

Cs 101 Introduction to Computing
Composed By Faheem Saqib
MiD Term Solved Long Question
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# MiD Term Solved Long Question 2008 to 2011

Q27

What is the problem with Brute Force Strategy approach?

#### Solution:-

Doesn't scale well with the size of the problem

Q28

What is software design methodology?

### Solution:-

The set of (often flexible) rules and guidelines a team of developers follow to construct reasonably complex SW systems

What is the name of HTML tag, that has Href attribute and What is the Purpose of Href?

#### Solution:-

```
<A HREF = "action" > label </A>
```

It is used to to create Links between pages, or we can used it as "mailto" function.

Q30

Write three characteristics of JavaScript.

#### Solution:-

- (1) JavaScript has numerous operators, classified in many categories.
- (2) Terminate all JavaScript statements with a semicolon. It is not always necessary, but highly recommended.
- (3) JavaScript ignores any extra white spaces or line breaks that you put in the code
- (4) Although JavaScript allows variable declaration, it does not require it except in the case when
- (5)

Q31

Give reasons why we need semantic web?

#### Solution:-

Whereas, today's Web's content is designed for humans to read; the Semantic Web's content will be designed for computers to understand meaningfully. However, the

Semantic Web is not a replacement but an extension of the present Web, in which info is given well defined meaning

Q32

What are the two key features of UNDO command in MS-Excel?

#### Solution:-

- 1. Allows you to recover from your mistakes
- 2. Allows you to experiment without risk

Question No: 27 (Marks: 1)

What is the Brute Force Strategy?

Answer:. A staretegy in which all possible combinations are examined and best among them is selected. Brute force (also known as brute force cracking) is a trial and error method used by application programs to decode encrypted data such as passwords or Data Encryption Standard (DES) keys, through exhaustive effort (using brute force) rather than employing intellectual strategies.

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It is primarily used in the form of client-side JavaScript, implemented as an integrated component of the web browser, allowing the development of enhanced user interfaces and dynamic websites

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How can you explain control unit?

Answer: Control unit is a computerized part of the speech processor. Most of the controls, such as program, volume and sensitivity, are located on the control unit.

Question No: 30 (Marks: 3)

How a designer makes Structured Design?

Answer: Structured Design: Materials and member type, size, and configuration to carry loads in a safe and serviceable fashion.

In general, structural design implies the engineering of stationary objects such as buildings and bridges, or objects that may be mobile but have a rigid shape such as ship hulls and aircraft frames tructural design involves at least five distinct phases of work, project requirements, materials, structural scheme, analysis, and design

It is insufficient in most cases, for the designer to consider a solution, a design. He should evaluate several alternate designs and choose the best in the sense of maximizing such technical objectives as efficiency, reliability, and maintainability while satisfying such design constraints as memory size and response time.

Question No: 31 (Marks: 5)

What is Turing machine? Who invented it and also explain how a Turing test is conducted?

Answer: A Turing machine is a theoretical device that manipulates symbols contained on a strip of tape. Despite its simplicity, a Turing machine can be adapted to simulate the logic of any computer algorithm, and is particularly useful in explaining the functions of a CPU inside of a computer. The "Turing" machine was designed by Alan Turing in 1937.

The Turing test is a proposal for a test of a machine's ability to demonstrate intelligence. It proceeds as follows a human judge engages in a natural language conversation with one human and one machine, each of which tries to appear human. All participants are placed in isolated locations. If the judge cannot reliably tell the machine from the human, the machine is said to have passed the test. In order to test the machine's intelligence rather than its ability to render words into audio, the conversation is limited to a text-only channel such as a computer keyboard and screen.

If a computer pass the test, we can say that a machine can think.

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What are JavaScript literal and what are its types?

Answer: The raw data that make up the root of data types are called "literals." These are, in effect, literally what they represent themselves to be. Numbers, strings, and Boolean values make up the core set of literals in JavaScript. Little mystery exists with literals, but important differences exist between them. In JavaScript, data types include strings, which are simply quoted characters, numbers, Boolean, Objects and even a type which has no value at all, Null. Since JavaScript is a loosely typed language, you don't neccessarily need to know what type of data every value is (although it certainly helps).

