

HARARE INSTITUTE OF TECHNOLOGY

SCHOOL OF INFORMATION SCIENCES AND TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

DEPARTMENT OF SOFTWARE ENGINEERING

BACHELOR OF TECHNOLOGY (HONS) INFORMATION TECHNOLOGY

BACHELOR OF TECHNOLOGY (HONS) SOFTWARE ENGINEERING

COURSE CODE: IIT 124/ISE 126 NET-CENTRIC PRINCIPLES AND DESIGN

TIME: 3 HOURS

DATE: MAY/JUNE 2018

INSTRUCTIONS TO CANDIDATES:

- This paper contains 5 (Five) questions.
- **SECTION A** has 2 compulsory questions
- **SECTION B** has 3 (Three) questions, you choose any 2 (Two).
- Each question carries 25 marks.
- Start a new question on a fresh page

ADDITIONAL MATERIALS

- Answer Book
- LAB Computer

SECTION A: ANSWER ALL QUESTIONS

QUESTION 1

- a) Write HTML code to create a survey form as shown below with the given validations. [15]

Student Satisfaction is #1

Please take the time to fill out the following survey

Your Secret Code:	<input type="text" value="00XY998888"/>
Password:	<input type="password"/>
First Name:	<input type="text"/>
Last Name:	<input type="text"/>
Your favorite website:	<input type="text"/>
Your age in years:	<input type="text" value="25"/>
What was your favourite topic:	<input checked="" type="checkbox"/> HTML 5 <input type="checkbox"/> CSS <input type="checkbox"/> Javascript <input type="checkbox"/> Angular JS <input type="checkbox"/> None
Rate your experience in Net Centric Programming Course:	<input type="radio"/> 1 - Very Poor <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input checked="" type="radio"/> 5 - Very Good
How likely would you recommend the Course:	<input type="range" value="5"/>
Other Comments:	<input type="text"/>
Email address:	<input type="text" value="rog#@hit.ac.zw"/>
<input type="button" value="Submit Query"/> <input type="button" value="Reset"/> <input type="button" value="Cancel"/>	

Notes

- All fields are required
- Your secret code should be read only
- Your favourite webpage should take only urls
- Minimum age should be 18 and maximum should be 65
- When you click submit query a pop up box using javascript should appear saying form submitted
- When you click reset, form should go to defaults
- Cancel button does nothing

- b) Improve the design and layout of the webpage using CSS. [10]

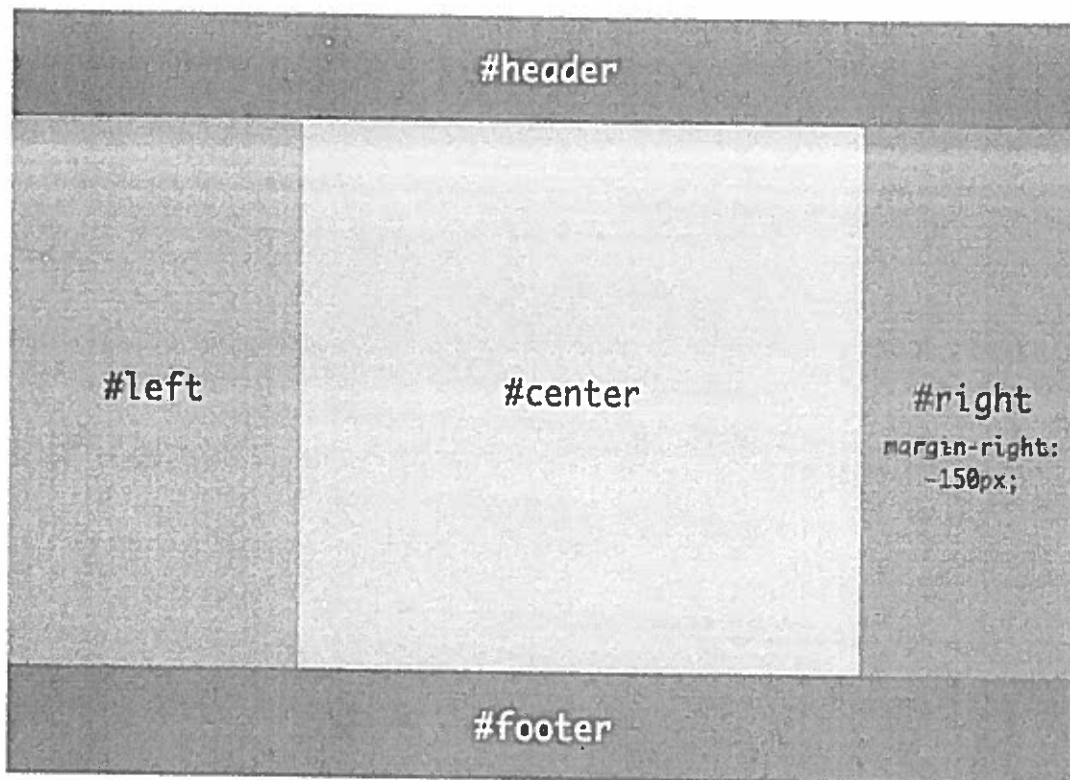
QUESTION 2

a) The Holy Grail is a famous web layout known to all web developers which uses HTML and CSS to produce a beautiful layout for a webpage.

- i) Write the HTML code for this layout
- ii) Write the CSS for this layout

[5]

[10]



Use the following colours;

#header #757575, #left #64B5F6, #center #FFFFFF, #right #4CAF50, #footer #757575

b) Write a JavaScript program which compute, the average marks of Peter Banga listed in the table below.

i. Using this average, determine the corresponding average grade for the semester.

NB Display average marks and grade in both an alert box and console.

[10]

Course Name	Marks
ISE 126	80
ICS 120	77
HIT 120	88
IIT 126	95
ISS 120	66

Range	Grade
<45	F
<55	3
<65	2.2
<75	2.1
<=100	1

SECTION B (ANSWER ANY 2 (TWO) QUESTIONS)

QUESTION 3

- a) In brief, explain the difference between margins and padding. [2]
- b) Describe a simple attack that could be executed if browsers did not implement the Same Origin Policy. [2]
- c) Outline the importance of the HTML DOCTYPE declaration. [3]
- d) List 3 ways in which Web applications are revolutionary compared to traditional applications. [3]
- e) Outline **3(three)** pros and **2(two)** cons of using technologies such as bootstrap and bulma. [5]
- f) Explain **2 (two)** different ways that CSS supports the DRY (Don't Repeat Yourself) principle. [4]
- g) State the purpose of a hypertext link with sample code. [2]
- h) Briefly explain **4 (four)** common ways to reduce the load time of a web application. [4]

QUESTION 4

- a) Differentiate between form get and form post [4]
- b) Outline **3 (three)** advantages and **3 (three)** disadvantages of using CSS [6]
- c) Explain using code examples the different ways to add CSS to HTML [4]
- d) Differentiate amongst the following web development career paths;
 - i. Front-End [2]
 - ii. Back-End [2]
 - iii. Full-Stack [2]
- e) What are the major factors to be considered when using images on a website? [5]

QUESTION 5

- a) Using clearly labelled diagrams write notes on the following
 - i. MVC architecture [8]

ii. Client Server Architecture

[8]

b) Expand and write short notes on the following acronyms;

i. HTML

[3]

ii. CSS

[3]

iii. AJAX

[3]