Computer Engineering
Western Technical-Commercial School

Name:

Date: Section:

Computer Service and Maintenance Safety Review Questions

Answer questions in sentence form neatly in the space provided. Use the related web resources to answer the questions fully. Half a mark for short points and one mark for each explanation.

1. Why is it good practice/precaution to unplug the computer before cleaning?

   _____

2. Why should you not use a standard vacuum to clean out a computer?

   _____

3. What issues may capacitors have in unsafe situations?

   _____
   _____

4. What is electrostatic discharge, how it is caused, and how can you prevent it when working on a computer?

   _____
   _____
   _____

5. Never spray cleaning liquids directly on sensitive equipment, why & how?

   _____
   _____

6. Explain four hazards of using compressed air while cleaning a computer.

   _____
   _____
   _____
   _____
   _____

7. How can the above hazards be prevented?

   _____
   _____
   _____

8. Summarize a list of 8 safety precautions that should be kept in mind when servicing a computer.

   _____
   _____
   _____

Mark Breakdown Column

Q#	A
1	1
2	1
3	2
4	3
5	2
6	4
7	4
8	4
T=	21

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Service and Maintenance Procedures Review Questions

Answer questions in sentence form neatly in the space provided. Use the related web resources to answer the questions fully. Half a mark for short points and one mark for each explanation.

1. What is the purpose of computer service cleaning & maintenance (4)?

_____

2. Why is it important to test the system before servicing the computer?

_____

_____

3. What two main concerns does dust cause with computers/electronics?

_____

4. When cleaning a system, why is it necessary to remove some components?

_____

5. What common tools/resources are needed to service/clean your computer?

_____

6. What 3 factors affect how often a computer should be cleaned/serviced?

_____

_____

_____

7. Describe three techniques using compressed air to clean a computer.

_____

_____

8. List the major maintenance steps to service/clean a computer?

_____

_____

_____

9. List five preventative measures on top of regular service maintenance?

_____

_____

_____

_____

Mark Breakdown Column

Q#	A
1	2
2	2
3	2
4	1
5	4
6	3
7	3
8	5
9	5
T=	27

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Computer Hardware Component Review Questions

Answer questions in sentence form neatly in the space provided. Use the related web resources to answer the questions fully. Half a mark for short points and one mark for each explanation.

1. List four major computer function areas used also to categorize hardware and two examples of each.

Mark
Breakdown
Column

Q#	A
1	6
2	3
3	2
4	4
5	2.5
6	8
7	4.5
T=	30

2. What is the CPU, what is it generally made up of, and what does it do?

3. The speed of the processor or operations per second, is dependent on what two main factors and name two indirect factors?

4. What are the primary ROM / RAM components and their differences.

5. Define secondary storage memory and name the 3 common types?

6. Compare the speed, voltage, amps, and watts for standard USB 1,2,3 & C.

7. List with quick description all the common computer supply connections.

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Electronic Components Review Questions

Answer questions in sentence form neatly in the space provided. Use the related web resources to answer the questions fully. Half a mark for short points and one mark for each explanation.

1. Name 2 classes of electronics with explanations and 2 examples each?

_____

_____

Mark Breakdown Column

2. Explain what resistors and capacitors do in a circuit?

_____

_____

Q#	A
1	4
2	2
3	7
4	10
5	5
T=	28

3. Explain on a molecular level how silicon crystal is altered to make N and P type semiconductor materials.

_____

_____

_____

_____

_____

4. Explain how semiconductors work in forward and reverse bias using key terms: PN junction, free electrons, depletion region, battery, 0.7 volts, forward bias, reverse bias, positive holes.

_____

_____

_____

_____

_____

_____

_____

_____

_____

5. In simple terms, how does a transistor work and what is it used for?

_____

_____

_____

_____

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Troubleshooting and Project Design Process Review Questions

Answer questions in sentence form neatly in the space provided. Use the related web resources to answer the questions fully. Half a mark for short points and one mark for each explanation.

1. What is troubleshooting?

_____
_____
_____
_____

2. What is a design process?

_____
_____

3. Using the SPICE model, name and explain each of the process steps.

_____
_____
_____
_____

Mark
Breakdown
Column

Q#	A
1	3
2	3
3	5
4	1
5	2
6	3.5
7	1
8	2.5
9	1
T=	22

4. Using the SPICE model with respect to troubleshooting, which step takes up the most time in this process?

_____

5. What is incident matching and how does it fit in with troubleshooting.

_____
_____

6. List the 5 major steps in troubleshooting and if no solution then what?

_____
_____
_____

7. When troubleshooting, what is the key knowledge area required to allow you to communicate effectively?

_____

8. What key skills and knowledge make for a better troubleshooter?

_____
_____

9. In order to be an effective troubleshooter, you need to not only have operational knowledge but also…?

_____