

Total No. of Questions : 8]

SEAT No. :

PA-1509

[Total No. of Pages : 2

[5926]-129

**T.E. (Information Technology)**  
**WEB APPLICATION DEVELOPMENT**  
**(2019 Pattern) (Semester - II) (414464A)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer four questions.
- 2) Figures to the right indicate full marks.
- 3) Assume suitable data if necessary.
- 4) Neat diagrams must be drawn wherever necessary.

- Q1)** a) List and explain different types of structural directives in Angular. [6]  
b) How would you demonstrate the term web framework? Give the reason for using a web framework. [6]  
c) What is Angular JS? Explain its features. [6]

OR

- Q2)** a) List and explain the features of any three popular web frameworks. [6]  
b) Explain MVC architecture with a suitable diagram. [6]  
c) How would you use the term typescript? Give the advantages and disadvantages of using it. [6]

- Q3)** a) List and explain the features of advanced MongoDB. [6]  
b) Explain any four methods of console object in node.js with suitable examples. [6]  
c) Write a short note on PM2 microservices. [5]

OR

- Q4)** a) Explain the callbacks in node.js with a suitable example. [6]  
b) What is the purpose of map reduce? Explain it with a suitable example. [6]  
c) Write a short note on Mongoose ODM [5]

P.T.O.

- Q5)** a) Explain the mobile devices and desktop devices in detail. [6]  
b) What is j Query? Explain its architecture in detail. [6]  
c) What is CDN? How it is powerful in web development? [6]

OR

- Q6)** a) Explain the mobile devices and desktop devices in detail. [6]  
b) What is j Query? Is j Query a mobile framework? If yes. explain in brief [6]  
c) What is a page? Write a code to create a page in j Query mobile. [6]

- Q7)** a) What is VPC? Explain the components of VPC. [6]  
b) What is cloud computing? What are the benefits of cloud computing? [6]  
c) List and explain the steps to deploy the application on the elastic beanstalk. [5]

OR

- Q8)** a) What are the storage services provided by AWS? [6]  
b) What is S3 bucket and how to create a bucket? [6]  
c) What is PuTTY? How to connect the EC2 instance with PuTTY? [5]

