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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA**(An Autonomous Institute Affiliated to AKTU, Lucknow)****B.Tech****SEM: VI - THEORY EXAMINATION- (2024 - 2025)****Subject: Web Development using MEAN Stack****Time: 3 Hours****Max. Marks: 100****General Instructions:****IMP:** *Verify that you have received the question paper with the correct course, code, branch etc.*

- 1. This Question paper comprises of **three Sections -A, B, & C.** It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.*
- 2. Maximum marks for each question are indicated on right -hand side of each question.*
- 3. Illustrate your answers with neat sketches wherever necessary.*
- 4. Assume suitable data if necessary.*
- 5. Preferably, write the answers in sequential order.*
- 6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.*

SECTION-A

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1. Attempt all parts:-

- 1-a. Callback is called. (CO1, K1) 1
- (a) The callback is a technique in which a method calls back the caller method.
 - (b) The callback is an asynchronous equivalent for a function.
 - (c) Both of the above.
 - (d) None of the above.
- 1-b. Select the function that is used to include modules in Node.js. (CO1, K1) 1
- (a) include();
 - (b) require();
 - (c) attach();
 - (d) all of the Above
- 1-c. Select requests that are used to transmit a large amount of data, as the data is included in the body of the request. (CO2, K2) 1
- (a) GET
 - (b) POST
 - (c) PUT
 - (d) DELETE
- 1-d. Choose correct templating engine for Express. (CO2, K1) 1
- (a) Oil
 - (b) Master

- (c) Body parser
- (d) pug
- 1-e. Select object oriented terms that are supported by Typescript. (CO3, K2) 1
 - (a) Modules
 - (b) Class
 - (c) Interface
 - (d) All
- 1-f. TypeScript compiles file in . (CO3, K1) 1
 - (a) JavaScript
 - (b) C
 - (c) Python
 - (d) None
- 1-g. Select the process of sharing data between controller and viewer. (CO4, K2) 1
 - (a) using components
 - (b) using models
 - (c) using service
 - (d) using method
- 1-h. Select the correct one as the father of AngularJS.(CO4, K1) 1
 - (a) Brad Green
 - (b) Misko Hevery
 - (c) Adam Abrons
 - (d) Mike Adams
- 1-i. Choose Primary difference between SQL and NoSQL databases. (CO5, K2) 1
 - (a) SQL databases use a fixed schema, while NoSQL databases use a flexible schema
 - (b) SQL databases use a hierarchical data structure, while NoSQL databases use a document-based structure
 - (c) SQL databases are relational, while NoSQL databases are non-relational
 - (d) All of the above
- 1-j. Select the example of SQL Database. (CO5, K2) 1
 - (a) MongoDB, Cassandra, and Redis
 - (b) MySQL, Oracle, and PostgreSQL
 - (c) Hadoop, Hive, and Spark
 - (d) All of the above

2. Attempt all parts:-

- 2.a. Describe Graph QL.(CO1, K2) 2
- 2.b. Define the term Express.js Routing.(CO2, K1) 2
- 2.c. Define power of types in your words.(CO3, K1) 2
- 2.d. Explain types of data binding in your words. (CO4, K2) 2

2.e.	Discuss features of MongoDB. (CO5, K2)	2
SECTION-B		30
3. Answer any <u>five</u> of the following:-		
3-a.	Demonstrate callback hell in Node.js. (CO1, K3)	6
3-b.	Perform Promise Chaining.(CO1, K3)	6
3-c.	Discuss scaffolding in Express.js. (CO2, K2)	6
3-d.	Explain the process of code to start serving static files in Express.js. (CO2, K2)	6
3.e.	Implement Anonymous function with example. (CO3, K3)	6
3.f.	Describe data binding with different types in details. (CO4, K2)	6
3.g.	Implement steps for update documents in a MongoDB collection. (CO5, K3)	6
SECTION-C		50
4. Answer any <u>one</u> of the following:-		
4-a.	Examine REPL in Node.js in detail along with implementation. (CO1, K4)	10
4-b.	Differentiate File System Modules and Template Engine in detail. (CO1, K4)	10
5. Answer any <u>one</u> of the following:-		
5-a.	Examine the difference between Express.js and Node.js along with code. (CO2, K4)	10
5-b.	Assess Environmental Variable in detail with example.(CO2, K5)	10
6. Answer any <u>one</u> of the following:-		
6-a.	Implement How to import and export a module in programming concept justify this with example. (CO3, K3)	10
6-b.	Compare typescript function ,function declaration, function definition and function call in detail .(CO3, K4)	10
7. Answer any <u>one</u> of the following:-		
7-a.	Examine Angular.js ng-options in detail.(CO4, K4)	10
7-b.	Defend Form group and form control in Angular.js with implementation (CO4, K5)	10
8. Answer any <u>one</u> of the following:-		
8-a.	Evaluate steps for MongoDB Environment Setup and how to Install MongoDB on Windows.(CO5, K5)	10
8-b.	Assess the process of combining the API with an Angular application, and what tools and libraries can you use to make HTTP requests to the API.(CO5, K5)	10