KINGS

COLLEGE OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
QUESTION BANK

SUBJECT CODE: CS1018   **YEAR: IV**

SUBJECT NAME: GRID COMPUTING   **SEM: VIII**

UNIT – I GRID COMPUTING

Part –A (2 MARKS)

1.   Define grid computing.

2.   List some of the QOS features available in grid computing.

3.   List the features of computational grid

4.   State the features of data grids.

5.   Mention the foundations of grid computing.

6.   What is business on demand?

7.   Define Grid Resource Brokers

8.   Define Grid Security Infrastructure (GSI)

9.   Mention some major business areas of grid computing.

10.   What is a Service-Level Agreement (SLA)?

11.   Name some earlier derivatives of grid computing.

12.   Mention some characteristics of virtual organization.

13.   List the business benefits provided by grid computing.

14.   Mention the common needs of grid applications.

15.   List the support functions offered by resource broker.

16.   List out the capabilities of grid portals.

Part – B

1. Explain in detail about virtual organization.   (16)

2. Write about the scope of grid computing. in business areas. .   (16)

3. Explain some of the grid application and their usage patterns.   (16)

4. Write short notes on.   (16)

   a) Schedulers

   b) Resource broker

   c) Load balancing

   d) Grid portals

5. What are the data and functional requirements of grid computing?   (16)

6. Explain briefly about grid infrastructure.   (16)

UNIT - II GRID COMPUTING INITIATIVE

Part –A(2 MARKS)

1.   Name the classification of grid computing organization based on their functional role.

2.   What are the basic goals of GGF?

3.   What are the major works of GGF?

4.   Mention the important characteristic of legion system

5.   What are the core objects defined by legion system?

6.   Name the components available in Nimrod architecture?

7.   What are the scheduling algorithms used in Nimrod_G?

8.   What are the major objectives of Euro grid project?

9.   What are the application specific work packages identified for the Euro grid?

10.   Define dynamic accounting system.

11.   Mention the characteristic of connectivity layer?

12.   What are the two primary classes of resource layer protocols?

13.   What are the collective services available in grid computing

14.   What are the basic principles of autonomous computing?

15.   What are the four essential characteristics of   on demand business?

16.   What are the essential capabilities provided by on demand business?

17.   Write note on GRAM.

18.   Differentiate condor from condor _G.

PART –B

1   a)   Explain about the organization developing grid standards and best practices

                Guidelines.   (8)

        b)   Explain about the organization   working to adopt grid concepts into commercial

                products.   (8)

2.   Discuss briefly about organization building and using grid based solution to

        solve their computing data and network requirements. .   (16)

3.   Write notes on organizations developing grid computing toolkits   frameworks and

        Middleware solution.   (16)

4.   Explain the layered architecture of grid with a neat diagram.   (16)

5.   Describe about the relation of grid architecture with other distributed technologies.(16)

6.   Write notes on

                Autonomic computing   (4)

                BOD and   infrastructure virtualization   (4)

                Service oriented   architecture and grid   (4)

                Semantic grids   (4)

7.   What are the third generation initiatives of grid computing?.   (16)

UNIT - III GRID COMPUTING APPLICATIONS

Part –A (2 MARKS)

1.   What are the two commonly understood SOA architecture?

2.   Define SOA.

3.   Define Web Service .

4.   Define Semantic Web

5.   Write a note on Service-Oriented Architecture (SOA)

6.   Define Simple Object Access Protocol (SOAP)

7.   Define Web Services Architecture (WSA)

8.   Define Web Service Description Language (WSDL)

9.   What are the fundamental components of SOAP specification?

10.   What are the features of SOAP?

11.   What are the mechanisms available to implement the features of SOAP?

12.   Write notes on Message exchange pattern.

13.   List out the difference between WSDL 1.1 and WSDL1.2.

14.   What is the vision behind global XML architecture?

15.   What are the major building blocks identified by GXA?

16.   Write notes on WS –Federation

17.   What are the classifications of service state management?

18.   List out the layers of grid architecture.

19.   Compare and contrast Grid Computing and P2P computing

20.   What are the third generation grid initiatives?

21.   Mention the two type of message encoding used in WSDL 1.1.

Part -B

1.	Explain briefly about SOA.	(16)
2.	Explain briefly about Web service architecture.	(16)
3.	Explain in detail about SOAP.	16)
4.	What are the service message description mechanism available? Explain.	(16)
5.	Explain briefly about WSDL.	(16)
6.	Discuss in detail about global XML Architecture vision.	(16)
7.	Discuss in detail about web service and grid service.	(16)
8.	Explain in detail about Basic Profile guidelines.	(16)

