**Question No 1**

The operators are special symbols that are used to carry out certain operations on the operands. The Dart has numerous built-in operators which can be used to carry out different functions, for example, ‘+’ is used to add two operands. Operators are meant to carry operations on one or two operands.

Different types of operators in Dart:

The following are the various types of operators in Dart:

Arithmetic Operators

Relational Operators

Type Test Operators

Bitwise Operators

Assignment Operators

Logical Operators

Conditional Operator

Cascade Notation Operator

Question no 2

void main() {

num price=600;

num result=price \*5;

print ("The Price of 6 ticket is ${result}");

}

Question no 3

void main() {

List<int> first = [1,2,3,4,5,6,7];

List<int> second = [3,5,6,7,9,10];

List<int> difference = first.toSet().difference(second.toSet()).toList();

print(difference.toString());

}

Question no 4

Conditional Operator

**?**

It is a simple version of if-else statement. If the condition is true than expersion1 is executed else expersion2 is executed.

**??**

If expersion1 is non-null returns its value else returns expression2 value.

Question no 5

**Number:** The number in Dart Programming is the data type that is used to hold the numeric value. Dart numbers can be classified as:

The int data type is used to represent whole numbers.

The double data type is used to represent 64-bit floating-point numbers.

The num type is an inherited data type of the int and double types.

**Example**

**void main() {**

**// declare an integer**

**int num1 = 2;**

**// declare a double value**

**double num2 = 1.5;**

**// print the values**

**print(num1);**

**print(num2);**

**var a1 = num.parse("1");**

**var b1 = num.parse("2.34");**

**var c1 = a1+b1;**

**print("Product = ${c1}");**

**}**

**String:** It used to represent a sequence of characters. It is a sequence of UTF-16 code units. The keyword string is used to represent string literals. String values are embedded in either single or double-quotes.

**void main() {**

**String string = 'Muzammil';**

**String str = 'Abid';**

**String str1 = 'Hussain';**

**print (string);**

**print (str + str1);**

**}**

**Boolean:** It represents Boolean values true and false. The keyword bool is used to represent a Boolean literal in DART.

**void main() {**

**String str = 'Coding is ';**

**String str1 = 'Fun';**

**bool val = (str==str1);**

**print (val);**

**}**

**List:** List data type is similar to arrays in other programming languages. A list is used to represent a collection of objects. It is an ordered group of objects.

**void main()**

**{**

**List gfg = new List(3);**

**gfg[0] = 'Geeks';**

**gfg[1] = 'For';**

**gfg[2] = 'Geeks';**

**print(gfg);**

**print(gfg[0]);**

**}**

**Map:** The Map object is a key and value pair. Keys and values on a map may be of any type. It is a dynamic collection.

**void main() {**

**Map gfg = new Map();**

**gfg['First'] = 'Geeks';**

**gfg['Second'] = 'For';**

**gfg['Third'] = 'Geeks';**

**print(gfg);**

**}**

**Question no 6**

void main() {

List<int> array1 = [7, 14, 21, 28, 35, 42, 49, 56, 63, 70];

List<int> array2 = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10];

final map = Map<int, int>.fromIterable(array1,

key: (item) => item, value: (item) => item);

print(map);

}

**Question no 7**

import 'dart:io';

void main() {

String password = "1234";

print("Enter your Password?");

String userpassword = stdin.readLineSync().toString();

if (userpassword.isEmpty) {

print("Please enter your password");

} else if (password == userpassword) {

print("Correct! The password you entered matches the original password.");

} else {

print("Incorrect password");

}

}

**Question no 8**

void main() {

var student = ["Muzammil", "Asad", "Osama"];

var score = [200, 400, 250];

num total = 500;

for (var item in score) {

double percentage = item / total \* 100;

print("The Percentage is ${percentage} %");

}

}

**Question no 9**

**Legal Varibles**

1. var name
2. num first\_name
3. String firstname
4. dynamic firstname
5. int mark

**Illegal varibles**

1. $var name;
2. Var name first
3. String “$ name”
4. String 1234name
5. String var

**Question 10**

void main() {

var name = "HyderIslam";

String result = name.replaceAll('Islam', 'abad');

print(result);

}