

Name of the student: Anuj Sapkota Class: 8

Section: Gyallica Roll No: 6 Subject: Computer Date: 2077/9/7

Symbol No.: _____ Symbol No. In words: _____

To be filled by Examiner:

Obtained Marks: _____ Marks in words: _____

Date: _____ Examiner: _____

Start from here:

Group A

1)

a)

→ Computer software is the set of programs which are designed to perform specific tasks.

→ Eg: Firefox, MS paint, windows 10, etc.

b)

→ Application software is the set of programs which is designed to perform specific tasks of for the users. Its examples are; MS-Word, billing system, MS-excel, etc.

c)

→ Device driver is a system software that communicates



and controls a particular device which is attached to system. Eg: USB driver, UART devices, etc.

d) ~~★~~

→ ~~A~~ Number system is a set of values which are used to represent a quantity.

e)

→ The number system which is formed by eight different digits is Octal number system.

Group B

2.

a) → Packaged Software

- It is an application software designed for general purpose only publicly.

- It is cheaper than customized software.

Customized Software

- It is an application software designed for special purpose for specific group person, etc.

- It is expensive than packaged software.

b)

- System software is the set of programs designed to operate, control and supervise over all components and their functions.
- Its three functions;
- It supports the development of other application software.
 - It monitors the effective and efficient use of various hardware resources, such as CPU, memory, peripherals, etc.
 - It supports the ~~executive~~ execution of other application software.

c)

- Operating system is the main software of computer that is designed to operate, supervise, control and manage whole computer components and their functions.
- Its three important functions are;
- It manages memory locations.
 - It manages input and output devices.
 - It supports other hardware and application software.

→



d)

→

~~Intre~~Interpreter

Compiler

- It is a system software that is designed to ~~high~~ translate high level language into machine language one instruction at a time.

- It is a system software that is designed to ~~tran~~ translate high level language into machine language whole program at a time.

- It takes less time to analyze the source the code. ~~but the~~

- It takes more time to analyze the source code.

e)

→

Language translator is a system software designed to translate another language into machine language for hardware and vice versa.

→ Its types are: Assembler, Interpreter and Compiler.

f)

- i) Binary number system is a number system which is formed by 0 and 1 digits. It has base 2 as it has 2 digits 0 and 1. 0 is used to represent 'OFF' and 1 is used to represent 'ON'. A computer works on these (OFF and ON) electric pulses.



ii) Hexadecimal number system is a number system which is formed by sixteen different characters and digits which are 0-9 [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] and A-F [A, B, C, D, E, F]. In Hexadecimal number system, the characters A stands for 10, B stands for 11, C stands for 12, and so on. Its positional weight is 16 which is its base, too.

Group C

3.

a) $(426)_{10} = (?)_2$

			R
→	2	426	0
	2	213	1
		106 6	0
	2	53	1
	2	26	0
	2	13	1
	2	6	0
	2	3	1
	2	1	1
		0	

∴ Ans. = $(110101010)_2$



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b) $(166)_{10} = (?)_8$

→ Soln,

Here,

8	166	6	↑
8	20	4	
8	2	2	
0			

∴ Ans. = $(246)_8$

c) $(3215)_{10} = (?)_{16}$

→ Soln,

Here,

		R
16	3215	15 ↑
16	200	8
16	12	12
0		

Since, $12 = C$ & $15 = F$

∴ Ans. = $(C8F)_{16}$

d) $(2056)_8 = (?)_2$

→ Soln,

Here,

2	0	5	6
421	421	421	421
010	000	101	110

∴ Ans. = $(10000101110)_2$

e) $(3ACE)_{16} = (?)_2$

→ Soln

Here,

Since, ~~A~~ =

3
8421
00101

A=10
8421
1010

C=12
8421
1100

E=14
8421
1110

∴ Ans = ~~11010101001101~~¹¹ ∴ Ans = $(11101011001110)_2$

f) $(4137)_8 = (?)_{16}$

→ Soln

Here,

① 4 1 3 7
 421 421 421 421
 100 001 011 111

= $(10000101111)_2$

② 1000 0101 1111
 8421 8421 8421
 8 5 15=F

∴ Ans = $(85F)_{16}$



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g) $(110100)_2 = (?)_8$

→ Soln

Here,

$$\begin{array}{ccc} 1 & 1 & 0 \\ \hline 4 & 2 & 1 \\ \hline 6 & & \end{array}$$

$$\begin{array}{ccc} 1 & 0 & 0 \\ \hline 4 & 2 & 1 \\ \hline 4 & & \end{array}$$

$\therefore \text{Ans.} = (64)_8$

h) $(\underline{1110} \underline{1001})_2 = (?)_{16}$

→ Soln

Here,

$$\begin{array}{ccc} 1 & 1 & 1 & 0 \\ \hline 8 & 4 & 2 & 1 \\ \hline 14 & = & E & \end{array}$$

$$\begin{array}{ccc} 1 & 0 & 0 & 1 \\ \hline 8 & 4 & 2 & 1 \\ \hline 9 & & & \end{array}$$

$\therefore \text{Ans.} = (E9)_{16}$