Every piece of data in these categories is known as a value. When a value is referred to outright in a statement, it is called a literal value. For the same reason people are identified by names as opposed to "human" or "person", literal values can be named in order to make repeated reference to them practical, efficent and readable. These names are called variables.

Literals can be of several types. Some of them are:

**Array Literals** 

**Boolean Literals** 

**Floating-Point Literals** 

**Integers** 

**Object Literals** 

**String Literals** 

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Define URL

**URL(Uniform resource locator)** 

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Examples of URLs: <a href="http://vu.edu.pk">http://vu.edu.pk</a>

http://www.yahoo.com

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### **Randomized Algorithm:**

Any algorithm whose behavior is not only determined by the input, but also values produced by a random number generator

These algorithms are often simpler and more efficient than deterministic algorithms for the same problem. And because of there simplicity they are easier to analyze which is the most important thing in the decision making of an algorithm.

Question No: 29 (Marks: 2)

What was the name of first super computer. When it was introduced?

CRAY1 is the first computer and it was introduced in 1973

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How a designer makes Structured Design?

**Structured Design** is known as a Top-down design.

The designed first conceives about the High level design and then further designs the details of the high level design components and it goes on and on.

Making small changes in the functionality of the systems sometimes leads to major re-design exercise. Structured design separates the functionality from programs data and that's why program's deisgned by this methodology are difficult to maintain.

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Why microprocessor uses the binary number system and not the decimal or any other number system?

The processor is the logic of a computer and functions comparably to a human central nervous system, directing signals from one component to another and enabling everything to happen. A microprocessor is made from miniaturized transistors and other circuit elements on a single

semiconductor integrated circuit (IC) . These are made up oof semiconductor and silicon.

Microprocessor are composed of components which has only two states either 0 or 1. Binary number system is also composed of these two states.

Microprocessor till today only understand the machine language and machine language is only based on binary number system. Even today's 64 bit microprocessors are also based on this technology.

### Question No: 32 (Marks: 5)

Why do we need an Interactive Form in a webpage?

- 1. Interactive forms are used to gather user data and interact with the user.
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- 3. In HTML, <FORM> </FORM> tag is used to insert the form in a web page and it always lie in <BODY></BODY> html tag.
- 4. without form's web site is only "READ ONLY".
- 5. with the help of forms a user and can search the contents, place order for goods and services.
- 6. Forms can be simple or very complex, based on the requirement.
- 7. forms can contain a single element or many e.g text area, buttons
- 8. Question No: 27 (Marks: 1)
- 9. What is the key feature of batch programs?

10.

- 11. Batch files are useful for running a sequence of executables automatically
- 12. Question No: 28 (Marks: 1)
- 13. Name two languages which are used for client side scripting?
- 14. JAVASCRIPPT /NETSCAPE

15.

- 16. Question No: 29 (Marks: 2)
- 17. What is the purpose of MODEM?

18.

19. THE PURPOSE OF MODEM IS MODULATE AND DEMODULATE THE ELECTRONIC
ANALOG PULSES OF THE COMPUTER TO PULSES THE PHONE SYSTEM M CAN HANDEL.

20.

- 21. Question No: 30 (Marks: 3)
- 22. What is Home Page of a web site?

23

24. The pages of a website can usually be accessed from a simple Uniform Resource Locator (URL) called the homepage. The URLs of the pages organize them into a hierarchy, although hyper linking between them conveys the reader's perceived site structure and guides the reader's navigation of the sit

25.

- 26. Question No: 31 (Marks: 5)
- 27. Why microprocessor uses the binary number system and not the decimal or any other number system?

28.

- 29. At this point in computer science we only have two 'digital' states, which is that any bit can only be either on or off.
- 30. The on/off is commonly used to represent yes/no.(On(1) = Yes, Off(0) = No)
- 31. A microprocessor can only see if a signal is there or is missing, in other words, if the signal is on or off, or a bit is a 1 or a 0.

32.

33.

- 34. Question No: 32 (Marks: 5)
- 35. What is the difference between Interactive-mode and Batch-mode Application Software?
- 36. Batch files are useful for running a sequence of executables automatically and are often used by system administrators to **automate** tedious processes while interactive mode applications attract the attention of user this kind of applications can not execuate untill
- 37. User have interest to execure and complete the process.

