(57) 28/02/2022 IV 4th Shift

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MID SEMESTER EXAMINATION – FEB - MAR 2022 **B. TECH. - 6th Sem**	
Course Code: **COCSC18, CACSC20** Course Title: **High Performance Computing**	
Time: 1.5 Hours	**Max. Marks: 15**
Note: Attempt all the five questions. Missing data / information if any, may be suitably assumed & mentioned in the answer. All questions are of equal marks.	

Q. No.	Question	Marks	CO
1a	Explain Flynn's classification of parallel architecture with diagram.	2	1
1b	Define granularity.	1	2
2a	State any four application areas of parallel computing.	2	3
2b	Explain recursive decomposition with an example.	1	2
Q3	S1: Load R1, 1024 /R1 ← 1024/ S2: Load R2, M(10) /R2 ← Memory(10)/ S3: Add R1, R2 /R1 ← (R1) + (R2)/ S4: Store M(1024), R1 /Memory(1024) ← (R1)/ S5: Store M((R2)), 1024 /Memory(64) ← 1024/ where (Ri) means the content of register Ri and Memory(10) contains 64 initially.		
3a	Draw the dependency graph to show all the dependencies.	2	3
3b	Are there any resource dependencies if only one copy of each functional unit is available in CPU?	1	1
4a	Explain MPI_Send() primitive in message passing using MPI.	2	4
4b	Explain PRAM models in brief	1	5

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P.T.O.

8/3/22 10 to 11:30

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B.Tech. (CSE), Sem. 06

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MID SEMESTER EXAMINATION

February-2022

Course Code: **COCSC20** Course Title: **Internet of Things**

Time: 1:30 Hours Max Marks: 25

Note: **Attempt all questions.**
Assume suitable missing data if any.

No.	Question(s)	CO	Marks
1 (a)	Explain the **format** of HTTP request and response line with an **example.**	1	**2**
1 (b)	What is **Axiom 0** by Tim Berners-Lee, director W3C? What are the key considerations for IoT architecture?	3	**3**
2 (a)	Explain the following abbreviations: a) URI b) JSON c) NFC d) MANET e) Name one of ADC approach	1	**2.5**
2 (b)	Explain the **uses/applicability** of cloud, fog, and edge computing in terms of an IoT application.	4	**2.5**
3 (a)	Write any **five differences** between Active and passive RFID Tags. Active Tag | Passive Tag	3	**2**
3 (b)	Explain the **usecase** of RFID technology at Airport. What could be the **pros and cons** using RFID.	5	**3**
4 (a)	Write and explain an **algorithm** of DSR protocol with an example (routing process over a network).	2	**2**
4 (b)	Explain the most suitable architecture for IoT networks in a **diagrammatical** representation.	2	**3**
5 (a)	Match the following: **Layer(s)** — **Protocol** Link Layer — UDP Application Layer — 6LoWPAN Application Layer — COAP Internet Layer — HTTP Transport Layer — IEEE 802.15.4	1, 3	**3**
5 (b)	What are **pin configurations** of the ultrasonic sensor? What are the **enablers** for the IoT Technology, explain with example?	1	**2**

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