



مبادئ تقنية المعلومات

نماذج أسئلة اختبار و تدريبات



Hisham Teach



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تنبيه هام:

عزيزي المتعلم شرائك لهذه الملزمة لا يعني امتلاكك لحقوق الطبع والنشر
لا احلل نسخها أو تصويرها أو نشرها بأي طريقة كانت **دون أخذ إذن مني.**

طريقة المذاكرة؟ ذاكر الكتاب / السلايد وبعد ذلك تدرب على الملزمة

لا تحط كل اعتمادك على الملزمة نهائيًا

هشام محمود تعباني

True/ False Questions:

1	A binary digit can be represented using a switch.	
2	Human senses deal with analogue information	
3	Analogue signal has a finite level of amplitude	
4	Digital signal is discrete and only have 2 level of amplitude	
5	Logic one can be generated electrically by turning an electric switch OFF.	
6	35k bps internet connection means that 35k bit being transmitted every minute	
7	As bit period increases, data rate increases	
8	Noise interference with audio signal result in good audio quality	
9	High level of noise could result in bit errors	
10	Encryption used to remove noise from digital signals	

Multiple Choice

11. According to Moore's law, the number of transistors on the IC doubles every ____
- a. Months
 - b. Year and half
 - c. Year
 - d. Day
12. A transistor is an electronic device that act as ____
- a. Switch
 - b. Bit
 - c. Integrated circuit
 - d. None of the above
13. the Chip is another name of the ____
- a. transistor
 - b. bit
 - c. digital signal
 - d. none of the above
14. ____ is not continuous and finite.
- a. Analogue signal
 - b. Digital Signal
 - c. Neither a nor b
 - d. Either a or b

15. _____ measures the duration of the bit.
- a. Bits rate
 - b. Data rate
 - c. bit period
 - d. Transistor
16. Noise is easily removed from _____
- a. Digital Signal
 - b. Analogue signal
 - c. Discreet signal
 - d. All of the above
17. In digital technology errors can be _____
- a. Detected
 - b. Corrected
 - c. Transmitted
 - d. a and b
18. the speed of processing digital information is _____ the speed of processing analogue information.
- a. higher than
 - b. lower than
 - c. Equal to
 - d. None of the above
19. _____ makes ensures that if a third party intercept the signal they can not _____ the signal
- a. Decipher, receive
 - b. Decipher , encryption
 - c. Encryption, decipher
 - d. Encryption, receive
20. Compression is achievable for digital technology because:
- a. It is discrete
 - b. It contains repetitive information
 - c. It is fast
 - d. It can correct errors

Q2 (4 marks): Figure 1 shows a digital signal that represents an audio clip that has lasted for 0.006s and produced 12 bits. Knowing that each sample is represented by 2 bits:

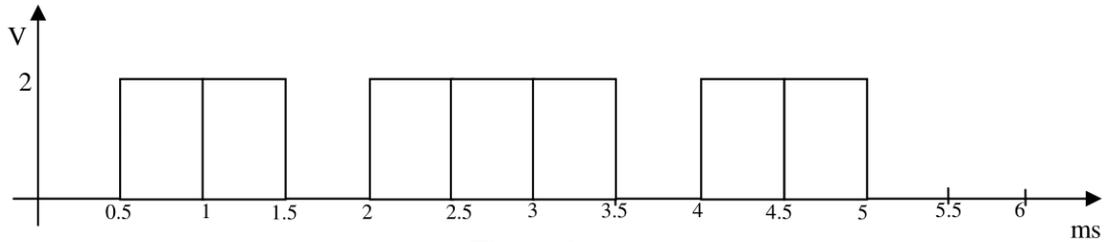


Figure 1

a. Calculate the sampling frequency of the audio signal?

$$\tau = 12/2 = 6 \text{ samples}$$

$$f_s = \tau/T = 6/0.006 = 1000 \text{ Hz}$$

b. Calculate the bandwidth of the original audio signal knowing that the sampling frequency is equal to the Nyquist rate?

$$f_N = 2B \Rightarrow B = f_N/2 \Rightarrow B = 500 \text{ Hz}$$

c. What are the bit period and the data rate of the digital signal shown in Figure 1?

$$\text{Bit period} = 0.5 \times 10^{-3} \text{ s}$$

$$\Rightarrow \text{Data rate} = 1/0.5 \times 10^{-3} = 2000 \text{ Bit per second}$$

d. A digital to analogue convertor is used to reconstruct the analogue audio signal. Plot the reconstructed samples of using the quantization levels shown in Figure 2?

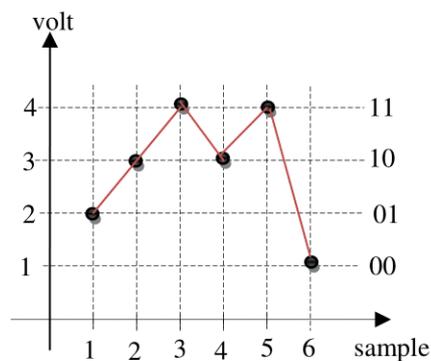


Figure 2

CH9: System analysis and Design

1. _____ is the field concerned with the planning, development, and implementation of artificial systems, including information systems.

[Hint]

- Prototyping
- Systems analysis
- Parallel conversion
- Cost-benefit analysis

2. Systems developers determine the requirements needed to modify an existing system or to develop a new one.

[Hint]

- True
- False

3. A system _____ is a collection of components purposefully organized into a functioning whole to accomplish a goal.

[Hint]

4. The first phase in the systems development life cycle is:

[Hint]

- maintenance.
- planning.
- implementation.
- analysis.

5. Which is NOT an essential of systems development wisdom that is built into the SDLC?

[Hint]

- A problem-solving approach works best.
- User involvement is crucial.
- Good project management skills are needed.
- Systems should be designed to meet current-day needs.

6. Which of the following is not a drawback to prototyping?

[Hint]

- Too much time spent on developing prototypes
- Increased user involvement
- Incomplete analysis of the problem and solution
- User confusion

7. Although the traditional waterfall model is still used by many organizations, the fast pace of change in information technology today sometimes requires more responsive techniques.

[Hint]

- True
- False

8. An organization's information technology steering committee does NOT include:

[Hint]

- information systems personnel.
- users.
- senior management.
- stockholders.

9. A problem is an unacceptable or undesirable result.

[Hint]

- True
- False

10. A process called _____ determines the requirements of the system by analyzing how the system will meet the needs of end users.

[Hint]

- systems analysis
- cost-benefit analysis
- technical analysis
- requirements analysis



King Abdulaziz University

Faculty of Computing and Information

Department of Information Technology

Introduction To Information Technology (CPIT 220)

26 / 7 / 1439 H

Second Exam

Time Allowed: 90 Minutes

Student Name:

Student ID:

Section Number:

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انقر للانتقال