SCHOOL OF INFORMATION TECHNOLOGY & ENGINEERING

Winter Semester 2019 – 2020

CAT – II Examination

Programme	: B.Tech (IT&CSE)	Slot	: B1+TB1
Subject	: OPEN SOURCE PROGRAMMING	Duration	: 1 ½ hrs
Subject Code	: ITE1008	Max. Marks	: 50
Faculty	: Prof.S.Subashanthini		
Exam Mode	: CLOSED NOTEBOOK		

PART-A (Answer ALL the questions) [5*10=50 Marks]

1. Create a simple PHP Form with username, password, remember (checkbox) & **(10)** Login button. If user select 'remember' functionality, save username & password in cookies. When Login Form loads, show recently saved username & password in the respective form fields from the cookies. If user do not select 'remember', cookies should be deleted.

2. Write a PHP Program to create a class Employee containing empid, name, age, **(10)** experience. Create a constructor to initialize the data members. Define a method named as *Show* to display the details. Define a method named as validate to check for the following conditions:
   - Length of EmpCode should be exactly 6
   - Maximum characters of name is 30
   - Age cannot be less than 18 or more than 58
   - Experience cannot exceed age-18

   If the above conditions are not satisfied, throw a user defined exception named as *SecurityException*. Write appropriate exception handling code.

3. Write a PHP code that connects to a database *'Asia'. Create a table* called **(10)** *'Country'* with the following structure. Use *mysqli prepared statements* to insert 5 records into the table 'Country'. Finally retrieve the values of the country name field of all the records and display it as a list to the browser.

```
+------------------------+------------------------+
| Field                  | Type                   |
+------------------------+------------------------+
| COUNTRY_ID             | varchar(2)             |
| COUNTRY_NAME           | varchar(40)            |
| REGION_ID              | decimal(10,0)          |
+------------------------+------------------------+
```

4. Create an abstract class by name Person with the attributes –Name, Day of **(10)** Birth, Month of Birth, Year of Birth, Address and Community. Include appropriate constructors for initializing the instance members, a getData function, and a display function(both the functions are abstract).

Create another class called Student that extends Person class. The class should include the instance members – Register Number, Mode of Study (1. Regular or 2. Part-time), School Name, aggregate percentage of marks (each of which represent the mark in Physics, Chemistry and Mathematics or Biology). Include appropriate constructors for initializing the instance members.

Create another class called BTech_Admission2020 that extends Student class. The class should define a method determineEligibility to determine if the person is eligible to be admitted in B.Tech for 2020 batch. Use the following criteria for checking the eligibility.

1. Candidates should have secured an aggregate of 60% in Physics, Chemistry, and Mathematics in the HSC Exam.
2. Candidates who have studied in Regular, Full Time are eligible.

Implement the above php code and test the functionality of all the methods.

5. a Write a php code that extracts and display the following output by **(3)** implementing a single regular expression pattern on the given string variable *test*.

$test = "This is a Test";

Output:

```
Matched

is is
is
is
```

5.b Write a php program to validate a PAN Card number using regular expression. **(3)** A PAN card number is said to be valid when it starts with 5 uppercase letters, followed by 4 digits and ends up with a upper case letter. A Valid PAN have only 10 letters.

5.c Write a php code that uses a regular expression to check the validity of an email **(4)** id and extracts the username from a valid email id.