Question No: 27 (Marks: 1)

What is the key feature of object-oriented design?

**ANSWER:** The key feature of object-oriented design is that it treats every thing as object having properties and methods. These objects are separately treated and designed and once designed it can be used in any other system. So once designed can be used many times.

Question No: 28 (Marks: 1)

**ANSWERS:** Purpose of spreadsheets is that it can do calculations on data accurately.

# Question No: 29 (Marks: 2)

#### List down two advantages of writing Pseudo Code

**Answers:** The advantages of pseudo code are:

- It is quite similar to human language so easy to understand.
- It is close to real code so easy to write real code from it.

### Question No: 30 (Marks: 3)

How can we calculate total number of rows in the truth table?

**ANSWER:** The formula for calculating number of rows in truth table is **2**<sup>n</sup>

Where n = number of inputs

#### Question No: 31 (Marks: 5)

Differentiate between Vector graphics and Bit-mapped graphics.

#### ANSWER:

VECTOR GRAPHICS	BIT MAPPED IMAGES	
1. Treat everything as an object	1. Treats everything as a bit map.	
1. Treat everything as an object	1. Treats everything as a oft map.	
2 Is manufaction in demandant	2 D1	
2. Is resolution independent	2. Resolution dependent	
3. Relatively small size	3. Large files	
4. Example: Corel Draw	4. Example: Microsoft Paint	
1	1	

# Question No: 32 (Marks: 5)

Write differences between Shareware and trail ware software.

#### **ANSWER:**

#### **SHAREWARE**

- 1. These are shared freely.
- 2. It is given without payment ahead of time.

#### **TRIALWARE**

- 1. Software is offered for a trial period.
- **2.** When the period is expired it is no more in use.

# CS101 Solved Subjective Part Midterm

# Question No: 31 (Marks: 1)

What does TCP/IP stand for?

### **Transmission Control Protocol**

### Question No: 32 (Marks: 1)

Why there is a need to use primary key in database?

Primary Key is a field that uniquely identifies each record stored in a table

#### Question No: 33 (Marks: 2)

What is image processing?

## **Image Processing:**

A branch of computer science concerned with manipulating and enhancing computer graphics

#### Question No: 34 (Marks: 2)

Define testing with respect to programming..

Testing: The tasks performed to determine the existence of defects

#### Question No: 35 (Marks: 3)

How can we define a computer screen?

#### Question No: 36 (Marks: 3)

What is difference between Design and System Architecture?

### **System**

A collection of elements which working together produces a result not achieved by the things alone

# **System Architecture**

#### The structure

(in terms of components, connections, constraints) of a product or a process

```
Question No: 37 (Marks: 3)
```

Write JavaScript code to convert the number 236.2363611111556 into currency format and JavaScript statement to show output.

```
a = 236.2363611111556;
b = a.toString();
decimalPos = b.indexOf(".", 0);
c = b.substring(0, decimalPos + 3);
document.write(c);
```

#### Question No: 38 (Marks: 5)

Show output of the following code:

```
for (i=0; i<=10; i++)  \{ \\ \\ document.write("The number is " + i); \\ \\ document.write("<br/>"); \\ \}
```

# Question No: 39 (Marks: 5)

What is a Relational Database? Give the names of any three RDBMS software. (2+3)

#### **Relational Databases**

- Databases consisting of two or more related tables are called *relational databases*
- A typical relational database may have anywhere from 10 to over a thousand tables
- Each column of those tables can contain only a single type of data (contrast this with spreadsheet columns!)
- Table rows are called records; row elements are called fields
- A relational database stores all its data inside tables, and nowhere else
- All operations on data are done on those tables or those that are generated by table operations
- Tables, tables, and nothing but tables!

#### **RDBMS**

- Relational DBMS software
- Contains facilities for creating, populating, modifying, and querying relational

databases

- Examples:
- -Access
- -FileMaker Pro
- -SQL Server
- -Oracle

Question No: 40 (Marks: 10)

Define the following terms.

