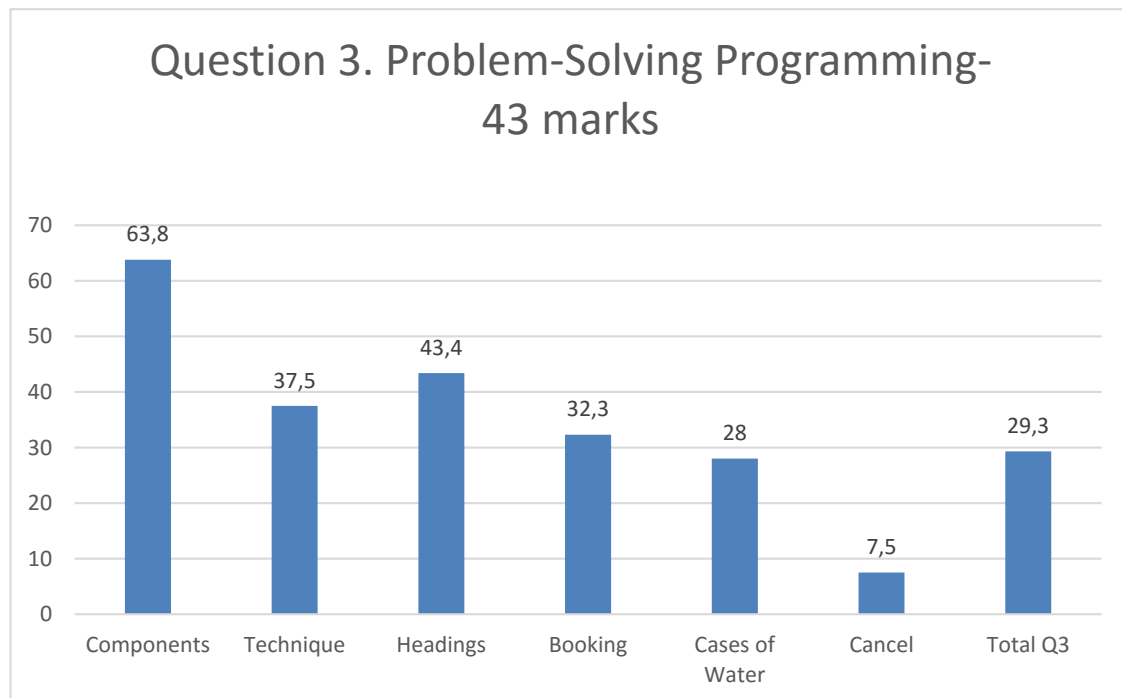
(e) Any other comments useful to teachers, subject advisors, teacher development etc.

- Rubric coaching is encouraged for both teacher and learners



QUESTION 3

(a) General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?



- The pass rate for this question was 29.3%
- This was the hardest question of the whole paper because it required problem solving skills which are of a higher level.
- A lot of planning by the candidate was required.
- They needed to know exactly what they were going to achieve before attempting the problem.
- The highest percentage of learners who did not attempt the question or have achieved 0 is found in this question 25%

(b) Why was the question poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions

Reasons why the questions were poorly answered and specific examples of common errors and misconceptions:

- Components
 - Most candidates did not place two buttons
- Programming Technique



- Modular design technique was not understood by most those candidate who attempted this section. They did not create their own methods or call an in built method, like enabling the buttons.
- Display array with headings in columns
 - Some candidates confused the inner and outer loops, especially those who used the string grid as an output area
- Make a booking
 - Checking in the 2D array for available space using the index was challenging to the candidates
- Full cases of water
 - Marks were lost because candidates failed to use the correct loop (for rows and columns) to calculate the total confision on the inner loop and the outer loop
 - Rounding off the total number of cases needed proved to be a challenge to the learners
- Cancel a workshop
 - This was the poorly performed section in the whole paper, very few learners attempted it.
 - They could not remove the workshop from the workshop array correctly, Remove duplicate values from the 2D Array.
 - Decreasing the counter of maximum number of workshops
 - Removing the workshops from the combobox was also poorly done.

(c) Provide suggestions for improvement in relation to Teaching and Learning

- Generally if the learner was not confident enough to do Q1 and Q2 then that learner does not proceed to do question 3. More teaching of the basics needs to be encouraged.
- This section is linked with how the learners carry out their PAT, as an open question, they are free to use whichever method they see able to solve the problem.

(d) Describe any other specific observations relating to responses of learners

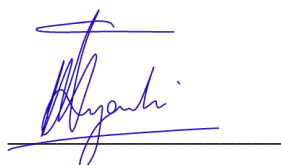
- Learners failed to capitalize on some simple marks because they did not even attempt to read the question. If they had gone to the rubric they should have noticed that some of the marks were given without even writing a line of code, just placing components on the form.

(e) Any other comments useful to teachers, subject advisors, teacher development etc

- Encourage the learners to challenge themselves by giving them small projects to be accomplished in class, within an hour, as practice.

Lewis Nyanhi

NAME OF THE CHIEF MARKER:



SIGNATURE

05/12/2015

DATE



Ikamva eliqaqambileyo!