

**CÂU HỎI, ĐÁP ÁN GỢI Ý, GIẢI THÍCH CHUYÊN MÔN CÂU 1, C, CẢ
MATLAB/SIMULINK VÀ ORCAD PSpICE ĐỀU LÀ PHẦN MỀM TIÊU
CHUẨN CÔNG NGHIỆP ĐỂ PHÂN TÍCH MẠCH. CÂU
2, E, & QUOT; $P_{TỔNG} = P_{R1} + P_{R2} + P_R$. VỚI $I_1 = 3A, I_2 = 4A$. DO XL**

Thời gian: **Không giới hạn** | Số câu: **15**

Họ và tên thí sinh: _____
Lớp / Đơn vị: _____

Số báo danh: _____
Ngày thi: _____

1. Which software is an industrial standard for circuit analysis?

- A.** Microsoft Excel
B. Adobe Acrobat
C. Matlab/Simulink
D. Orcad Pspice

2. What is the total power ($P_{tổng}$) if $P_{R1} = 3A$, $P_{R2} = 4A$, and $P_R = XL$?

- A.** 7A
B. XL
C. $XL + 7A$
D. Cannot be determined

3. What is the function of a resistor in a circuit?

- A.** To increase the current
B. To decrease the current
C. To store energy
D. To generate power

4. What does the 'P' in Pspice stand for?

- A.** Power
B. Program
C. Personal
D. Professional

5. Which of the following is not a component of a basic electrical circuit?

- A.** Resistor
B. Capacitor
C. Inductor
D. Microphone

6. What does MATLAB stand for?

- A.** Matrix Technical Analysis Library
- B.** Matrix Laboratory
- C.** Mathematical Technical Analysis Library
- D.** Mathematical Laboratory

7. What does Orcad stand for?

- A.** Oregon CAD
- B.** Orchard CAD
- C.** Original CAD
- D.** Orbital CAD

8. What does Simulink do?

- A.** It is a circuit analysis tool
- B.** It is a programming language
- C.** It is a simulation and model-based design environment
- D.** It is a data processing tool

9. Which of the following software is not used for circuit analysis?

- A.** Matlab/Simulink
- B.** Orcad Pspice
- C.** Microsoft Word
- D.** Multisim

10. What is the unit of current?

- A.** Volts
- B.** Ohms
- C.** Amperes
- D.** Watts

11. What is the symbol for resistance?

- A.** R
- B.** I
- C.** V
- D.** P

12. Which law states that the sum of voltages in a closed loop is equal to the sum of voltage drops in that loop?

- A.** Ohm's Law
- B.** Kirchhoff's Voltage Law
- C.** Faraday's Law
- D.** Maxwell's Equations

13. What does a capacitor do in a circuit?

- A.** It resists current.
- B.** It stores energy in an electric field.
- C.** It generates power.
- D.** It converts AC to DC.

14. What is the relationship between current and resistance?

- A.** They are directly proportional.
- B.** They are inversely proportional.
- C.** There is no relationship.
- D.** It depends on the circuit.

15. What is the main purpose of a fuse in a circuit?

- A.** To increase the current
- B.** To store energy
- C.** To protect the circuit from excessive current
- D.** To convert AC to DC

ĐÁP ÁN

Câu 1	Câu 2	Câu 3	Câu 4	Câu 5	Câu 6	Câu 7	Câu 8	Câu 9	Câu 10
C, D	C	B	C	D	B	A	C	C	C
Câu 21	Câu 22	Câu 23	Câu 24	Câu 25					
A	B	B	B	C					

Gợi ý / Giải thích:

Câu 1: Look for software specifically aimed at circuit analysis.

Câu 2: Total power is the sum of the powers of all components.

Câu 3: Think about the effect of resistance on current.

Câu 4: It's related to the user of the software.

Câu 5: Look for the component that doesn't directly affect the flow of electricity.

Câu 6: MATLAB is related to matrices.

Câu 7: Orcad originated from Oregon, United States.

Câu 8: Simulink is used for modeling, simulating, and analyzing dynamic systems.

Câu 9: One of the options is a word processing tool.

Câu 10: It's named after a French mathematician and physicist.

Câu 11: It's the first letter of the word 'resistance'.

Câu 12: The law is named after a German physicist.

Câu 13: Think about the property of storing energy.

Câu 14: Consider Ohm's Law.

Câu 15: Think about safety measures in a circuit.