- ¬ Object
- ¬ Event Handler
- ¬ Local Variable
- ¬ Scope of Variable
- ¬ Array

**Object** 

A named collection of properties(data, state) & methods (instructions, behavior)

**Event Handler** 

An event handler is a command which calls a function when an event happens, such as the user clicking a button

#### **Local Variable**

Declaring variables (using the var keyword) within a function, makes them local•They are available only

within the function and hold no meaning outside of it

#### **Scope of Variable**

Defining the space in which a variable is effective is known as

defining the scope of a variable. A variable can be either local or global in scope

Array

????

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Question No: 31 (Marks: 1)

In programming, what is a loop?

In computer science a for loop is a programming language statement which allows code to be repeatedly executed. A for loop is classified as an iteration statement.

Question No: 32 (Marks: 1)

What are the other names of function? Any one.

Routine, procedure, sub prograam

Question No: 33 (Marks: 2)

**How JavaScript Arrays are heterogeneous?** 

Arrays are heterogeneous in java script because at the same time stimultanously they can hold elements of multiple data types

Question No: 34 (Marks: 2)

What is the database?

Data base is a collection of organized data in a proper way that computer can quickly search for any desired data item, its an easy way of allowing of manipulation of data, they are design in such a way that access to any desired data can be identified and reached quickly and easy, they are generally consist of collection of interrelated files

Question No: 35 (Marks: 3)

Differentiate between LAN and WAN with one example of each.

Lan is a local area network where as wan is a wide area network

Lan can be used in a specific areas with limited computers where as wan can be used on computers shared by large distances

For example lan can be used on pc s or an organization located in one building but wan can be used on large scales like banks all over or in any Large communication systems

Question No: 36 (Marks: 3)

# **What are Trojan Horses?**

Trojen horses are a kind of cyber crime, they are v harmful to computer because they are stand alone programme and the look like what they are not like any thing amusing or not harmless like games...

Question No: 37 (Marks: 3)

**Elaborate Rester Graphics with examples.** 

A raster graphics image, digital image, or bitmap, is a data file or structure representing a generally rectangular grid of pixels, or points of color, on a computer monitor, paper, or other display device.

To illustrate the matter further - here's the letter "J":

\_

Look closely at it... Take a magnifying glass to it if you like. You see a "J", the computer sees something more like this, where '.' represents a zero and 'X' represents a one:

....X

....X

X
Х
Х
X
X
<b>xx</b>
<b>xx</b>

.XXX.

Where you see a zero, the computer instructs its video hardware to paint the current background color. A one calls for the current foreground color. Yes, it is actually a bit more complicated, but it all basically boils down to one bit or the other making a distinction

between the colors of adjacent pixels, which together form an image.

Question No: 38 (Marks: 5)

What are the important properties, methods and event handlers of image object?

The primary use of the image object is to download an image into the cache before it is needed to display, image object can be used to create different kinds of animations or to display one of several images based on the desired requirement, in java script image object can be used to display the required pre loaded image

<u>Properties of image object is</u>: height, width, hspace, vspace, src, name border etc

### **Methods**:none

Event handlers:on aboart, onload, onerror etc

```
Question No: 39 (Marks: 5)
```

Write the JavaScript code for the Function SumOddNumbers(maxNumber) that can add non-negative odd numbers up to maxNumber and return their sum.

Function sum odd numbers(maxnumber){var sum=0;

```
For(i=0; <maxNumbers;I++)
{

{
    if(i / 2 == 1 || i == 1)
    sum += i;
}

return sum;
```

Question No: 40 (Marks: 10)

#### Write a note on:

- · Coding guidelines
- · Guidelines for developing short programs.
- · Coding guidelines
- Always use semicolons to end statements
- Indent blocks of code (2 to 5 spaces)
- Identifiers

- Use the camel back scheme
- Variables: nouns
- Functions: verbs
- Comment Liberally
- Make them descriptive but concise

ŀ

### **Gudelines for developing short programs.**

- Read and understand the problem
- Do you have all the required data?
- No: Get it
- Else assume it. State it explicitly
- Do the design

Question No: 41 (Marks: 10)

write a note on each of the following:

