



Post Graduate Diploma in Management (Hospital & Health Management)

PGDM – 2021-23 Batch

Term – V : Term End Examination

Course & Code	: HIT 712 Programming Language(through OOPs)	Reg. No.	:
Term & Batch	: V, 2021-23	Date	: 9/1/2023
Duration	: 3 Hrs	Max. Marks	: 70

Instructions:

- Budget your time as per the marks given for each question and write your answer accordingly.
 - Don't write anything on the Question Paper except writing your Registration No.
 - Mobile Phones are not allowed even for computations.
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Part A: Q. 1 to Q.10 (10 questions*1 marks = 10 marks).

1. Which of the following is not a valid C variable name?

- a) `int number;`
- b) `float rate;`
- c) `int variable_count;`
- d) `int $main;`

2. All keywords in C are in _____

- a) LowerCase letters
- b) UpperCase letters
- c) CamelCase letters
- d) None of the mentioned

3. What is an example of iteration in C?

- a) `for`
- b) `while`
- c) `do-while`
- d) all of the mentioned

4. What is `#include <stdio.h>`?

- a) Preprocessor directive
- b) Inclusion directive
- c) File inclusion directive
- d) None of the mentioned

5. What will happen if the following C code is executed?

```
#include <stdio.h>
int main()
{
    int main = 3;
    printf("%d", main);
    return 0;
}
```

- a) It will cause a compile-time error
- b) It will cause a run-time error
- c) It will run without any error and prints 3
- d) It will experience infinite looping

6. In the C language, the constant is defined _____.

- a) Before main
- b) After main
- c) Anywhere, but starting on a new line.
- d) None of the these.

7. What is the result after execution of the following code if a is 10, b is 5, and c is 10?

```
If ((a > b) && (a <= c))
    a = a + 1;
else
    c = c+1;
```

- a) a = 10, c = 10
- b) a = 11, c = 10
- c) a = 10, c = 11
- d) a = 11, c = 11

8. The C source file is processed by the ____.

- a) Interpreter
- b) Compiler
- c) Both Interpreter and Compiler
- d) Assembler

9 Which are the fundamental data types in C?

- a) char
- b) int
- c) float
- d) All of the above

10. What is the correct syntax to declare a variable in C?

- a) data_type variable_name;
- b) data_type as variable_name;
- c) variable_name data_type;
- d) variable_name as data_type;

Part B: Q.11 to Q.16 (4 questions *5 Marks =20 Marks) Attempt any four.

11. If the marks obtained by a student in five different subjects are input through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject is 100.

12. Two numbers are input through the keyboard into two locations C and D. Write a program to interchange the contents of C and D without using third variable

13. Draw a flow chart to find the greatest among three numbers

14. Differentiate between Compiler and Assembler

15. Explain Problem Solving Procedure

16. Draw a flow chart to calculate the average from 25 exam scores.

Part C: Q.17 to Q.22 (4 questions *10 Marks =40 Marks) Attempt any four.

17 A university has the following rules for a student to qualify for a degree with A as the main subject and B as the subsidiary subject:

- (a) He should get 55 percent or more in A and 45 percent or more in B.
- (b) If he gets less than 55 percent in A he should get 55 percent or more in B. However, he should get at least 45 percent in A.
- (c) If he gets less than 45 percent in B and 65 percent or more in A he is allowed to reappear in an examination in B to qualify.
- (d) In all other cases he is declared to have failed.

18 An Insurance company follows following rules to calculate premium.

- (1) If a person's health is excellent and the person is between 25 and 35 years of age and lives in a city and is a male then the premium is Rs. 4 per thousand and his policy amount cannot exceed Rs. 2 lakhs.
- (2) If a person satisfies all the above conditions except that the sex is female then the premium is Rs. 3 per thousand and her policy amount cannot exceed Rs. 1 lakh.

(3) If a person's health is poor and the person is between 25 and 35 years of age and lives in a village and is a male then the premium is Rs. 6 per thousand and his policy cannot exceed Rs. 10,000.

(4) In all other cases the person is not insured.

Write a program to output whether the person should be insured or not, his/her premium rate and maximum amount for which he/she can be insured.

19. In a company an employee is paid as under:

If his basic salary is less than Rs. 1500, then HRA = 10% of basic salary and DA = 90% of basic salary. If his salary is either equal to or above Rs. 1500, then HRA = Rs. 500 and DA = 98% of basic salary. If the employee's salary is input through the keyboard write a program to find his gross salary.

20. A certain grade of steel is graded according to the following conditions:

- (i) Hardness must be greater than 50
- (ii) Carbon content must be less than 0.7
- (iii) Tensile strength must be greater than 5600

The grades are as follows:

Grade is 10 if all three conditions are met

Grade is 9 if conditions (i) and (ii) are met

Grade is 8 if conditions (ii) and (iii) are met

Grade is 7 if conditions (i) and (iii) are met

Grade is 6 if only one condition is met

Grade is 5 if none of the conditions are met

Write a program, which will require the user to give values of hardness, carbon content and tensile strength of the steel under consideration and output the grade of the steel.

21 Write a program to find odd and even numbers from 1 to 100.

22 Write a program to print all prime numbers from 1 to 300