

Duration: 2 Hours

Max Marks: 60

Instructions: i) All Questions are compulsory  
ii) Figures to the right indicate full marks

Q. 1 A) State TRUE or FALSE

(5x1=05)

- i) Node.js is built on top of Google's V8 JavaScript engine.
- ii) JavaScript (and Node) by convention is a non-blocking language.
- iii) In Node applications, event emitters are created using the "Event Contract" data type.
- iv) Express provides request routing, a static file server, view engine integration, and a plethora of community modules.
- v) The idea behind SPAs is that all the necessary code can be retrieved in a single page load or dynamically loaded as necessary

Q.1 (B) Define the purpose of the following in not more than 20 words.

(5x1=05)

- i) app.use
- ii) REPL.
- iii)Readable streams
- iv)"Mogosh" command
- v) Jade

Q.2 Answer the following:

- (a) Explain why angular was developed. (2)
- (b) Describe the working of "\_\_filename and \_\_dirname" (3)
- (c) Explain how writing a module in node js works with a code snippet. (5)

Q.3. Answer the following:

- (a) Explain Asynchronous coding (2)
- (b) Explain the working of the two schema types used in mongoose (3)
- (c) Illustrate the use of mogodb commands to Insert and Retrieve data. Use examples to support your answer .. (5)

Q.4. Answer the following:

- (a) Explain the meaning of MEAN Stack. (2)
- (b) Describe the working of require() function with a code snippet (3)
- (c) Compare and contrast between Callback function and Callback hell with code snippet. (5)

**Q.5. Answer the following:**

- (a) Explain caching in node js (2)
- (b) Describe the working of mongoose models. (3)
- (c) Apprise the use of routes in Express. Use code snippet to support your answer. (5)

**Q.6. Answer the following.**

- (a) Explain MVC in angular (2)
- (b) Describe the working of Promises in Node js (3)
- (c) Explain app.js in detail. (5)

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