Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **1** of **20**

A group of researchers from the Physics department at MIT tracked the evolution of the cosmos from a few hundred thousand years after the Big Bang up to the current time, 13.8 billion years later using a model called ____.

- Illustris

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **2** of **20**

Ultimately, a computational model is translated into a computer program written in a ____ language and executed on a Von Neumann computer.

- high-level

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **3** of **20**

Data ____ determines the optimal format for presenting data.

- presentation

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **4** of **20**

A typical laptop computer executes roughly ____ instructions per second.

- 2 billion

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **5** of **20**

A physical system that is modeled using a set of equations and algorithms that capture the properties and behaviors of the system is referred to as which of the following?

- simulation model

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **6** of **20**

The massively parallel Chinese Tianhe-2 supercomputer, which runs at a rate of 34 ____, will be executing computational models in the area of fluid dynamics.

- petaflops

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **7** of **20**

The National Energy Research Scientific Computing Center climate model was executed on a massively parallel IBM-SP supercomputer containing 6,086 processors, with the peak computation rate of six ____.

- teraflops

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **8** of **20**

The field of ____ is concerned with the technical issues involved in information display.

- computer graphics

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **9** of **20**

The time that a body takes to fall through space is modeled as ____.

- continuous

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **10** of **20**

The ____ method entails observing the behavior of a system and formulating a hypothesis that tries to explain its behavior.

- scientific

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **11** of **20**

Data ____ determines which values are important and should be included and which values can safely be omitted.

- extraction

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **12** of **20**

A simulation can easily model fractions of a second or billions of years, because time is simply a ____ in an equation.

- parameter

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **13** of **20**

____ is an enormously important part of computational modeling; without it, we could not interpret a model's results.

- Scientific visualization

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **14** of **20**

Data ____ converts data to other forms or to different units so that information is easier to understand and interpret.

- manipulation

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **15** of **20**

The.____ of one event can cause new events to occur at some time in the future.

- process

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **16** of **20**

Parts of a system that display random behavior are known as ____.

- stochastic components

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **17** of **20**

In a model of a department store, a customer purchasing an item is an example of a(n) ____.

- event

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **18** of **20**

One of the most powerful and useful forms of scientific visualization is image ____.

- animation

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **19** of **20**

Testing a model airplane in a wind tunnel to understand how the full-sized aircraft would behave is an example of a ____ model.

- physical

Unit 13 Test

Your Score: **90%**
18 Correct out of **20**
Question **20** of **20**

An ____ is any activity that changes the state of a system.

- event