Paper / Subject Code: 82906 / Web Services

(2 ½ Hours)   [Total Marks: 75]

N.B.   1) All questions are compulsory.

2) Figures to the right indicate marks.

3) Illustrations, in-depth answers and diagrams will be appreciated.

4) Mixing of sub-questions is not allowed.

Q. 1   Attempt All (Each of 5Marks)
                                        (15M)

(a)   Multiple Choice Questions
                                        (5M)

1.   is the endpoint to test your service through tester for
JAX-WS.

a) http://localhost:8080/app-name/service-name?Tester

b) http://localhost:8080/app-name/service-name?WebServiceTester

c) http://localhost:8080/app-name/service-name?WSDL

d) http://localhost:8080/app-name/service-name?WSDLTester

2.   indicates that web method has only an input message
and no
output.

a) Request/Response   b) Two-way   c) One-way   d) None of these

3.   Which of the following is not a valid HTTP method used in RESTful web
services?

a) OPTIONS   b) DATE   c) GET   d) POST

4.   Which of the following HTTP Status code means NOT MODIFIED, used
to reduce network bandwidth usage in case of conditional GET requests?
a) 200   b) 201   c) 204
 d) 304

5.   A WCF service is exposed to the world as a collection of   .

a) Messages   b) endpoints   c) services   d) None of these

(b)   Fill in the blanks

(Use these pool of options - channels, payload, UDDI, Granularity, JSR353)

1.   Web services can be discovered using   .

2.   Service   refers to the scope of functionality exposed by a service.

3.   The request data which is present in the body part of every HTTP message is referred as   .

4.   is Java API for JSON Processing.

5.   The messaging layer in a WCF Architecture is composed of

     .

(5M)

(c)   Give short answers in 1-2 sentences

1.   What is XML?

2.   Define Informational/Type I service?

3.   What is a Jersey Client?

4.   Define HATEOAS.

5.   What is .NET Framework Client Profile?

(5M)

Q. 2   Attempt the following (Any THREE)(Each of 5Marks)
         (15M)

(a)   What is SOAP? Explain in detail.

(b)   Write a short note on fault element in SOAP.

(c)   Describe the structure of WSDL document.

(d)   Explain the Client Service Model with respect to Web Service.

(e)   Describe in brief any one of the SOAP communication models.

(f)   Write a web service method that accepts two numbers as parameters and
returns the value of addition of those numbers using JAX-WS. (Write only the
Webservice method block)

Q. 3   Attempt the following (Any THREE) (Each of 5Marks)
         (15M)

(a)   Write a short note on Swagger with respect to JAX-RS.

(b)   List and explain any five JAVA frameworks for building RESTful web
services.

(c)   Describe the characteristics required for Good Resource
Representation.

(d)   Explain HTTP and its working with a neat diagram.

(e)   Write a note on HTTP basic authentication.

(f)   Describe the Media Type Annotation in JAX-RS APIs.

Q. 4   Attempt the following (Any THREE) (Each of 5Marks)
         (15M)

(a)   Write down the steps to create a Windows Communication Foundation
Client.

(b)   Explain different environment of hosting web services.

(c)   Explain the Features of WCF in detail.

(d)   Write a note on Quality of Service (QoS) for Webservices.

(e)   What do you mean by Service Contract? Explain in detail.

(f)   What do you mean by Operation Contract? Explain in detail.

Q. 5   Attempt the following (Any THREE) (Each of 5Marks)
                (15M)

(a)   Write a short note on Web Service Development Lifecycle.

(b)   List and explain the core constraint of RESTful system.

(c)   What is Windows Communications Foundation?

(d)   Describe the characteristics of Inter-process communication.

(e)   How does data exchange happens using JSON in JAX-RS? Explain.

****