



Roll No:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

BTECH
(SEM VII) THEORY EXAMINATION 2024-25
HIGH PERFORMANCE COMPUTING

TIME: 3 HRS

M.MARKS: 100

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A

1. Attempt all questions in brief. 2 x 10 = 20

Q no.	Question	CO	Level
a.	Define Peer to Peer Computing with example.	1	K1
b.	Write about the Protocol and its importance.	1	K2
c.	Explain the term Open Grid in computing.	2	K2
d.	Why Security is the important concern in Computing?	2	K3
e.	How Cluster build with network nodes?	3	K3
f.	Write the applications of Clusters.	3	K2
g.	Explain the term Virtual Machine with example.	4	K2
h.	State the use of software in clustering.	4	K1
i.	Write the use of cloud in computing.	5	K2
j.	Explain the term Storage in respect of Cloud.	5	K2

SECTION B

2. Attempt any three of the following: 10 x 3 = 30

a.	Describe the Grid Computing Model and its Protocols with proper diagram.	1	K2
b.	Explain the Open Grid Service Architecture in Computing Environment.	2	K3
c.	List the components of Clusters. Explain different classification of Clusters.	3	K2
d.	Discuss the use of Parallel Virtual Machine and its working with example.	4	K4
e.	List the different type of Clouds. Explain all the types of cloud with example.	5	K3

SECTION C

3. Attempt any one part of the following: 10 x 1 = 10

a.	Write about the Architecture of High-Performance Grid with diagram and its applications.	1	K3
b.	Discuss the High-Performance Application Development Environment with example.	1	K4

4. Attempt any one part of the following: 10 x 1 = 10

a.	Write about the various requirements and capabilities of Open Grid in Computing.	2	K3
b.	Describe about the GLOBUS Toolkit with proper example.	2	K2

5. Attempt any one part of the following: 10 x 1 = 10

a.	Illustrate the resource management and Scheduling process in Clustering Computing.	3	K3
b.	Draw the architecture of Cluster Computer and explain it in brief.	3	K3

6. Attempt any one part of the following: 10 x 1 = 10

a.	Discuss the use of Parallel programming with MPL with example.	4	K4
b.	Draw the architecture of Beowulf System and explain it in Brief.	4	K3

7. Attempt any one part of the following: 10 x 1 = 10

a.	Discuss the Service Oriented Architecture in Cloud with diagram.	5	K4
b.	Explain the various components used in Cloud Computing with example.	5	K3