

Exam Date & Time: 03-Oct-2023 (03:15 PM - 04:15 PM)



CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF TECHNOLOGY AND ENGINEERING
DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY AND RESEARCH
Seventh Semester of B. Tech (CSE) Examination
Unit Test - 2

ADVANCE COMPUTING [CS451]**Marks: 30**

Duration: 60 mins.

Section - 1

Answer all the questions.

Section Duration: 15 mins

Instructions:

- (i) Attempt **all** the questions.
(ii) Figures to the right indicate **full** marks.

1			What is edge computing's role in cloud computing?							(1)	
1)	They are unrelated		2)	They are the same		3)	Edge computing provides an alternate location to run workloads -- at the edge instead of a cloud environment.		4)	Edge computing is the cloud's silver lining -- or the edge of the cloud	
2			One application of IoT edge computing is using sensors, real-time data analytics and data operations to run a self-driving car.							(1)	
1)	True		2)	False							
3			What's the difference between edge computing and fog computing?							(1)	
1)	Experts use them interchangeably		2)	The architectures place intelligence and compute power in separate places		3)	Fog computing encompasses a large web of connected devices and data locations, and edge computing processes data and compute solely at the edge		4)	All of the Above	
4			Which of the following simply means to hardware or software load over web servers, that improves the efficiency of the server as well as the application?							(1)	
1)	Load Balancing		2)	Amazon Cloud-front		3)	Elastic Load Balancer		4)	Security Management	
5			Which service in Azure is used to manage resources in Azure?							(1)	
1)	Azure Portal		2)	Log Analytics		3)	Application Insights		4)	Azure Resource Manager	
6			Which of the following services is/are provided by the Google Cloud Platform?							(1)	
1)	Machine Learning		2)	Storage		3)	Compute		4)	All of the above	
7			What is the primary advantage of using Docker?							(1)	
1)	Improved application security		2)	Improved application performance		3)	Improved application portability		4)	Improved application scalability	
8			How does Docker differ from traditional virtualization?							(1)	

1)	Docker uses hardware-level virtualization		2)	Docker uses software-level virtualization		3)	Docker provides full isolation of the underlying system		4)	Docker provides less isolation of the underlying system	
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9		
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Which sentence describes better Docker?

1)	Build once, run twice		2)	Build once, run everywhere		3)	Easy to run, is much more fun		4)	All of the above	
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(1)

10		
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Fog computing allows for latency-sensitive distributed surveillance that maintains privacy.

1)	True		2)	False	
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(1)

Section - 2

Answer 4 out of 5 questions.

Section Duration: 45 mins

Instructions:

- (i) Attempt **all** the questions.
- (ii) Figures to the right indicate **full** marks.
- (iii) Make suitable assumptions and draw neat figures wherever required.

1		
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Illustrate the need of Edge Computing? How is Edge Computing related to IoT? Explain Two Real-world Applications of Edge Computing.

(5)

2		
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Explain the lifecycle of web application deployment in the Cloud using Amazon Web Services (AWS) with auto-scaling and high availability.

(5)

3		
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Illustrate the characteristics of Fog Computing in detail.

(5)

4		
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How many Docker components are there? List and explain briefly each component.

(5)

5		
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Mention the difference between virtualization and containerization.

(5)

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