Max. Marks: 75

Time: 3 Hrs.

(Write your Roll No. on the top immediately on receipt of this question paper)

Note: Answer five questions in all. All questions carry equal marks.

Q1   Describe is Inversion of Control and Dependency Injection with example code.   15
What are the benefits of Dependency Injection?

Q2   Create the flowchart for HTTP Connection Establishment. Indicate HTTP verbs   15
and status code in flow chart at correct place. Define HTTP headers and its
importance. Write the HTTP Request and Response message structure. Explain
the importance of HTTP Cookies with example.

Q3   What is the difference between Stream Sockets and Datagram Sockets? Write   15
the functions in order used for creating TCP client-server and UDP client-server
using standard socket library.

Q4   Write a program in any language to fetch various (max. five) parameters of a   15
remote machine. Your program should be supported by a detailed workflow.
Store the parameters in a DB and display them on a web page with location and
IP of the remote machine.

Q5   What is the difference between libraries and framework and discuss the benefits   15
of using Web Framework? What are the different components of three-tier web
architecture, explain with the help of a diagram? What is MVC design pattern
and describe the importance and responsibility of each component?

Q6   What is Serialization? Discuss the importance of Serialization in Network   15
Applications. Write an client-server application to broadcast and receive packets
in network.