

## COMPUTER STUDIES

### Paper 2

#### (PRACTICAL)

(Reading Time: 15 minutes)

(Writing Time: Three hours)


(Maximum Marks: 100)

(Candidates are allotted additional time of 15 minutes for only reading the paper.

They must NOT start writing during this time)

---

### INSTRUCTIONS

1. This paper consists of **TWO** sections: section A and section B. Section A is on HTML. Section B covers both HTML and JavaScript.
2. Section A is compulsory. Section B contains **TWO** questions from which you are required to attempt only **ONE**.
3. All your work should be saved in a folder named with your actual index number on the Desktop. For example,  012181231234 this folder is named with the index number 012181231234. Your name or school name **CANNOT** be used as folder name or file names.
4. You are allowed to use **ONLY Notepad** for this practical. Use of any other HTML editors will result in cancellation of your work.
5. The intended marks for questions or parts of questions are given in brackets [ ].
6. Save your work from time to time to prevent loss of work due to unexpected power failure or hardware/software problem.
7. Make sure that your folder is handed over to the visiting examiner at the end of the examination.
8. DO NOT leave the examination hall before you have made sure that you have answered all the required number of questions.

## SECTION A [50 Marks]

Attempt ALL question

### Question 1

[50]

Design a webpage **index.html** with the title “DRC” as shown in figure 1.

The screenshot shows a web page for the Department of Revenue and Custom (DRC). The header includes the DRC logo on the left, the department name in the center, and the date (11/8/2018) on the right. The main content area is divided into three columns. The left column contains 'Internal Links' (PIT Registration, Publication, TPN Search) and 'Important Links' (Ministry of Finance, Ministry of Economic Affairs, Royal Civil Service Commission). The middle column is titled 'What is PIT?' and explains that Personal Income Tax (PIT) is levied on an individual's income from various sources: A. Employment income (monthly basic salary allowances, bonus, commission, leave encashment), B. Rental income (land, building, factory building, any other structure generating income), and C. Income from sale of cash crops. It also states that PIT rates are applied based on the amount of income, as shown in the PIT slab table below. The table has two columns: 'Taxable income' and 'Tax percent'. The rates are: 0% for income less than or equal to 200,000; 10% for income greater than 200,000 and less than or equal to 300,000; 15% for income greater than 300,000 and less than or equal to 500,000; and 20% for income greater than 500,000. The right column is titled 'PIT Calculation' and contains input fields for 'Basic Pay:', 'Taxable Income:', 'Total Tax:', and 'Yearly Net Income:'. There are 'Calculate' and 'Reset' buttons at the bottom of this section. The footer contains 'Contact us' information (e-mail address: drc@gmail.com; Phone No: 02-481671) and a copyright notice (©DRC 2018 All Rights Reserved).

**DEPARTMENT OF REVENUE AND CUSTOM**

DATE  
11/8/2018

**What is PIT?**

Personal Income Tax (PIT) is a tax levied on the personal income of an individual on an accrual basis from any or more of the following sources:

A. Employment income:

- monthly basic salary allowances
- bonus
- commission
- leave encashment

B. Rental income (income earned from real properties):

- land
- building
- factory building
- any other structure generating income

C. Income from sale of cash crops

Based on the amount of income, different PIT rates are applied as shown in the PIT slab below.

PIT Slab	
Taxable income	Tax percent
less than or equal to 200,000	0%
greater than 200,000 and less than or equal to 300,000	10%
greater than 300,000 and less than or equal to 500,000	15%
greater than 500,000	20%

**Internal Links**

- PIT Registration
- Publication
- TPN Search

**Important Links**

- Ministry of Finance
- Ministry of Economic Affairs
- Royal Civil Service Commission

**PIT Calculation**

Basic Pay:  
Taxable Income:  
Total Tax:  
Yearly Net Income:

Calculate Reset

**Contact us**  
e-mail address : drc@gmail.com; Phone No : 02-481671

©DRC 2018 All Rights Reserved

Figure 1

### Instructions

- Use HTML tags to design the layout of the web pages with appropriate size as shown in **Figure 1**. [4]
- Use an appropriate background colour for each sections of the web page. Use appropriate heading levels, font types and font colours for the text in the webpage. [4]
- Header section should contain agency's logo (on the left), name of the agency (middle) and date on the extreme right. You can use any relevant pictures or clipart available in your computer as a logo for the agency. Use appropriate image tag attributes and values (provide an alternative text for the image and also specify the width and height of the image). [5]

- d. The middle section should be divided into three columns as shown in *Figure 1*. The left column should contain navigation links. The middle column should contain information about Personal Income Tax (PIT) and the PIT slab. The last column should contain a form, with relevant form elements to calculate the PIT. Use appropriate HTML tags to present the information as shown in the *Figure 1*. For the navigation links, use the following hypertext references: [35]

**Internal links:**

- PIT registration: **registration.html**
- Publication: #
- TPN search: #

**Links to other sites:**

- Ministry of Finance: **http://www.mof.gov.bt**
- Ministry of Economic affairs: **http://www.moea.gov.bt**
- Royal Civil Service Commission: **https://www.rcsc.gov.bt**

