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Examination Answer Books

12 Pages

Instructions to Candidates

1. Please give the information requested in the boxes below.
2. Enter your name in the space provided to the right, fold over and seal down (using the label provided) to hide your name.
3. The answers must be legibly written. The Examiners can either type your answers or have them typed and the expense of typing charged to the candidate.
4. Write your answers in ink.
5. Begin each answer on a fresh page. Do all rough work in the answer book and cross it through.
6. No part of this book is to be torn out; it must be handed in complete.
7. If more books than one are used, fasten them together using the tags available from the invigilator(s).
8. Every book must be handed in. In no circumstances may answer books, used or unused, be taken out of the examination venue.

1	Student Number	1806547
2	Title of Examination Paper	Computer System
3	Module Code	M4X01500
4	Date and Time of Examination	15/01/2019
5	Examination Venue	VIVIAN HALL
6	Seat Number	G042
7	Number of Answer Books handed in	1

Complete, fold and seal
(see note 2 below)

SURNAME: CHISHI

FORENAME(S): RIZWAN

List the numbers of the questions you have attempted	Office Use
1	6
2	8
3	3
5	7
6	5
7	3
8	3
9	9
Total 8	38/60

Best
50%

63%

1)

$a \rightarrow 7 = 0111$ ✓

2

$b \rightarrow 12 = 1100$ ✓

2

$c \rightarrow 100 = 1100010$ ✗

$d \rightarrow 211 = 11001001$ (backward)

$e \rightarrow 4096 = 10000000000000$ ✓

2
6
5
=



2)

Von Neuman Computer architecture

1) one main memory which has both data and instruction ✓

2) ALU Arithmetical Logic unit which is able to work on binary base ✓

3) CU Control unit (which can manage the processing system) ✓

4) I/O input and output devices ✓

mem?

8
1
2
=

6) main Functions of an operating System

- i) it hides the messy work between hardware and software interface ✓
- ii) Convenience :- Provides us the comfort to use computers easily ✓
- iii) -> it can manage to use resources more accurately ✓
- iv) Can do multitasking ✓
- v) Efficiency ✓



7)

~~Compiled~~ So

The difference is not the language (software)

it the way it is implemented ✓

Compiled software are one whole pre selected process which runs from start to finish without human interaction. Codes and instructions are pre selected. Compiled software are easier to write and understand. They are machine independent ✓

Interpreted approach of Software requires human interaction step by step. They ~~and~~ are mostly written in machine dependent language. which are normally harder to understand and write. They are much longer and takes very long to write and understand. much harder to implement for a normal person.



8 a) High level language

High level language is what we speak (English). They are much easier to understand for humans. we can write and understand them very easily. They are machine independent.

b) Low level language

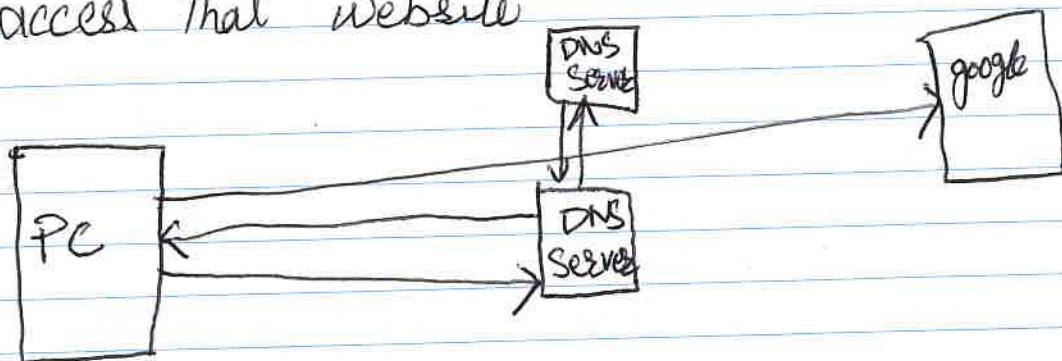
Low level languages are normally machine dependant. They are much harder for humans to understand and write. For example binary language is a low level language. Takes longer to write and are normally lengthy.

