

(c) Define Asynchronous Programming in Node JS?(5)

[This question paper contains 8 printed pages.]

Your Roll No.....

आपका अनुक्रमांक.....

Sr. No. of Question Paper : 740

I

Unique Paper Code : 6332493501 UPC

Name of the Paper : Full Stack Web Development
- II

Name of the Course : B.Voc (Web Designing)

Semester : V

Duration : 3 Hours

Maximum Marks : 90

(For Admissions of 2019 onwards)

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Question No. 1 is compulsory in Section-A.
3. Attempt any **four** questions from Section-B.
4. Parts of a question should be attempted together.

Section A

1. (a) Write Programming language for each on which following technologies/framework are based? (3)

1) Node JS

2) Maven

3) Express JS

4) Gradle

- (b) Which tool can be used for Continuous Integration and Continuous Development? In which language that tool is written? (3)

- (c) Write a Git command to Checkout/Clone any github repository into your Machine? (3)

- (d) What is the use of Nodemon dependency/extension in Node JS Application? (3)

- (e) Differentiate between Docker Image and Docker Container? (3)

- (2) API to Multiply 2 Input Numbers and return result

- (3) API to Divide 2 Input Numbers and return result

- (4) API to Subtract 2 Input Numbers and return result

Use API Method, API Path, Server Port according to yourself.

- (b) What do you mean by POM.xml ? (3)

6. (a) What are the Steps to develop the docker image of a gradle/maven spring boot application or project? Explain the steps with the docker commands? (8)

- (b) Differentiate between Jenkins and Docker as Software tools? (7)

7. (a) What do you mean by REST API? (5)

- (b) Explain Port Forwarding with Docker Container? (5)

4. (a) Write the Git Commands for following operations:

(8)

(1) View All Remotes of your Git Repository

(2) Create New Remote 'authorized_origin'

(3) Push Branch 'myBranch' to origin
'authorized_origin' in Remote Repo.

(4) Change working branch from 'main' to
'myBranch'

(b) What are the Possible ways to authenticate your
local Repositories commit to Push in Remote
Repository on Github?

Hint: Tokens Generations, Collaborators (7)

5. (a) Develop an App named 'Arithmetic Operations'
Using Maven/Gradle Spring Boot. The App
contains following API's: (12)

(1) API to add 2 Input Numbers and return result

(f) What all Modules need to import or require to
develop an API which will fetch a record from
Mysql database? (3)

(g) Write Status Codes for following API responses:(3)

(1) OK

(2) Internal Server Error

(3) Unauthorized Access

(h) Which of the following statements are true? (3)

(1) Multiple Server Side applications can run on
Same Port in Same Machine.

(2) Multiple Server Side applications can run on
Same Port in different machines.

(3) Multiple Server Side applications can run on
different ports on the same machine.

(i) Differentiate between Git and Github? (3)

- (j) Where do we need to create a DockerFile for our application? Write the docker file extension if any?
(3)

Section B

2. (a) What do you mean by MERN stack? Explain each technology stack in detail? (7)
- (b) Explain the Steps to Create the following API through Node JS? (8)
- (1) API Method: POST
 - (2) API Path: /login
 - (3) API Request Body: Id (Integer), password(String)
 - (4) API Response: String ("Login Successful/ Unsuccessful")
 - (5) Server Port: 8089

The API will simply compare Id and password to following correct credentials :

Id: 201178

Password: BVOC@2021

3. (a) Develop a small Library Management Application using Express JS. Application will of four different API's. (12)

- (1) Add New Book API
- (2) View All Books API
- (3) Update Any Book API
- (4) Delete Any Book API

Use MongoDB/Mysql to fetch data from Database.

Server port of the application will be 8084.

Server Ip address will be 127.0.0.1

- (b) Explain In Built packages/library/modules in Node JS? (3)