

**CHRISTIAN SOCIAL SERVICES COMMISSION (CSSC)**  
**NORTHERN ZONE JOINT EXAMINATIONS SYNDICATE (NZ-JES)**



**FORM SIX PRE – NATIONAL EXAMINATION 2026**

**136/2**

**COMPUTER SCIENCE 2**

**Time: 3 Hours**

**Friday, 27<sup>th</sup> February 2026a.m**

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**Instructions**

1. This paper consists of **three (3)** questions.
2. Answer **two (2)** questions including question number **one (1)**.
3. Each question carries twenty-five (25) marks.
4. Save your work on the desktop in the folder named by your **Examination Number**.
5. Save your work by using the 2007 and above version of MS Office software you are using.
6. Submit printed codes and screenshots together with softcopy of your work(s).
7. Cellular phones and any unauthorised materials are **not** allowed in the examination room.
8. Check whether the **printed** works(s) are similar to the **softcopy** saved in the folder.
9. Type your **Examination Number** on every page of your softcopy work(s).

1. (a) A school has launched a “Healthy Students Initiative” aimed at early identification of potential health risks among students. During annual physical check-ups, the school nurse records each student’s weight and height and needs a quick way to compute the Body Mass Index (BMI) and determine their health category. Because the school wants to promote healthy lifestyles, students identified as Underweight, Overweight or Obese are invited for *counseling sessions*, while those in the Normal range receive a *wellness certificate*. The nurse requires a small computer program that can assist in performing these calculations accurately and consistently during the check-up process. Write a C++ program that:

- Accepts a student’s **weight (in kilograms)** and **height (in foot)** as input.
- Convert height in foot into meters using the following conversion value

**1 foot = 0.3048 meter**

- Calculates the **BMI using this formula where the height should be in meters:**

$$\text{BMI} = \frac{\text{weight}}{\text{height}^2}$$

Classifies the student as:

- ✓ Underweight (BMI<18.5)
  - ✓ Normal (BMI 18.5 – 24.9)
  - ✓ Overweight (BMI 25 – 29.9)
  - ✓ Obese (BMI≥30)
- Displays the BMI accurately, along with a message guiding the school staff on what action to take based on the category (e.g., “Schedule counseling” or “Issue wellness certificate”).
- (b) Write C++ Program that accepts coefficients of a quadratic equation and calculates the roots based of determinant;
- ✓ Determinant > 0, Distinct real Roots
  - ✓ Determinant = 0, Equal real roots
  - ✓ Determinant < 0 Complex roots

2. The national examination council of Tanzania prepare to launch its beta version. The NECTA goal is to compiles lists of **candidates** who will go to university, candidate who failed national examination and the candidates who appeal against the National Examinations results;

- (a) Use html to design the following “candidate Examination Result Processing” Interface:

## STUDENT FINAL EXAMINARTION RESULT

Examination Number:

Student Name:

Combination: ☐ PCM ☐ PCB ☐ HGL

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SUB1  SUB2  SUB3

SUB4  AVR

**Interface Description:**

- Set cols=”70”and rows=”10”
- PCM stands for Physics, Chemistry and Advance mathematics.

- PCB stands for Physics, Chemistry and Biology.
- Set red colour for horizontal line.
- HGL stands for History, Geography and Language.

(b) Use java script code to activate the interface created in part(a) in order to perform the following tasks:

- User to enter marks for each subject in selected combination. The General Studies is compulsory for all students. The entered marks should be stored in text boxes SUB1, SUB2, SUB3, SUB4 respectively as combination and general study.
- Find the average of the marks stored in text boxes SUB1, SUB2, SUB3, SUB4 and store in a text box named "AVERAGE"
- Display message "Results for examination number, student name and average in" using a text area when user clicks the button "Show Result".
- Give a message by alert "congratulation! You have passed to join the university" if the average is greater than or equal to 50 otherwise it should give a message" sorry your average is less than 50! "You have failed the exam", otherwise gives a message "appeal the results" when a command button "Remarks" is clicked.
- Exit the program when a user clicks an "Exit" button.
- Clear all the visible in puts and the outputs when a user clicks a "clear"

3. The ICT Department of **Bright Future College** is organizing an annual workshop on *Basic Computer Applications* for newly admitted students. To manage the students attending the workshop, the department decides to create a **simple Windows Form application** that collects the students' basic information.

(a) Your asked to design this form using Visual Basic program

The screenshot shows a Windows Form titled "Form1" with a yellow title bar. The form has a grid background and contains the following elements:

- Title:** "Student's Registration Form" (yellow background)
- Labels (green boxes):** "Name", "Email", "Age", "Gender", "Hobbies", "Password".
- Input Fields (white boxes):** Text boxes for Name, Email, Age, and Password.
- Gender Selection:** Radio buttons for "Male" and "Female".
- Hobbies Selection:** Checkboxes for "Music", "Football", and "Eating".
- Buttons (orange boxes):** "Register" and "Clear".

(b) Interface description

- Form properties 23 font size, bold font style and MS Sans Serif font.
- The title label should have &H00C0FFFF& back color
- Labels for text boxes should have &H00C0FFC0& back color
- The register and Clear command button back color should be &H0080C0FF&

(c) Activate Clear Button so that when clicked it should reset all form input

(d) Activate the Register button such that when user clicks it, it should print the following output in a message box

*Registration successfully! Dear Mr/Miss <Name>, your information are:*

1. *Email: <email>*

2. *Age: <age>*

3. *Hobbies: <Hobby1, hobby2,...>*

*Please use <email> as your username and <password> as your password to login.*

**Note: Sample of output should look like this**

The screenshot shows a Visual Basic application window titled "Form1". Inside the window is a "Student's Registration Form". The form has the following fields and controls:

- Name:** Text box containing "juma nyosso".
- Email:** Text box containing "jum@gmail.com".
- Age:** Text box containing "34".
- Gender:** Radio button group with "Male" selected and "Female" unselected.
- Hobbies:** Check box group with "Music" and "Eating" selected, and "Football" unselected.
- Password:** Text box containing "\*\*\*\*\*".
- Buttons:** "Register" and "Clear" buttons at the bottom.

A message box titled "Question 3 Visual Basics" is open, displaying the following text:

Registration successfully! Dear Mr juma nyosso, your information are:  
1. Email: jum@gmail.com  
2. Age: 34  
3. Hobbies Are: Music and Eating  
Use jum@gmail.com As your username and '12345' as Your Password

The message box has an "OK" button.