3/10

5/10

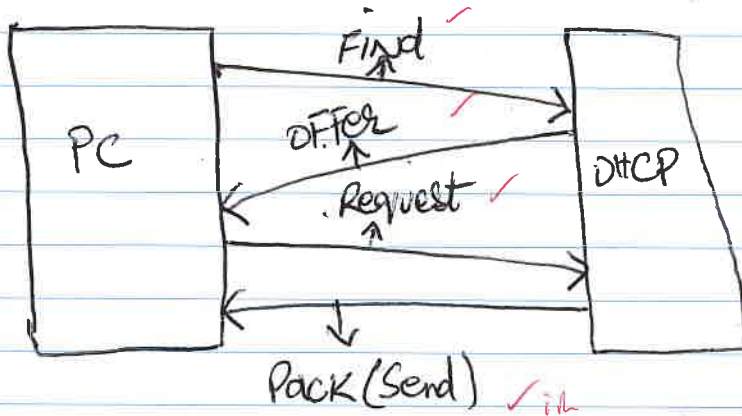
9) Domain name Service (DNS)

Domain name Service is a service which provides you the IP address when you try to open a website because each website has a different IP address. For example: if you try to open a website called (www.google.com) you need an IP address for that so your computer asks the DNS to give you the IP for that. If the DNS has the IP for that it will provide you that otherwise it will refer you to the next server for that IP so you can access that website.



DHCP

Dynamic Host Configuration Protocol



Basically when your computer tries to connect to the network it needs the IP address so you can connect to the network. ✓

Your computer finds the DHCP server and the DHCP server sends the offer back to your computer and then your computer sends the request back to DHCP for an IP address. Then the DHCP server sends the pack back to your computer with an IP address and default gateway so your computer can connect to the network. ✓

5)

Principal of locality

There are mainly two types of locality.

i) Temporal locality ✓

ii) Spatial locality ✓

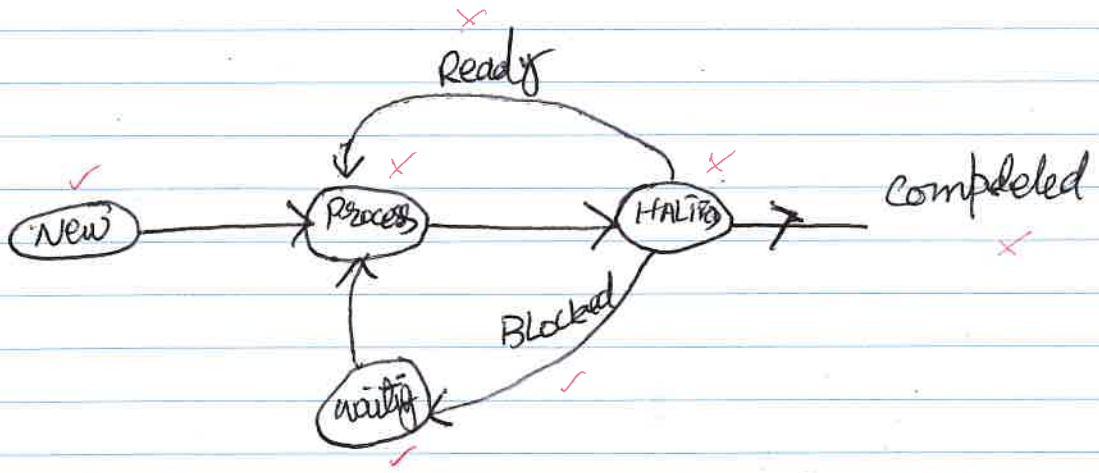
in temporal locality in cache means most recent process is more likely to be repeated again and for old one there are less chances to be executed again in near future. ✓

if the process is not been repeated for a while it will be deleted from cache memory and new one will replace it. ✓

in spatial locality if there are two process are next to each other or close by that means they are most likely to reference each other ✓

7
10

3)



3
10