UNIT – IV TECHNOLOGIES

PART –A (2Marks)

1.	What are the major goals of OGSA?

2.	What are the more specific goals of OGSA?

3.	What are the main purposes of use cases defined by the OGSA group?

4.	Name some representational use cases from OGSA architecture working group.

5.	Who are the actors in CDC?

6.	Mention the scenarios in CDC.

7.	What are the functional requirements of CDC on CGSA?

8.	Who are the actors in NFC?

9.	Mention the scenarios NFC.

10.	What are the functional requirements of NFC on CGSA?

11.	Who are the actors in online media and entertainment?

12.	Mention the scenarios online media and entertainment.

13. What are the functional requirements of online media and entertainment on CGSA?

14. What are the layers available in the OGSA architectural organization?

15. What are the OGSA basic services?

16. What are the two dimensions of stateful nature of web service

17. compare and contrast Web service with Grid service

18. What is a Stateful Web service?

19. Write note on Grid service description.

20. Define Grid service instance.

21. Define Grid service reference.

22. What is a Service data element?

23. List the four service data concepts.

24. Mention the attributes of SDE.

Part –B

1. Describe the architecture of OGSA. (16)

2. Explain briefly about commercial data center. (16)

3. Explain briefly about NGC. (16)

4. Explain briefly about Commercial grid. (16)

5. What are the OGSA platform components? Write note on each of them. (16)

6. Describe in detail about the inheritance interface diagram. (16)

7. Describe in detail about service data concepts. (16)

8. Explain briefly about CMM. (16)

9. What are the OGSA basic services? Explain each of them with necessary diagrams(16)

10. (a) Write notes on policy architecture (8)

    (b) Write notes on security architecture (8)

11 .(a) Write notes on metering and accounting   (8)

   (b) Write notes on common distributed logging   (4)

   (c) Write notes on distributed data access and replication.   (4)

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UNIT V GRID COMPUTING TOOL KITS

Part –A

1.   Mention the core components of GT3 core.

2.   What are the features of grid service container?

3.   Mention some of the some of the existing GT3 system-level services.

4.   What are the types of hosting environment supported by GT3?

5.   Define pivot handlers.

6.   What are the two aspects involved in GRAM?

7.   What are the two kinds of life cycle model associated with state data recovery?

8.   What are the default state management supports available   in GT3?

9.   What are two levels of security available in GT3?

10.   What are the treatments to the operation involved in service activation?

11.   What are the two ways available to create and add service data to service data set?

12.   What are the steps involved in creating SDE?

13.   Mention some of the expression evaluators supported by GT3.

14.   Write notes on client-side invocation pattern.

15.   What are the two different message level authentication mechanisms provided by

      GT3?

16.   What are the most common GT3 security handlers?

17.   List the requirements that should be fulfilled by information services.

18.   What are the important components in index service core?

19.   Mention the major components of GRAM.

Part –B

1.   Explain the Architecture of globus GT3 toolkit with a neat diagram.   (16)

2.   Describe about the   information management services available in GT3   (16)

3.   Describe about the index services available in GT3.   (16)

4.   What are the resource management services offered by GT3 ?   (16)

5.   Write notes on data management services.   (16)

6.   Explain briefly about service programming model.   (16)

7.   Explain in detail about Acme search service implementation in top down approach. (16)

8.   Discuss in detail about OGSI.NET Middleware Solutions.   (16)

9.   Describe in brief about service Programming model.   (16)

10.   (a)   Write notes on Grid service life cycle model   (8)

        (b)   Write notes on JAX-RPC Handlers   (8)

11.   (a)   Explain the   architecture of GRAM with a neat diagram   (8)

        (b)   Write notes on common GT3 security handler   (8)