Code No.: CS8123PE | R20 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE : : HYDERABAD
UGC AUTONOMOUS
I–M. TECH–I–Semester End Examinations (Regular) – April - 2022
HIGH PERFORMANCE COMPUTING (PE - II)
(CSE)

[Time: 3 Hours] **[Max. Marks: 70]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A **(20 Marks)**

1.	a)	Define Data Grid.	[2M]
	b)	List the advantages and disadvantages of Grid computing.	[2M]
	c)	What are the design objectives of Computer Clusters?	[2M]
	d)	Give the classification of Networking protocols.	[2M]
	e)	Differentiate between Cluster and Pervasive computing.	[2M]
	f)	What are the applications of Pervasive computing?	[2M]
	g)	What is meant by Device connectivity?	[2M]
	h)	Define Device connectivity.	[2M]
	i)	How can you represent the Qubit?	[2M]
	j)	Define Universal gate.	[2M]

PART-B **(50 Marks)**

2.	Discuss about Grid Architecture with a neat sketch.	[10M]
	OR	
3.	How grid is related to various Distributed Technologies? Explain in detail.	[10M]
4.	Briefly explain the design principles of Computer Clusters.	[10M]
	OR	
5.	Explain in detail about Load sharing and Balancing in cloud.	[10M]
6.	Discuss about Fault-Tolerant Cluster Configurations.	[10M]
	OR	
7.	Describe about Pervasive computing concepts.	[10M]
8.	Explain about Java for Pervasive computing.	[10M]
	OR	
9.	Write a short note on the following: i. Bluetooth ii. IrDA	[10M]
10.	Explain the following: i. Classical and Quantum logic gates. ii. Fredkin & Toffoli gates.	[10M]
	OR	
11.	Discuss in detail about Quantum Algorithms.	[10M]

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