Insert contact details (Contact us: e-mail: `contactus@drc.gov.bt`; Phone No :02481671) and a marquee (©DRC 2018; All rights reserved) at the footer section of the page as shown in *Figure 1*. [2]

**SECTION B [50 Marks]**

**Attempt ANY ONE questions**

**Question 2** [50]

- a. In the **index.html** page created for Question 1, include a script that gets current system date and displays it on the date section of page in the format **dd/mm/yyyy** as shown in *Figure 1*. [13]
- b. In the PIT calculation form on the **index.html** page, write a JavaScript function **pit()** which validates the basic pay based on the conditions below: [7]
- Basic pay should not be empty.
  - Basic pay should be a number.
  - Basic pay should not be less than 1.

- c. The function **pit()** should also calculate the taxable income and tax amount payable as per the PIT slab and the yearly net income of the user. [16]

[Hint: taxable income = 12 \* basic pay  
Yearly net pay = taxable income - tax payable;  
The tax payable has to be calculated as per PIT tax slab shown below]

Taxable income <= 200000	Tax = 0 % of taxable income
Taxable income > 200000 && <= 300000	Tax = 10 % of taxable income
Taxable income > 300000 && <= 500000	Tax = 10 % of taxable income
Taxable income > 500000	Tax = 20 % of taxable income

- d. On clicking **Calculate** button, the taxable income, tax payable and yearly net income of the user should be displayed in **Taxable Income**, **Total Tax** and **Yearly Net Income** input fields as shown in *Figure 2*. [6]
- e. The function **pit()** should execute on the click of **Calculate** button. [3]
- f. The **reset** button should clear all the inputs from the PIT calculation form. [1]
- g. Follow clean code techniques (i.e. good programming practices) when writing your code. [4]

The screenshot shows a web form titled "PIT Calculation" on a light blue background. It contains four input fields with labels above them: "Basic Pay:" with value 27500, "Taxable Income:" with value 330000, "Total Tax:" with value 49500, and "Yearly Net Income:" with value 280500. At the bottom are two buttons: "Calculate" and "Reset".

*Figure 2*

### Question 3

[50]

Using the **index.html** as a template, create another web page with title “*PIT Registration*”. Save the new page as **registration.html**.

**DEPARTMENT OF REVENUE AND CUSTOM**

DATE: 11/8/2018

### Taxpayer Registration

Name:

CID:

Village:

Gewog:

Dzongkhag:

Income Source: ☐ Salary ☐ Commission ☐ Rental ☐ Cashcrop

Marital status: ☐ Married ☐ Unmarried

### PIT Calculation

Basic Pay:

Taxable Income:

Total Tax:

Yearly Net Income:

**Internal Links**

- PIT Registration
- Publication
- TPN Search

**Important Links**

- Ministry of Finance
- Ministry of Economic Affairs
- Royal Civil Service Commission

**Contact us**  
e-mail address : drc@gmail.com; Phone No : 02-481671

©DRC 2018 All Rights Reserved

Figure 3

- Create a form to register a person for PIT with the appropriate form elements as shown in **Figure 3**. The title of the form should be “*Tax Payer Registration*”. [2]
- The **Name** input field should be able to display 22 characters and **CID** field should not accept a number more than 11 digits. Use at least 5 Dzongkhag names as options for the **Dzongkhag** field. [15]
- Include a JavaScript function **validate()** to check whether all the form elements are filled or not. If any one of the form elements is left out an **alert** with a message “*One or more fields are not filled or selected*” should be displayed as shown in **Figure 4**. [18]
- If the user has entered or selected all the form elements, the function **validate()** should display all the information entered by the user and ask for confirmation on whether to submit the form or not as shown in the **Figure 5**. [8]
- The function **validate()** should execute on clicking the **submit** button. [2]
- The **reset** button should clear all inputs from the Tax Payer Registration form. [1]

- g. Follow clean code techniques (i.e. good programming practices) when writing your code.

[4]

The screenshot shows a web form titled "Tax payer registration". The form has two input fields: "Name:" with the value "Karma Choki" and "CID:" which is empty. Below these fields is a white error message box with the text "One or more fields are not filled or selected." and a "Close" button. Further down, there are radio buttons for "Income source:" with "Salary" selected, and checkboxes for "Comission" (checked), "Rental", and "Cashcrop". At the bottom, there are radio buttons for "Marital status:" with "Married" selected, and "submit" and "reset" buttons.

Figure 4

The screenshot shows the same "Tax payer registration" form, but with a white confirmation dialog box overlaid. The dialog contains the text: "Your Entered information are:", "Name-Karma Choki", "CID:12345678901", "Village:Menchaena", "Gewog:Kikorthang", "Dzongkhag:Haa", "Marital status:married", "Income source:rental", and "Do you really want to submit these information?". At the bottom of the dialog are "Cancel" and "OK" buttons. The form behind the dialog shows the "Marital status:" radio buttons with "Married" selected, and "submit" and "reset" buttons.

Figure 5

This page is left blank intentionally.

This page is left blank intentionally.