

**BRAIN INTERNATIONAL SCHOOL**

**SUBJECT: C.S.**

**CLASS-XI Assignment**

**July-2024**

Ch-7: Data Handling Ch-3: Boolean Logic

Ch-5 : Introduction to Python Modules

**Q1. Answer the following questions.**

Q1. What will be the output of the following code?

(a)  $5 < 5$  or 10 (b)  $5 < 10$  or 5 (c)  $5 < (10 \text{ or } 5)$  (d)  $5 < (5 \text{ or } 10)$

Q2. What will be the output of the following code statements?

(a)  $17\%5$  (b)  $17\%5.0$  (c)  $(17\%5) = (17\%5)$  (d)  $(17\%5.0) = (17\%5.0)$

Q3. What will be the output of the following code?

```
x,y=4,8
```

```
z=x/y*y
```

```
print(z)
```

Q4. In a school fest, three randomly selected students out of 100 students (having roll numbers 1 -100) have to present bouquets to the guests. Help the school authorities to choose three students randomly.

Q5. Explain Random Module in Python.

Q6. What will the following code produce?

```
import random
```

```
print(random.random() * 100)
```

```
print(random.random())
```

Q7. Explain Typecasting in Python

Q8. State De Morgan's Theorem and prove the first and second theorem.

Q9. State and verify involution law.

Q10. Verify the following using truth table:

(1)  $X.X' = 0$  (2)  $X + X' = 1$

Q11. State and verify Absorption law in Boolean Algebra.

Q12. Draw the logic circuit for the following Boolean Expression :  $A.(B+C')$

Q13. Draw the logic circuit for the following Boolean Expression:

$F = (A+B).(A+B')$

