BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – Dip.CSE-2022/Dip.EE-2022/Dip.CE-2022/Diploma in Robotics & Automation-2023/Dip.CE-2023/Dip.CSE-2023/Dip.EE-2023/Dip.ME-2023

Course Name – Introduction to IT Systems

Course Code - ES101

(Semester I)

Full Marks : 60   Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)   1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Discuss the number system that uses the digits 0-9 and the letters A-F

a) Binary
b) Decimal
c) Octal
d) Hexadecimal

(ii) Define operating system?

a) Collection of programs that manages hardware resources(
b) System service provider to the application programs
c) All of the mentioned
d) Link to interface the hardware and application programs

(iii) To access the services of operating system, select the interface is provided by the

a) System calls
b) API
c) Assembly instructions
d) Library

(iv) Tell who was the inventor of Android Operating System?

a) Steve Jobs·
b) Bill Gates
c) Kernel Torvalds
d) Andy Rich Nick

(v) Examine out the error, if any in the program. #include int main() { int a = 10; switch(a) { } printf("This is c program."); return 0; }

a) Error: No case statement specified
b) Error: No default specified
c) No Error
d) Error: infinite loop occurs

(vi) Examine out the error, if any in the program. #include int main() { int i = 1; switch(i) { printf("This is c program."); case 1: printf("Case1"); break; case 2: printf("Case2"); break; } return 0; }

a) Error: No default specified
b) Error: Invalid printf statement after switch statement
c) No Error and prints "Case1"
d) None of these

(vii) Infer what are Keywords?

a) Keywords have some predefined meanings and these meanings can be changed

b) Keywords have some unknown meanings and these meanings cannot be changed

c) Keywords have some predefined meanings and these meanings cannot be changed

d) None of these

(viii) Choose the feature of an operating system that allows multiple users to run programs simultaneously on the same computer

a) File management

b) Multi-tasking

c) Device management

d) Networking

(ix) Trace a name having a few letters, numbers and special character _(underscore) is called

a) keywords

b) reserved keywords

c) tokens

d) identifiers

(x) Interpret if a=8, b=3 and c=-5 are integers, then value of a*b/c is

a) -4

b) -2.8

c) 2.8

d) 3

(xi) Interpret the value obtained in the function is given back to main by using _____ keyword.

a) return

b) static

c) new

d) volatile

(xii) Describe the brain of the computer.

a) Central Processing Unit

b) Memory

c) Arithmetic and Logic unit

d) Control unit

(xiii) Describe which is not a characteristic of a computer

a) Versatility

b) Accuracy

c) Diligence

d) I.Q.

(xiv) Describe the smallest unit of data in a computer

a) Bit

b) KB

c) Nibble

d) Byte

(xv) Define operating system?

a) Collection of programs that manages hardware resources(

b) System service provider to the application programs

c) All of the mentioned

d) Link to interface the hardware and application programs

Group-B
(Short Answer Type Questions)

3 x 5=15

2. Discuss the benefits of a multiprocessor system? (3)
3. Describe about the C programming? (3)
4. Illustrate the benefit of using octal and hexadecimal numbers. (3)
5. Describe algorithm with example in C programming? (3)
6. Explain what is the use of modulus operator (%) ? (3)

OR

Differentiate between the equality operator (==) and the assignment operator (=). (3)

Group-C
(Long Answer Type Questions)

5 x 6=30

7. Describe the role of vacuum tubes in the first generation of electronic computers. What were the limitations associated with their use in computer architecture? (5)
8. Evaluate the binary of following decimal number 183.653 . (5)
9. Explain where does the OS fit in with a proper diagram. (5)

10. Explain the process of declaring a variable in a programming language. What information is (5) typically included in a variable declaration?

11. Explain the purpose of decision control statements in programming, and why are they (5) essential for creating conditional logic?

12. Justify the purpose and operation of the bitwise left shift operator (5)

OR

Justify the purpose and operation of the bitwise right shift operator (5)

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