#### a. Vector or Object-Oriented Graphics:

#### **b. Bit-Mapped or Raster Graphics:**

A:In Vector or object oriented graphic everything drawn is treated as object. objects retain their identity after they are drawon. these objects can later be moved, stretched, duplicated, deleted, etc. they are resolution independent and have relatively small file size. the examples are: swf, svg, wmf, ps

brass\_ibrahim: Vector graphics is the use of geometrical primitives such as points, lines, curves, and shapes or polygon(s), which are all based on mathematical equations, to represent images in computer graphics.

brass\_ibrahim: The term "vector graphics" is mainly used today in the context of two-dimensional computer graphics Virtually all modern 3D rendering is done using extensions of 2D vector graphics techniques .Virtually all modern 3D rendering is done using extensions of 2D vector graphics techniques

### **B:Bit-Mapped or Raster Graphics:**

Treats everything that is drawn as a bit-map

If an object is drawn on top of another, it is difficult to move just one of them while

leaving the other untouched

Changing the resolution often requires considerable touch-up work

Relatively large file size

Examples: gif, jpg, bmp

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28 objectives were from old papers out of 30.

What is Array? Marks 2

what is computer prrofessional? Marks 2

define onLoad and onUnload? Marks 2

waht is time bomb? Marks 2

what is bandwidth? Marks 2

"while" loop is more preferable than "For" loop? Marks 3

sementic web and present web? Marks 3

can we replace a human doctor by Expert system? Marks 5

Difference Internt and intranet?

Marks 5

ways of navigation Heuristics?

Marks 5

event handling?

**Define network organization and its advantages?** Marks 10

Coding Guidline and guidlines for short programs? Marks 10

Dewelop a web page that displays six thumbnails images. A main image should be changed to a large version of thumbnail as soon as the mouse moves over the thumbnail. Write complete html and java script? Marks 10

characteristics of Internet?

Marks 10

Profile and responsibilities of Team Leader?	Marks 10
due to computer how many jobs are available and	
how many jobs are eliminated?	Marks
Today was my CS101 Paper. The Subjective Quizze	es are as under:
1. How many members are in operational team and resposibilities	I what there key
2. What is Computer Screen?	
3. What are weaknesses of the web?	
4. Characteristics of Internet (Any Five)?	
5. Breifly describe	
Telnet	
VoIP	
Instant Messaging	
FTP	

### IP/TCP

'+' operator

6. Describe the organizational structure?
7. What is image process
8. Pixel?
Today I had CS 101 Paper. There were 41 questions. 30 objective and 11 descriptive. Few of the questions were:
3 attributes of event handler
Difference between Internet and Intranet
Function
Commonsense to avoid viruses and explain antivirus
TCP/IP
An attack on Yahoo servers
Spreadsheets
Codes for uploading file
Hierarchy in an organization
Team lead
COO
Developer
Businessess monitoring their employees

#### **Image in Javascript**

Question No: 17 (Marks: 2)

Write the major types of softwares with examples?

Answer...

System SW

System software is responsible for controlling, integrating, and managing the individual

hardware components of a computer system.

System software performs tasks like transferring data from memory to disk, or rendering

text onto a display Specific kinds of system software include loading programs, operating

systems, device drivers, compilers, assemblers, linkers, and utilities.

Software libraries that perform generic functions also tend to be regarded as system

software. System software stored on non-volatile storage on integrated circuits is usually

termed firmware. These generally perform the background tasks in a computer. These

programs, many times, talk directly to the HW.

**Application SW** 

Programs that generally interact with the user to perform work that is useful to the user.

These programs generally talk to the HW through the assistance of system SW.

Question No: 18 (Marks: 2)

What is the major difference between paragraph and Line Break <BR> tags?

<P> ... </P>

**Paragraph** 

<BR>

**Line break** 

Question No: 19 (Marks: 2)

Why PASCAL was designed and what is the problem with PASCAL?

Answer,,

Pascal is very good for writing well-structured and readable programs, but it is not as

flexible as the C programming language

C++ embodies powerful object-oriented features, but it is complex and difficult to learn

What changes in the field of computer languages can we expect in the near future

Question No: 20 (Marks: 3)

What are the key requirements of E-commerce Software?

Answer..

