Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **17CS3010** | **Duration :** | **3hrs** |
| **Sub. Name :** | **CLOUD COMPUTING SERVICES** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | | **Marks** |
| 1. | a. | Describe the characteristics and benefits of cloud computing. | CO1 | | 10 |
| b. | Classify the limitations of cloud computing. | CO1 | | 10 |
| **(OR)** | | | | | |
| 2. | a. | Identify the procedure for crowbar based machine deployment. | CO1 | | 12 |
| b. | Outline the crowbar architecture and its components for OpenStack cloud deployment automation. | CO1 | | 8 |
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| 3. | a. | Illustrate the significance of regions, zones and host aggregates in OpenStack Deployment. | CO2 | | 10 |
| b. | Describe the OpenStack conceptual architecture, list and briefly explain compute, storage, network and admin oriented services. | CO2 | | 10 |
| **(OR)** | | | | | |
| 4. | a. | Describe barclamps. Is it necessary to deploy the barclamps in order ?  Justify your answer. List the types of cluster node configurations available. What type is recommended and why? | | CO1 | 10 |
| b. | Explain the high availability architecture components and describe the importance of fencing and STONITH. | | CO1 | 10 |
|  |  |  | |  |  |
| 5. | a. | Appraise the six services offered by keystone to bind other cloud infrastructure services together. | | CO2 | 10 |
| b. | Write the appropriate service catalog management commands to perform the following tasks:  i) define/create a service “ai” ii) list the existing services  iii) delete an existing service gaming  iv) create endpoint for “ai” (public/private/internal)  v) list all the existing end points vi) delete an existing endpoint gaming. | | CO2 | 10 |
| **(OR)** | | | | | |
| 6. | a. | Explain the image file formats supported by glance and image recommendations. | CO2 | | 10 |
| b. | Write the correct commands to perform the following tasks.  i) create new image in the glance registry named  “sles15.qcow2” and set the visibility as public  ii) delete an existing image cirros iii) list all the existing images  iv) show the images details of sles15  v) change the visibility of sles15 to private | CO2 | | 10 |
|  |  |  |  | |  |
| 7. | a. | Describe neutron software defined networking functionality to Open Stack cloud to create and manage layer 2 and layer 3 networking. | CO4 | | 15 |
| b. | Write the necessary commands to perform the following:  i) create a network bchain-network  ii) create a subnet bchain-dev-subnet with the network  192.168.93.0/24  iii) create a router chain-dev-router  iv) connect the router with the subnet bchain-dev-subnet  v) connect the router with external interface named “external” | CO4 | | 5 |
| **(OR)** | | | | | |
| 8. | a. | Illustrate the provisioning, deployment, and retirement of workload services using different virtualization back ends by nova. | CO3 | | 10 |
| b. | Write the correct commands to perform the following tasks:  i) launch a new instance  ii) reboot an instance  iii) suspend and resume an instance  iv) power off and remove an instance  v) display existing instances | CO3 | | 10 |
|  | | **Compulsory**: |  | |  |
| 9. | a. | Elanca cloud provider has to implement an object storage with the properties of high available, distributed object store. It must support massive scale in and out. Propose solution architecture with different tiers. | CO5 | | 15 |
| b. | Describe any five container | object commands | CO5 | | 5 |