

Roll No. :

Total No. of Questions : 9] [Total No. of Pages : 4

67056-N

M.C.A. 2nd Semester (2 Year Course)
Examination, July-2021
(w.e.f. 2020-21)

ADVANCE OBJECT TECHNOLOGY
Paper-2019CA22C1

Time : Three Hours] [Maximum Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note :- Attempt five questions in all, selecting one question from each Unit. Q. No. 1 is compulsory.

1. (a) Write an example of XML tag containing element and attribute.
- (b) What do you mean by implied attribute in XML ?
- (c) Name any four implicit objects in JSP.
- (d) How Print Writer is different from Servlet-Output Stream ?
- (e) What is bean persistence ?

- (f) Which package(s) are used for remote method invocation ?
- (g) List two disadvantages of struts framework.
- (h) What can be different methods that can be used to track information about a particular client while using stateless connection protocols ? 2×8=16

Unit-I

2. (a) What is DTD ? Why do we use it ? Explain different components of DTD. Write the DTD for the XML file containing following information :

```
<Cricketer>
  <name>
    <first>Rohit</first>
    <last>Sharma</last>
  </name>
  <emailID>sharmarohit@gmail.com
  </emailID>
  <phoneNumber>9876543210
  </phoneNumber>
  <DOB>
    <year>1987</year>
    <month>June</month>
    <day>23</day>
  </DOB>
</Cricketer>
```

- (b) Explain different data types used in Javascript with examples. 10,6
3. (a) What is DOM in XML ? How is it different from XML schemas ?
- (b) How does Javascript may be invoked and call global variable ? Give example. 10,6

Unit-II

4. (a) How are Swing components different from AWT components ? Explain the basis of the use of CheckButton or RadioButton for getting input from user.
- (b) What is BDK introspection ? Explain its use in Java programming. 10,6
5. (a) What are JTabbed Panes used in Swing ? Write a short code of creating two tabbed panes with different component(s) placed on each.
- (b) How are Applets related to Swing components ? 10,6

Unit-III

16 each

6. What is a Servlet Program ? How does it use HttpRequest and HttpResponse objects ? Write code for a servlet that takes two values as input from a form and can show the result of mathematical operations of +, -, × and ÷.

7. What are the differences between a session and a cookie ? How can we create and delete a cookie ? Show by suitable program(s).

Unit-IV

8. (a) Write short notes on the following :
- (i) Actions elements
 - (ii) Directive elements
 - (iii) Declarations elements
 - (iv) Scriptlets elements $2\frac{1}{2} \times 4 = 10$
- (b) What are the various memory usage considerations during the use of servlets and JSP code ? Explain. 6
9. (a) What is a custom tags.in JSP ? What are the components that make up a tag library in JSP ?
- (b) Write details on the Struts technology, its framework and how do client machine communicate with the server machine in this environment. 10,6