**E-Commerce Software** 

**Key requirements:** 

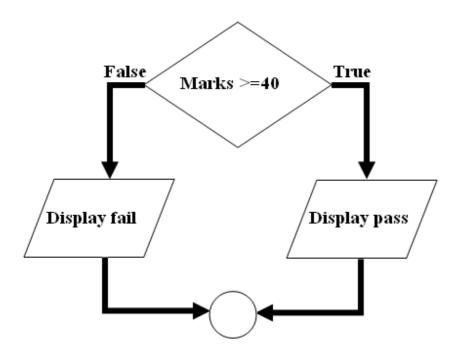
Reliability

**Security** 

Ability to handle 1000's of transactions, simultaneously

Question No: 21 (Marks: 3)

Write down the pseudo code for the following flow chart.



Answer.... Pseudo code

**Flowcharts** 

**Actual code** 

**Pseudo Code** 

Language that is typically used for writing algorithms

Similar to a programming language, but not as rigid

The method of expression most suitable for a gi

Question No: 22 (Marks: 5)

(a) Write down two positive features of client-side scripting.

Answet..

Reduced server load as it does not have to send messages to the user's browser about

missing or incorrect data

Reduced network traffic as the form's data is sent only once instead of many to's and

fro's

Question No: 17 (Marks: 2)

What is Ockham's Razor principle?

Answer...

When choosing among competing, successful solutions to a problem, choose the one which is the least

complex

This principle is called the "Ockham's Razor," after William of Ockham famous 13-th

century English philosopher

Question No: 17 (Marks: 2)

Explain briefly the different techniques that are used to embed JavaScript code in a web page?

Answer., Client-side JavaScript code is embedded within HTML documents in a number of ways:

- Between a pair of <script> and </script> tags
- From an external file specified by the src attribute of a <script> tag
- In an event handler, specified as the value of an HTML attribute such as onclick or onmouseover
- As the body of a URL that uses the special javascript: protocol

The following sections document each of these JavaScript embedding techniques in more detail. Together, they explain all the ways to include JavaScript in web pages -- that is, they explain the allowed structure of JavaScript programs on the client side.

Question No: 18 (Marks: 2)

What is an interpreter? Write its one benifit over compiler.

#### **Answere**

Interpreter is a program that executes instructions written in a highlevel language

An interpreter translates high-level instructions into an intermediate form, which it then

executes. In contrast, a compiler translates high-level instructions directly into machine

language

Compiled programs generally run faster than interpreted programs.

compilation stage during which the whole of the high-level code is translated into

machine instructions in one go. This process can be time-consuming if the program is

long.

The interpreter can immediately execute high-level programs, without waiting for the

completion of the translation process

The choice of which language to use can also depend on the:

- -Type of computer the program is to run on,
- Expertise of the programmer

Interpreters: immediate response, but execute code slowly.

Compilers: Takes longer to compile, but super-fast execution.

Whether response time of a microprocessor is greater or less than that of RAM?

A microprocessor incorporates most or all of the functions of a computer's central processing unit (CPU) on a single integrated circuit (IC, or microchipThe first microprocessors emerged in the early 1970s and were used for electronic calculators, using binary-coded decimal (BCD) arithmetic in 4-bit words. Other embedded uses of 4-bit and 8-bit microprocessors, such as terminals, printers, various kinds of automation etc, followed soon after. Affordable 8-bit microprocessors with 16-bit addressing also led to the first general-purpose microcomputers from the mid-1970s on.

During the 1960's, computer processors were often constructed out of small and medium-scale ICs containing from tens to a few hundred transistors. The integration of a whole CPU onto a single chip greatly reduced the cost of processing power. From these humble beginnings, continued increases in microprocessor capacity have rendered other forms of computers almost completely obsolete (see history of computing hardware), with one or more microprocessors used in everything from the smallest embedded systems and <a href="https://example.com/hardware">handheld devices</a> to the largest mainframes and supercomputers.

Since the early 1970s, the increase in capacity of microprocessors has been a consequence of Moore's Law, which

suggests that the complexity of an integrated circuit, with respect to minimum component cost, doubles every two years

In the late 1990s, and in the high-performance microprocessor segment, heat generation (TDP), due to switching losses, static current leakage, and other factors, emerged as a leading developmental constraint

Question No: 20 (Marks: 3)

Write formula for the following expression.

