

GUIDOL, Gauhati University
Assignment Based Examination 2021
MSc-IT 3rd Semester
IT-28: Advanced Web-Technology

Total Mark: 50

1. Answer any two from the following:

15 x 2 = 30

(a) (i) Design the following structure using HTML

Item	Quantity	Unit/Price	Total Price
Mouse	10	150	1500
Keyboard	5	300	1500
		Grand Total	3000

(ii) Write a JavaScript program to display the summation of all the numbers between a range of numbers where the starting and the ending number of the range will be supplied by the user in two text boxes.

(b) Design an XML file to store the information of the employees of an organization. The information should be like emp_id, emp_name, emp_designation, emp_salary. Store at least 2 employee information in the XML file. What is XSLT? Write XSLT code to display the employees information stored in the XML file in a web page in proper format.

(c) (i) What is JavaBean? How does a bean differ from a class?

(ii) Explain the differences between RMI and CORBA.

2. Write short notes on any four from the following:

5 x 4 = 20

(a) Client-Server Architecture.

(b) GET and POST.

(c) e-Commerce.

(d) External DTD and Internal DTD.

(e) JDBC and ODBC.

(f) Compiled and Interpreted Language.

GUIDOL, Gauhati University
Assignment Based Examination 2021
MSc-IT 3rd Semester
IT-16: Object Oriented Programming using JAVA

Total Mark: 50

1. Answer any five from the following:

6 x 5 = 30

- (a) What do you mean by “data-hiding”? Explain.
- (b) What do you mean by “encapsulation”? Explain.
- (c) What do you mean by Bytecode, Classpath, Constructors, Dynamic Binding and Abstract Class?
- (d) What is Vector? Mention at-least its four important methods with a description for each.
- (e) Discuss the Character Stream Classes in Java.
- (f) Write a program in Java which reads an array of integers and then calculates their summation.
- (g) Write a program in Java which clearly distinguishes between the static data member and non-static data member.
- (h) What are wrapper classes? Why are they useful? Describe three important methods of Integer wrapper class.

2. Answer any five from the following:

10 x 2 = 20

- (a) Create a class called “book”. The data members should contain isbn no, book name, author name, publisher name, edition, price. Use appropriate constructors, member functions. Here, also show the use of static data-member.
- (b) What do you mean by exceptions? Discuss exception handling in details. Also give a detailed discussion on various types of exceptions that can occur in Java.
- (c) Write down the output of the following code:

```
int i=10;
System.out.println (i);
for (i=0; i<11; i++)
    System.out.print (i+“*”);
System.out.println (i);
for (int a=i; a<=i; a++);
    System.out.println(“*”);
```

Gauhati University
Institute of Distance and Open Learning
M.Sc. IT 3rd Semester
IT-14: Operating System
Assignments

1. Answer any two from the following Questions

- a) What will happen if there is no Operating System available in a computer system? Explain with examples. Why Operating System is termed as Extended Machine and Resource Manager? 5 + 10 = 15
- b) Why First-Come First-Serve CPU scheduling algorithm is called as Non-preemptive scheduling algorithm? Explain the advantages and disadvantages of Non-preemptive scheduling algorithms over Preemptive scheduling algorithms. Which CPU scheduling algorithm is the most efficient one according to you? Give an appropriate explanation. 3 + 6 + 6 = 15
- c) Explain the concept of Virtual Memory. How the concept of Virtual Memory can be implemented in Operating System? Explain with examples. 5 + 10 = 15

2. Answer any one from the following Questions

- 1) Explain Race condition with a suitable example. Write down the relation between race condition and mutual exclusion. Explain the use of Semaphores to solve the Producer-Consumer problem with examples. Write down the limitations of Peterson's Solution to achieve mutual exclusion. 5 + 3 + 8 + 4 = 20
- 2) How deadlock can be prevented? Explain with examples. Explain Banker's Algorithm for multiple resources to avoid deadlock with suitable examples. 10 + 10 = 20

