

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

036/1

INFORMATION AND COMPUTER STUDIES 1

(For Both School and Private Candidates)

Time: 3 Hours

ANSWERS

Year: 2021

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1. This paper consists of sections A, B and C with a total of twelve questions
2. Answer all the questions in section A and B and one question in section C.

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1. (i) In a computer system, unprocessed numbers, text, and pictures for various purposes are known as:

- A. Knowledge
- B. Data
- C. Information
- D. Contents
- E. Figures

Correct Answer: B. Data

Reason: Data represents raw, unprocessed facts that can later be transformed into meaningful information, unlike knowledge, contents, or figures, which represent processed outcomes.

(ii) Which objects will you use to create a form in Microsoft Access?

- A. Tables and Queries
- B. Tables and Design Views
- C. Tables and Reports
- D. Queries and Reports
- E. Queries and Design Views

Correct Answer: A. Tables and Queries

Reason: In Microsoft Access, forms are often based on tables to input and display data, and queries can be used to refine or manipulate the data displayed in the form.

(iii) Which method is best for protecting the computer against short-circuiting?

- A. Providing standby generator
- B. Providing fire extinguisher
- C. Providing surge protectors
- D. Providing insulated cables
- E. Providing air ventilation

Correct Answer: C. Providing surge protectors

Reason: Surge protectors prevent electrical overloads that can result in short-circuiting, whereas options like fire extinguishers or ventilation do not prevent electrical damage.

(iv) What does an advertisement with a combination of text, audio, pictures, and some animations present?

- A. Hyperlink Presentation
- B. Hypermedia Presentation
- C. Multimedia Presentation
- D. Single Media Presentation
- E. Interactivity Presentation

Correct Answer: C. Multimedia Presentation

Reason: A multimedia presentation integrates text, audio, images, and animations, unlike hyperlink presentations, which focus on navigation, or single media presentations, which utilize one medium.

(v) The correct sequence of computers arranged in descending order according to their physical size and processing power is:

- A. Mainframe Computer, Minicomputer, Supercomputer
- B. Minicomputer, Mainframe Computer, Supercomputer
- C. Supercomputer, Mainframe Computer, Minicomputer
- D. Minicomputer, Supercomputer, Mainframe Computer
- E. Mainframe Computer, Supercomputer, Minicomputer

Correct Answer: C. Supercomputer, Mainframe Computer, Minicomputer

Reason: Supercomputers are the largest and most powerful, followed by mainframes and then minicomputers.

(vi) What is the function of the features ***** as used in Microsoft Excel?

- A. To align the text top, middle, and left
- B. To align the text left, middle, and center
- C. To align the text top, middle, and right
- D. To align the text left, center, and right
- E. To align the text top, middle, and bottom

Correct Answer: E. To align the text top, middle, and bottom

Reason: The feature adjusts vertical alignment in cells to distribute text evenly between the top, middle, and bottom of a cell.

(vii) The shortcut key used to open the new Microsoft Word document without closing the existing document is:

- A. Enter+N
- B. Ctrl+N
- C. Shift+N
- D. Insert+N
- E. Alt+N

Correct Answer: B. Ctrl+N

Reason: Ctrl+N is the universal shortcut for creating a new document in most applications, including Microsoft Word.

(viii) Which one is a correct order of making audio files?

- A. Editing, Mixing, Recording, and Burning
- B. Recording, Editing, Mixing, and Burning
- C. Mixing, Editing, Burning, and Recording
- D. Recording, Mixing, Editing, and Burning
- E. Mixing, Editing, Recording, and Burning

Correct Answer: B. Recording, Editing, Mixing, and Burning

Reason: The logical sequence involves first recording the audio, then editing to refine it, mixing to combine tracks, and finally burning the output.

(ix) Which software can you use to prepare a month calendar?

- A. Microsoft Word
- B. Microsoft Excel
- C. Microsoft Access
- D. Microsoft Photoshop
- E. Microsoft Publisher

Correct Answer: B. Microsoft Excel

Reason: Microsoft Excel, with its grid format, is ideal for creating structured layouts such as calendars.

(x) Which function can be applied in the following worksheet in order to display the status of PROFIT or LOSS?

- A. =IF(B2>D2, "PROFIT", "LOSS")
- B. =IF(C2<D2, "PROFIT", "LOSS")
- C. =IF(C2<D2, "LOSS", "PROFIT")
- D. =IF(B2>C2, "PROFIT", "LOSS")
- E. =IF(C2>B2, "PROFIT", "LOSS")

Correct Answer: A. =IF(B2>D2, "PROFIT", "LOSS")

Reason: The formula compares revenue (B2) with cost (D2); if revenue exceeds cost, it outputs "PROFIT"; otherwise, it outputs "LOSS".

