

**INTERNET TECHNOLOGY
(INFO 4101)**

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
any 5 (five) from Group B to E, taking at least one from each group.*

Candidates are required to give answer in their own words as far as practicable.

**Group – A
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) undefined is a predefined global _____.
(a) keyword (b) variable
(c) constant (d) object
- (ii) _____method removes the child elements from the selected element in jQuery.
(a) remove() (b) after()
(c) empty() (d) attr()
- (iii) The value returned by a _____promise becomes the parameter passed to the next .then() block's executor function.
(a) fulfilled (b) rejected
(c) pending (d) blocked
- (iv) _____ directive initializes an AngularJS application.
(a) ng-app (b) ng-init
(c) ng-open (d) ng-close
- (v) _____ executes a particular block of code once after a specified time has elapsed.
(a) setTimeout() (b) setInterval()
(c) timeout() (d) timein()
- (vi) _____describes how a parser resolves variable names when functions are nested.
(a) Promises (b) Lexical scoping
(c) Callback (d) Event handler
- (vii) _____keyword is added to functions to tell them to return a promise rather than directly returning the value.
(a) await (b) sync
(c) async (d) wait

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- (viii) Javascript is _____.
- (a) single-threaded (b) three-threaded
(c) two- threaded (d) four-threaded
- (ix) The _____ module facilitates an application to become a Single Page Application.
- (a) ngBind (b) ngRoute
(c) ngModel (d) ngApp
- (x) The _____ directive is a container that put the content provided by the routing.
- (a) ng-bind (b) ng-init
(c) ng-view (d) ng-contain

Group – B

2. (a) State the purpose of global object in the context of JavaScript. How "strict equality operator (===)" is different from "normal equality operator (==)". What is destructuring assignment in the context of JavaScript?
- (b) State the purpose of for/of loop with example. Describe several techniques of object creation in the context of JavaScript.

(2 + 2 + 2) + (2 + 4) = 12

3. (a) Define arrow function in the context of JavaScript Array. Explain how public field declaration is different from private field declaration in the context of JavaScript Class with example.
- (b) Explain the concept of symbol in the context of JavaScript with example. Define Typed Array in the context of JavaScript with example.

(2 + 4) + (3 + 3) = 12

Group – C

4. (a) Explain the purpose of the on() method with example in the context of jQuery event. State the purpose of jQuery parent() method.
- (b) Describe the attr() method for setting and getting attributes in jQuery. State the purpose of jQuery children() method.

(4 + 2) + (4 + 2) = 12

5. (a) What is Promises in the context of JavaScript? Give an example.
- (b) State the differences between Promises and Callbacks. Give an example of asynchronous programming with async and await in the context of JavaScript.

(2 + 4) + (2 + 4) = 12

Group – D

6. (a) Explain the concept of optional properties of an interface with example in the context of typescript. State the purposes of union types in the context of typescript.
- (b) Explain the concept of Event Loop in the context of Node.js. What is Job Queue in the context of Node.js?
- (3 + 3) + (4 + 2) = 12**
7. (a) State the pupose of Backbone.js. Explain the concept of “el” property in the context of Backbone.js view.
- (b) Describe the features and benefits of d3.js. Give an example of the append() method in the context of d3.js.
- (2 + 4) + (3 + 3) = 12**

Group – E

8. (a) Explain the concept of MVC and MVW architecture in the context of AngularJS. State the purpose of ng-app directive in the context of AngularJS.
- (b) Define AngularJS Expressions. Give an example of \$timeout service in the context of AngularJS.
- (4 + 2) + (2 + 4) = 12**
9. (a) Explain the concept of two way data binding with example in the context of AngularJS. Explain purpose of restrict property with the value "C" in the context of AngularJS.
- (b) Explain the purpose of ngRoute module in AngularJS with example. State the properties of the response object in AngularJS.
- (4 + 2) + (4 + 2) = 12**

Department & Section	Submission Link
IT	https://classroom.google.com/c/MTQyMDI4ODI3NTM5/a/Mjc0NDEwODA4OTIz/details