

# ICT4LT

## FINAL TEST OPEN BOOK NO LAP-TOP (100 menit)

Name: OPIK DWI INDAH, S. Pd

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You do not need any extra paper, write down all your answers right here ! Use the back page if necessary.

1. Why should we learn about **ICT** (10 points): We know that ICT refers to the Information, Communication and Technology. It is a set of resources and technological equipment to communicate, create tools, and manage information. Some technology equipments here are computer, telephone, internet, radio, etc. And we should learn about ICT because nowadays is technology era where each person must know the facility of technology and can operate it. Besides, ICT is very useful in every field for example in educational field. We can use ICT to make the teaching and learning process more effective and efficient, like the students can get more information about the lesson by searching in the internet and teachers can use this facility (like computer) as a media to teach and that media is very helpful for them. Therefore, we should learn about ICT because it is very important and very needed in our daily activity.

3. List 6 (six) examples of the teaching format (5 points):

<b>Talk and chalk</b>	Study Circle	Drill - Practice
Master and Apprentice	Speech - Presentation	Test - Exam

4. List 6 (six) aspects to support the teaching skills (5 points):

<b>Experience</b>	Knowledge	Technique
Talent	Style	Tools

5. In one of your group assignments, your group has made a visit to an **ICT** facility for education (10 points):

(a) Name the **ICT** facility your group has visited: Computer Laboratory in SMK Nur Karya Tidung

(b) List 2 (two) examples of **hardware**, **software** and **humanware** aspects at the **ICT** facility:

<u>hardware aspects</u>	<u>software aspects</u>	<u>Humanware aspects</u>
Mouse	Operating system and Program	Computer operator
Keyboard	Moodle	Computer engineer

6. Your group has interviewed a practicing teacher to make an assessment on her/his mastery in **ICT** and how he/she uses the **ICT** to support his/her job (10 points):

(a) The teacher's name: Rahmat, S. Pd place of work: SMK Nur Karya Tidung

(b) His/her mastery of **ICT** is (circle only one answer):

\* Extra Ordinary \* Good \* Not Quite Good

(c) Explanation of 6(b): Based on the observation, his mastery of ICT is good because he can operate the computer well and in teaching process, he gave good explanation and nice interaction to the students, so they can catch the point or got the information of explanation clearly from him. But, unfortunately at there is less of facility like computer, which it can influence the teaching and learning process running slowly. However, he tried to do the best.

(use the back page if necessary)



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7. A society where the majority of its population earn their living as **information workers** is called an Information society (5 points). What do **Information workers** do for living? (10 points) Answer: They producing, processing, distributing information and producing the information technology.

Examples of **information workers** are (give three more): Teachers, Lecturers, Secretary, manager, researchers, academicians, writers and reporters.

8. There are 3 (three) levels of Information Systems, from the lowest to the highest (10 points):

1. Manual - based Information Systems
2. Computer - based Information Systems, and
3. Network - based Information Systems

8. What **mode** of communication did **Shannon** and **Weaver's model** of communication originally represent? Answer: Simplex mode. **2 (two)** other **modes of communication** derived from the same model are: (a) Full - Duplex and (b) Half - Duplex (10 points)

9. The smallest unit of information is 1 BIT stands for (an abbreviation of) Binary Digit (5 points)

10. Create 16 (sixteen) different "4-bit binary codes" to identify 16 different persons (10 points):

A: 0000	E: 0100	I: 1000	M: 1100
B: 0001	F: 0101	J: 1001	N: 1101
C: 0010	G: 0110	K: 1010	O: 1110
D: 0011	H: 0111	L: 1011	P: 1111

11. Write down your answers below, or use the back page if necessary:

- (a) If each **letter** or **character** is coded into a **10 bit binary code** of information, every **word** is made up from **5 letters** in average, and the content of every **page** is about **500 words** in average, how many **bits** of information are there contained in a **250-page** book? (5 point).
- (b) How many books about the same size as described in 11(a) can fill up an **8 GB Flash Disk**? (Note: 1 B(yte) = 10 b(its), so 8 GB = 80 Gb)(5 point).

Answer:

11. (a)  $\begin{matrix} 1 \text{ word} = 5 \text{ letters} \\ 1 \text{ Letter} = 10 \text{ bits} \\ 1 \text{ Page} = 500 \text{ words} \end{matrix} \begin{matrix} > \\ > \\ > \end{matrix} \begin{matrix} 250 \text{ pages} \times 500 \text{ words} = 125.000 \text{ words} \\ 125.000 \text{ words} \times 5 \text{ Letters} = 625.000 \text{ Letters} \\ 625.000 \text{ Letters} \times 10 \text{ bits} = 6.250.000 \text{ bits} \end{matrix}$
- So, in a 250 - pages, there are 6.250.000 bits of Information
- (b)  $\begin{matrix} 6250.000 \text{ bits} / 1000 = 6.250 \text{ Kb} \\ 6.250 \text{ Kb} / 1000 = 6.25 \text{ Mb} \\ 6.25 \text{ Mb} / 1000 = 0.00625 \text{ Gb for 1 book} \\ 80 \text{ Gb} / 0.00625 \text{ Gb} = 12.800 \text{ books} \end{matrix}$

So, there are 12.800 books can fill up an 8 GB flash Disk.