2. Match the functions of Microsoft Office Publisher icons in List A with their corresponding icons in List B by writing the letter of the correct answer beside the item number in your answer booklet.

List A:

- (i) The icon which is used to check for spelling and grammar mistakes
- (ii) The icon which is used to print publisher document
- (iii) The icon which is used to save publisher document
- (iv) The icon which is used to remove text on a publisher document
- (v) The icon which is used to apply styles on a text in publisher document

List B:

- A.
- B.
- C.
- D.
- E.
- F.

G.
H.

Answers:

- (i) B
- (ii) G
- (iii) A
- (iv) H
- (v) E

3. Arrange the steps for designing a good database in a correct order beginning with the first step to the last step by writing the letter of each step in the answer booklet.

Steps:

- A. Define a primary key for each table.
- B. Design a draft database to determine the number of files or tables.
- C. Design data entry forms needed for the database.
- D. Carefully study the requirements of the user.
- E. Divide the information into separate fields, records, and tables.

Answer:

- 1. D
- 2. B
- 3. E
- 4. A
- 5. C

4. Suppose a Computer Subject teacher plans to install a network in a staff room, and you are asked to give advice on his decision:

(a) What type of network would you suggest to be installed in the staff room?

A local area network (LAN).

(b) Why have you proposed such a type of network in part (a)? Give two reasons.

- i. A LAN is cost-effective and suitable for a small space like a staff room.
- ii. It allows for efficient file sharing and communication between connected devices.

(c) What two things will the teachers benefit from the network established in part (a)?

- i. Easier access to shared resources like printers and files.
- ii. Improved communication and collaboration among teachers.

5. (a) What is the function of each of the following components in the computer system?

(i) Arithmetic Logical Unit (ALU): Performs all arithmetic operations (such as addition and subtraction) and logical operations (such as comparisons).

(ii) Control Unit (CU): Directs and coordinates the activities of the computer by fetching, decoding, and executing instructions.

(iii) Uninterruptible Power Supply (UPS): Provides backup power during electrical outages and protects the system from power surges.

(b) Why do computers store data in binary form? Give a reason.

Computers use binary form because it is efficient and reliable, representing data using only two states (0 and 1), which align with the on/off states of electronic components.

(c) Why is it strongly advised to always save your work while working in Microsoft Word?

It prevents data loss in case of power failure, accidental closure, or system crashes.

6. Jimi has no technical knowledge about the computer, but he plans to buy a new computer for his learning purpose.

(a) Explain three factors he should consider before buying a new computer.

i. Processor speed and performance: Ensures smooth operation and multitasking.

ii. Storage capacity: Determines how much data he can store.

iii. Budget: Helps him choose a computer within his financial capability.

(b) Explain two types of computer software expected to be installed in a computer bought. Give two examples for each category.

i. System software: Manages hardware and software resources. Examples include Windows OS and macOS.

ii. Application software: Performs specific tasks. Examples include Microsoft Word and Excel.

7. A seller prepared the following worksheet by using a spreadsheet program to monitor the sales of textbooks.

(a) Which function can be applied in cell D12 to calculate the total sales?

=SUM(D3:D8)

(b) Give two advantages of using the functions in a worksheet.

i. Automation of repetitive tasks: Functions like SUM and AVERAGE make calculations efficient by automating processes that would otherwise require manual computation.

ii. Accuracy: Functions reduce the likelihood of errors in calculations, ensuring precise results.

(c) Use cell reference to write the formula that will be used to calculate the total profit for French books stored in cell G7.

=E7-F7

(d) Use any cell in the given worksheet as an example to differentiate absolute cell referencing from relative cell referencing.

- Relative referencing: A formula like =D3+E3 adjusts automatically when copied to another cell.
- Absolute referencing: A formula like =\$D\$3+\$E\$3 does not adjust when copied to another cell.

8. (a) What is the importance of theme in Microsoft PowerPoint?

Themes provide a consistent and professional appearance across all slides, ensuring uniformity in design and layout.

(b) Describe the following types of views as applied in Microsoft PowerPoint:

- (i) Normal: The primary editing view used to create and arrange slides.
- (ii) Slide Sorter: Displays a thumbnail view of all slides, allowing easy reorganization.
- (iii) Slide Show: Runs the presentation as a full-screen slide show for viewing.
- (iv) Notes Page: Displays the slide alongside its associated speaker notes.