- 1) If we want to add the value from cell C3 to C10 we can write
- 2) If we want to add the value of C2 to the value of C4 and than multiply by C6, the formula is written for

1.answer formula

=sum(c3:c10) then enter

=(c2+c10Xc6) then enter

Question No: 22 (Marks: 5)

What is software life cycle?

**SW Life-Cycle** 

The sequence of phases a SW goes through from the concept to decommissioning

It is important to think about all those phases before the design work starts

Thinking about the future phases generally results in:

**Shorter delivery times** 

**Reduced costs of development** 

A system of higher quality

A Case in Point

I didn't discuss with the customer the specs of the HW & OS before developing a

particular e-commerce SW.

I wrote it for the HW/OS that was easily available to me.

Unfortunately that HW/OS combination differed from what was easily available to the

client Result: Huge amount of rework. Higher cost. Delayed delivery. Lower quality.

Therefore, now before designing a SW system, I first write down the installation manual,

and get it OK'd by the customer. I do the same with the Operation & Maintenance

manual as well.

Question No: 23 (Marks: 5)

Elaborate greedy algorithm definition with solid example in favour and one counter example?

An algorithm that always takes the best immediate, or local solution while finding an

answer

Greedy algorithms may find the overall or globally optimal solution for some

optimization problems, but may find less-than-optimal solutions for some instances of

other problems

**KEY ADVANTAGE:** Greedy algorithms are usually faster, since they don't consider the

details of possible alternatives

**Greedy Algorithm: Counter Example** 

During one of the international cricket tournaments, one of the teams intentionally lost a

match, so that they could qualify for the next round

If they had won that particular match, some other team would have qualified

This is an example of a non-greedy algorithm

**Greedy Algorithm: Example** 

A skier skiing downhill on a mountain wants to get to the bottom as quickly as possible

What sort of an algorithm should the skier be using?

The greedy-algorithm approach will be to always have the skies pointed towards the

largest downhill slope (dy/dx), at all times

What is the problem with that approach?

In what situations that will be the best algorithm?

## In which situations would it perform poorly?

<u>Insert text</u>: Allows you to insert text anywhere in the document.

<u>delete text:</u> Allows you to erase characters, words, lines, or pages as easily as you can cross them out on paper.

<u>cut and paste</u>: Allows you to remove (cut) a section of text from one place in a document and insert (paste) it somewhere else.

<u>copy</u>: Allows you to duplicate a section of text.

<u>page size and margins</u>: Allows you to define various page sizes and margins, and the word processor will automatically readjust the text so that it fits.

<u>search</u> and <u>replace</u>: Allows you to direct the word processor to search for a particular word or phrase. You can also direct the word processor to replace one group of characters with another everywhere that the first group appears. <u>word wrap</u>: The word processor automatically moves to the next line when you have filled one line with text, and it will readjust text if you change the margins.

<u>print:</u> Allows you to send a document to a printer to get hardcopy. <u>file management :</u> Many word processors contain file management capabilities that allow you to create, delete, move, and search for files. <u>font specifications:</u> Allows you to change fonts within a document. For example, you can specify bold, italics, and underlining. Most word processors also let you change the font size and even the typeface. <u>footnotes and cross-references:</u> Automates the numbering and placement of footnotes and enables you to easily cross-reference other sections of the document.

graphics graphics: Allows you to embed illustrations and graphs into a document. Some word processors let you create the illustrations within the word processor; others let you insert an illustration produced by a different program.

headers, footers, and page numbering: Allows you to specify customized headers and footers that the word processor will put at the top and bottom of every page. The word processor automatically keeps track of page numbers so that the correct number appears on each page.

<u>layout</u>: Allows you to specify different margins within a single document and to specify various methods for indenting paragraphs.

<u>macros</u>: A macro is a character or word that represents a series of keystrokes. The keystrokes can represent text or commands. The ability to define macros allows you to save yourself a lot of time by replacing common combinations of keystrokes.

merges: Allows you to merge text from one file into another file. This is particularly useful for generating many files that have the same format but different data. Generating mailing labels is the classic example of using merges.

