



P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Sixth Semester, B.E. - Computer Science and Engineering

Semester End Examination; July / Aug. - 2022

Cloud Computing Platform

Time: 3 hrs

Max. Marks: 100

Course Outcomes

The Students will be able to:

CO1: Understand Cloud Infrastructure of different service providers.

CO2: Explain Virtualization, Layering & virtualization and performance of virtual machines.

CO3: Describe the different modes of Cloud Resource Management and Scheduling.

CO4: Understand Google cloud platform and services.

CO5: Implement Google cloud platform and services.

Note: I) PART - A is compulsory. **Two** marks for each question.

II) PART - B: Answer any **Two** sub questions (from a, b, c) for a Maximum of **18 marks** from each unit.

Q. No.	Questions	Marks	BLs	COs	POs
I : PART - A		10			
I a.	Explain the following types of cloud: i) Community cloud ii) Hybrid cloud	2	L1	CO1	PO2
b.	List and explain two types of virtual machines.	2	L2	CO2	PO2
c.	List the fine classes of cloud resource management policies.	2	L1	CO3	PO2
d.	What is serverless computing?	2	L2	CO4	PO2
e.	Explain cloud DNS.	2	L2	CO5	PO2
II : PART - B		90			
UNIT - I		18			
1 a.	Write the difference between three cloud computing delivery models from the point of view of the application developers and users.	9	L3	CO1	PO2
b.	Explain AWS management console offered by Amazon, with a neat block diagram	9	L2	CO1	PO2
c.	Explain the major components of open source cloud platform 'Eucalyptus' what types of cloud is supported by Eucalyptus?	9	L2	CO1	PO2
UNIT - II		18			
2 a.	Discuss the steps involved in a xen hypervisor circular ring of buffers used to process requests.	9	L2	CO2	PO2
b.	Explain the issues faced by virtualization of X86 architecture.	9	L2	CO2	PO2
c.	Differentiate between full virtualization and para virtualization.	9	L2	CO2	PO2

UNIT - III**18**

- 3 a. Use the start-time fair queuing (SRQ) algorithm to compute the virtual start up and finish time for two threads a and b with weights $W_a = 1$ and $W_b = 5$ when the time Quantum is $Q = 15$ and thread b block at time $t = 24$ and wakes up at time $t = 60$. [Note: In case of a tie between threads give arbitrary priority to thread b].
- 9 L4 CO3 PO2
- b. Illustrate the stability of a two level resource allocation architecture with neat diagram.
- 9 L3 CO3 PO2
- c. Write ASCA combinatorial auction algorithm and explain with a neat diagram.
- 9 L3 CO3 PO2

UNIT - IV**18**

- 4 a. Explain the relationship between global, regional and zonal resources with a neat diagram.
- 9 L2 CO4 PO2
- b. Explain the three basic ways Google cloud interacts with the services and resources.
- 9 L1 L2 CO4 PO2
- c. What is compute engine? Also explain the key features of compute engine.
- 9 L2 CO4 PO2

UNIT - V**18**

- 5 a. Explain VPC networks and its properties in detail.
- 9 L1 L2 CO5 PO2
- b. List and explain benefits of load balancing on Google cloud platform.
- 9 L2 CO5 PO2
- c. Brief out machine learning services and machine learning API's.
- 9 L1 L3 CO5 PO2

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