Name: _____

Midterm Examination

COEN-317, Section 2

Total points possible: 30

1. The architecture of a decentralized distributed system in which processes serve an equal role is known as a _____ system. (1 point)

2. A _____ is a middleware layer component that solves the problem of incompatible interfaces in a distributed system. (1 point)

3. _____ is a form of persistent asynchronous communication that offers intermediate-term storage capacity for messages "without requiring either the sender or receiver to be active during message transmission." (1 point)

4. A _____ "acts as an application-level gateway in a message-queueing system. Its main purpose is to convert incoming messages so that they can be understood by the destination application." (1 point)

5. The eight socket operations for TCP (Transmission Control Protocol) are:

- _____. (1 point)

- _____. (1 point)

- _____. (1 point)

- _____. (1 point)

- _____. (1 point)

- _____. (1 point)

- _____. (1 point)

- _____. (1 point)

6. When "a process is offered a facility to locally call a procedure that is effectively implemented on a remote machine" this is known as a:

_____. (1 point)

7. A form of communication in which "a message that has been submitted for transmission is stored by the communication middleware as long as it takes to deliver it to the receiver" is known as:

_____. (1 point)

8. The _____ pattern of communication

"is used in traditional client-server communication" in which the client application sends

"a request message to a server and expects the later to respond with an appropriate

response." (1 point)

9. In the _____ pattern of communication,

"clients subscribe to specific messages" sent from the server. (1 point)

10. The _____ pattern of communication

is characterized by a push-pull process in which a process pushes out its results under

the assumption that other processes will pull in those results. (1 point)

11. A process which acts as both a client and a server at the same time is known as a

_____. (1 point)

12. The acronym ACID refers to four characteristics of transactions in database applications. These four characteristics which define ACID are:

- _____. (1 point)

- _____. (1 point)

- _____. (1 point)

- _____. (1 point)

13. One of the four layers in cloud computing and the lowest layer provides "the means to manage the necessary hardware: processors, routers, but also power and cooling systems." This layer is known as: _____.
(1 point)

14. One of the four layers in cloud computing, this layer forms "the backbone for most cloud computing platforms" by "allocating and managing virtual storage devices and virtual services." This layer is known as:

_____. (1 point)

15. One of the four layers in cloud computing, this layer provides a "means to easily

develop and deploy applications that need to run in a cloud." This layer also provides

"a vendor-specific API, which includes calls to uploading and executing a program in

that vendor's cloud." This layer is known as:

_____. (1 point)

16. One of the four layers in cloud computing, this layer runs programs in the vendor's

cloud. This layer is known as: _____.

(1 point)

17. A "collection of autonomous computing elements that appears to its users as a
single coherent system" is defined as:
_____. (1 point)

18. Scalability in distributed systems can be measured along the following three

dimensions:

_____ (1 point)

_____ (1 point)

_____ (1 point)