<u>spell checker</u>: A utility that allows you to check the spelling of words. It will highlight any words that it does not recognize.

tables of contents and indexes: Allows you to automatically create a table of contents and index based on special codes that you insert in the document. thesaurus: A built-in thesaurus that allows you to search for synonyms without leaving the word processor.

Question No: 17 (Marks: 2)

Write the

major types of softwares with examples?

Answer...

System SW

System software is responsible for controlling, integrating, and managing the

individual

hardware components of a computer system.

System software performs tasks like transferring data from memory to disk, or

rendering

text onto a display Specific kinds of system software include loading programs,

operating

systems, device drivers, compilers, assemblers, linkers, and utilities.

Software libraries that perform generic functions also tend to be regarded as system

software. System software stored on non-volatile storage on integrated circuits is

usually

termed firmware. These generally perform the background tasks in a computer. These

programs, many times, talk directly to the HW.

**Application SW** 

Programs that generally interact with the user to perform work that is useful to the

user.

These programs generally talk to the HW through the assistance of system SW.

Question No: 18 (Marks: 2)

What is

the major difference between paragraph and Line Break <BR> tags?

<P> ... </P> Paragraph <BR> Line break Question No: 19 (Marks: 2) Why PASCAL was designed and what is the problem with PASCAL? Answer,, Pascal is very good for writing well-structured and readable programs, but it is not as flexible as the C programming language C++ embodies powerful object-oriented features, but it is complex and difficult to learn What changes in the field of computer languages can we expect in the near future Question No: 20 (Marks: 3) What are the key requirements of E-commerce Software? Answer... **E-Commerce Software** Key requirements: Reliability Security

Ability to handle 1000's of transactions, simultaneously

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In what situations that will be the best algorithm?

In which situations would it perform poorly?

## Question No: 27 (Marks: 1)

What are compilers used for ?

Ans: compiler is a softwear that can translate the whole programe

in <u>once.it</u> also save the program. **Question No: 28** (Marks: 1)

What is Script?

Ans: script is a sequence of steps to carry out a work by processor And manage by a language like Javascript and vb scripts.

Question No: 29 (Marks: 2)

What is <P> tag in HTML and How it is different from <br > tag?

Ans: is used for paragraph in HTML language it has a closing tag unlike <br/> which has no closing tag. Br only used to break the current line while can be used for more lines

Question No: 30 (Marks: 3)

How can you manipulate the address of a file (resource) accessible on the Internet?

World wide web ,URL, domain name

Question No: 31 (Marks: 5)

Write Hyper Link for a Web Page and for an Email Address.

Ans: Following are the Hyper link for a web page

www.vu.edu .pk www.yahoo.com www.hotmail.com

Question No: 32 (Marks: 5)

Write down the requirement of Desktop Publishing? User requirement

Softwear requirements

. Laser printer Scanner

DESktop publishing softwears

e.g

adobe page maker

Ms publisher

High end pc with a large screen monitor

**Formate** 

Numerical data

Text

Question No: 27 (Marks: 1)

What is the key feature of batch programs?

Answer: The key feature is no user interaction with computer while a program is running.

Question No: 28 (Marks: 1)

Name two languages which are used for client side scripting?

Answer: Javascript , VBscript

Question No: 29 (Marks: 2)

What is the purpose of MODEM?

Answer: It receive data analog signal from a phone line and then convert them into digital signal and send back to the computer with which it is attached. It also receives data from computer and convert it into analog signals.

Question No: 30 (Marks: 3)

What is Home Page of a web site?

Answer: For a web user it is a first page displayed when a user starts a web browser and for a web developer it is a first page when a user selects a site.

Question No: 31 (Marks: 5)

Why microprocessor uses the binary number system and not the decimal or any other number system?

Answer: Because this system is natural for digital computer.

Digital computer have fundamental building blocks like ON & OFF

Etc so it is natural to represent those in a number system that
has only two symbols e.g Binary Numbers 0,1. Whereas decimal
system is natural for human.

Question No: 32 (Marks: 5)

What is the difference between Interactive-mode and Batchmode Application Software?

Answer: Batch-mode: This Mode Program has no user interaction with computer while a program is running e.g Paroll

Interactive-mode: The user runs the program on the computer and keeps interacting with the computer while a program is running e.g word processor