(c) Suppose you have been given a task to switch a slide to a different layout. Which steps would you follow to complete the given task?

- i. Go to the "Home" tab.
- ii. Click on "Layout" in the Slides group.
- iii. Select the desired layout from the list of available options.

9. (a) Explain three importance of database systems in daily life.

- i. Data organization: Databases enable systematic storage and retrieval of data, making it easier to manage large volumes of information.
- ii. Efficiency: Reduces the time and effort required to search, update, and process data.
- iii. Security: Provides mechanisms to protect sensitive data from unauthorized access.

(b) One of the government institutions has two different departments. One department uses paper-based databases while the other uses computerized databases. Which department will work more efficiently? Give four reasons for your answer.

The department using computerized databases will work more efficiently due to:

- i. Speed: Computerized databases allow for faster data retrieval and processing compared to manual methods.
- ii. Accuracy: Automated systems reduce human errors in calculations and data entry.
- iii. Accessibility: Data can be accessed from multiple locations simultaneously.
- iv. Scalability: Computerized systems handle large volumes of data without significant performance issues.

10. (a) Your teacher assigned all students in your class to design a website that advertises your school. The advertisement in the page includes information about physical address, email address, image of the school map, and a link to a Home page named "Go to Home". One of your fellow students had the following HTML codes which need some corrections. Identify the mistakes made and write the correct codes in order to give the correct results.

Given code:

```
<html>
<body bgcolor="lavendar">
<font face="Tahoma" size="7">CONTACT US</font> <br>
<table border="1" cellpadding="1">
<tr>
<td>Physical Address</b>
<h4>Changamwe Secondary School<br>
P.O Box 724<br>
Songwe</td>
</tr>
<tr>
<td>Email Address</b>
<a href="mailto:changamwe@yahoo.ac.ke">Mail Us</a></td>
</tr>
<tr align="center">
<td colspan="2"><img source="Kona1.jpg" width="80" height="50"></td>
</tr>
<tr align="center">
<td colspan="2"><a link="Home.html">Go to Home</a></td>
</tr>
<table>
</html>
```

Corrected code:

```
```html
<html>
<body bgcolor="lavender">
CONTACT US

<table border="1" cellpadding="5">
<tr>
<td>Physical Address

Changamwe Secondary School

P.O Box 724

Songwe</td>
</tr>
<tr>
<td>Email Address

Mail Us</td>
</tr>
<tr>
<td colspan="2" align="center"></td>
```



```

</tr>
<tr>
<td colspan="2" align="center">Go to Home</td>
</tr>
</table>
</body>
</html>

```

(b) Give an output of the following HTML codes which will be displayed in a web browser.

```

<html>
<body>
<h3>Student name</h3><input type="text" name="stdname">

<h3>Gender</h3><input type="radio" name="stdname">Male
<input type="radio" name="stdname">Female

<h3>Other information</h3>

<textarea wrap></textarea>
</body>
</html>

```

Output:

A webpage with the following elements:

- A text input box labeled "Student name".
- Two radio buttons labeled "Male" and "Female" under the "Gender" heading.
- A text area box under the "Other information" heading.

11. Why schools should include the use of Information and Communication Technology in teaching and learning processes? Explain by giving four reasons.

- i. Enhances learning experiences: ICT tools like videos, interactive simulations, and digital content provide engaging and effective learning experiences.
- ii. Promotes collaboration: ICT fosters group projects and collaborative learning through tools like Google Classroom or shared documents.
- iii. Prepares students for the future: It equips students with skills necessary for the digital era, such as using computers, coding, and internet research.
- iv. Improves accessibility: ICT allows students in remote areas or with disabilities to access quality education through online platforms.

12. Suppose you were given an opportunity to convince the headmaster to have the internet connection in your school. Explain four benefits of internet applications that will convince the headmaster to pay for the school's internet connection fees and bills.

- i. Access to online resources: Students and teachers can access vast educational materials, e-books, and journals to enhance learning and teaching.
- ii. Improves communication: Tools like emails, video conferencing, and educational forums enable efficient communication within and outside the school.
- iii. Facilitates e-learning: Internet connection supports online classes and virtual learning, especially in emergencies like pandemics.
- iv. Enhances administration: The internet simplifies administrative tasks like online fee payment systems, staff coordination, and record management.