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| **Syllabus for Diploma in “IT, Networking and Cloud”** | | | |
| **Elective Subject 1: Cloud Application Developer: 320 Hrs.** | | | |
| **Hour No.** | **Learning outcome** | **Professional Skills (Trade Practical)** | **Professional Knowledge (Trade Theory)** |
| **(With indicative Hours)** | |
| 1-200 | Able to understand the Cloud, Architecture, App Development & Deployment in cloud environment. | Following operations will be performed on the Cloud platforms:  Skills on fundamentals of cloud (20 Hrs)   * Create cloud account on IBM cloud and AWS, creating custom dashboard * Operations like creation, launch, security, and cleaning of instances will be performed on AWS cloud EC2 service * Creating S3 bucket and manage file life cycle * Host static website on S3 service   Skills on Essentials of Cloud Application Development on IBM Cloud (20 Hrs)   * Creating web application with IBM Cloud Foundry sample apps using web console * Connecting IBM Cloud using CLI, creating organisation, space, defining CF parameters * Creating application from CLI * Downloading sample code and re-deploying using CLI * Connecting IBM Cloud Cloudant with sample web application via CLI * Managing app and deleting applications from CF | (**75 Hrs of Theory)**   * Introduction to cloud, benefits, types, service delivery models * Understanding AWS cloud global infrastructure, scalability, elasticity, fault tolerance, reliability & durability aspects. * Introduction to core services- compute, storage, network, database, security & management * Getting started with IBM Cloud foundry, benefits, features, use cases, get introduced to Storage, PaaS Model services in IBM Cloud, Hosting web application son PaaS * Understanding web application deployment strategies and planning. Preparing application for cloud deployment over PaaS model instance in IBM Cloud Foundry * IBM Cloud CLI * Cloud Best practices |
|  |  | Skills on Essentials of Cloud Application Deployment on IBM Cloud Foundry- PaaS Model (60 Hrs)   * Preparing PHP web application to get deployed on cloud PaaS * Deploying PHP app on IBM Cloud Foundry * Updating application on local environment and re-deploy to Cloud Foundry * Preparing Django web application to get deployed on cloud PaaS * Deploying Django app on IBM Cloud Foundry * Updating application on local environment and re-deploy to Cloud Foundry * Preparing NodeJS web application to get deployed on cloud PaaS * Deploying NodeJS app on IBM Cloud Foundry * Updating application on local environment and re-deploy to Cloud Foundry   Skills on deploying application on AWS (25 Hours)   * Deploy PHP application on AWS Elastic Beanstalk service * Deploy Django application on AWS Elastic Beanstalk service * Deploy NodeJS application on AWS Elastic Beanstalk service |
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| 201-320 | Able to develop Cloud applications. | Projects: (120 Hrs) Develop an application and deploy on cloud:  (Examples)   1. Health Vitals Calculator- BMI, BMR, Obesity level 2. Vaccination Registration | |
|  | Revision | | |
|  | Examination | | |