Progressive Education Society's

Modern College of Arts, Science & Commerce (Autonomous), Ganeshkhind, Pune – 16

End Semester Examination: March / April 2025

Faculty: Science and Technology

Program: BCA **Semester: VI** **SET:** A
Program (Specific): BCA(Science) **Course Type:** DSE
Class: TYBCA(Science) **Max. Marks:** 70
Name of the Course: Programming in GO **Course Code:** 24-BCA-362
Time: 3Hr **Paper:** II

Instructions to the candidate:

1) *All Sections are compulsory.*
2) *Figures to the right indicate full marks.*
3) *Draw a well labeled diagram wherever necessary.*

Q1) Attempt the following: **[5 × 1 = 5]**

A) Choose the correct option:

1) Does Go support method overloading?

a) Yes b) No

2) Which of the following is true about type switch statement in Go?

a) The expression used in a switch statement must have an variable of interface{} type.

b) The type for a case must be the same data type as the variable in the switch, and it must be a valid data type.

c) When the variable being switched on is equal to a case, the statements following that case will execute. No break is needed in the case statement.

d) All of the above.

3) Which of the following is true about local variables in Go?

a) Variables that are declared inside a function or block are called local variables.

b) They can be used only by statements that are inside that function or block of code.

c) Local variables are not known to functions outside their own.

d) All of the above.

4) Which of the following is correct about ranges in Go?

a) The range keyword is used in for loop to iterate over items of an array, slice, channel or map.

b) With array and slices, it returns the index of the item as integer.

c) Both a and b

d) none of the mentioned

5) Go supports pointer arithmetic.

a) True b) False

B) Attempt the following: **[5 × 1 = 5]**

1. Define blank identifier.
2. Define variables with example.
3. What is function call by reference?
4. Define slice.
5. Define interface.

Q2) Answer the following (Any five) **[5 × 3 = 15]**

1. Briefly explain how package names are imported.
2. What are import paths?
3. What is type assertion in GO?
4. Explain go routine with example.
5. How to find out slice length and capacity?
6. Write about different channels.

Q3) Answer the following (Any five) **[5 × 4 = 20]**

1. Explain variadic function in GO with example.
2. What is slice? Explain the various ways to create slice.
3. What are formal and actual parameters in function?
4. Explain for loop with its syntax.
5. Write a note on Type assertion and type switches.
6. Can method accept both pointer & value? Explain.
7. Write a program using defer keyword in Go.

Q4) Answer the following (Any five) **[5 × 5 = 25]**

1. Explain method with struct type receiver.

   Write a program in Go language to create file in xml and print it.
2. Explain concept of recursion with example.
3. Write a program using pointer to print addition of two numbers in go.
4. What is anonymous function? Explain closure of function with example.
5. Write a program using embedding of interfaces in go.
6. Write a program using embedding of interfaces in go.
7. Write a program using channel to print addition and subtraction where both the values are returned by function and accepted in main and then printed.