

**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 Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) What does the term DOM stands for?
 (a) Document Object Model (b) Dynamic Object Model.
 (c) Discrete Object Model (d) none of these.
 - (ii) Which is the code that asks for the set of all div elements in a document?
 (a) var divs = \$(div); (b) var divs = jQuery("div");
 (c) var divs = \$("div"); (d) var divs = #("div");
 - (iii) Node.js runs on _____
 (a) client (b) server (c) both client and server (d) none of these.
 - (iv) Type script provides type checking at
 (a) run time (b) compile time
 (c) load time (d) none of these.
 - (v) On which of the following types of component can we create a custom directive?
 (a) Element directives (b) Attribute
 (c) CSS (d) all of the these.
 - (vi) Which of the following function returns true or false?
 (a) map() (b) reduce() (c) reduceRight() (d) lastIndexOf().
 - (vii) Which of the following method does not belong to JavaScript array methods?
 (a) reverse() (b) sort() (c) bind() (d) slice().
 - (viii) Which of the following class implements read only properties and methods?
 (a) mutable (b) immutable (c) native (d) host.
 - (ix) Which of the following method is used for getting and setting HTML form values using jQuery?
 (a) val() (b) attr() (c) css() (d) data()
 - (x) Which of the following method does not belong to inserting and replacing HTML elements using jQuery?
 (a) append() (b) prepend() (c) replaceWith() (d) html().

Group – B

- 2.(a) Describe two methods of object creation for JavaScript. Write getter and setter functions for JavaScript object property.
- (b) Describe the process of querying and setting prototype, class and extensible attributes of JavaScript object. Write JavaScript function to add and delete JavaScript array elements.
(4 + 2) + (3 + 3) = 12
- 3.(a) Describe the join(), reverse(), sort() and slice() JavaScript array methods with proper statements. Write JavaScript functions to compute factorial of a number.
- (b) Write the description of toString() method in respect of JavaScript. What are array predicates in the context of JavaScript array?
(4 + 4) + (2 + 2) = 12

Group – C

- 4.(a) What does dollar (\$) sign means in jQuery? Explain the use of jQuery noConflict() method with example.
- (b) What are the different DOM traversal methods available in jQuery? Explain at least one method with example.
(2 + 4) + (2 + 4) = 12
- 5.(a) Give an example of jQuery event handler registration and deregistration methods. Write down purpose of jQuery fadeIn(), fadeOut() and animate() method.
- (b) Why are JavaScript functions closures? What is high order function? Give an example of high order function.
(3 + 3) + (2 + 2 + 2) = 12

Group – D

- 6.(a) In which context type script differs with Java Script. Describe the benefits of typescript. Describe method overriding with the help of type script.
- (b) Give example of four HTML APIs.
(2 + 3 + 3) + 4 = 12
- 7.(a) Describe the features of Node.js. What is d3.js? Describe features and benefit of d3.js.
- (b) Describe select() method of d3.js. Give example of append(), text(), attr() and style() of d3.js.
(2 + 2 + 2) + (2 + 4) = 12

Group – E

8. (a) What are the advantages of using angular js? Describe MVC architecture.
(b) Develop a little application in angular js which will convert a binary number to its equivalent decimal number.

(3 + 3) + 6 = 12

- 9.(a) What are services in respect of Angular services? Describe the testing process of those services.
(b) Describe the survey process of Angular directives. Describe the purpose of \$http in respect of Angular Routes.

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