

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-I Semester (CSE/IT/BI/ECE/ECS/CE)

COURSE CODE (CREDITS): 25B11CI112 (4)

MAX. MARKS: 15

COURSE NAME: SOFTWARE DEVELOPMENT FUNDAMENTALS-I

COURSE INSTRUCTOR: PKG, MGN, AVA, RVS, RTY, MKA, RVK **MAX. TIME: 1 Hour**

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculator is not allowed

Q.No	Question	CO	Marks
Q1	A college wants to develop an online student attendance management system. Explain how the different phases of SDLC would be applied to develop this system.	CO1	2
Q2	Create an algorithm and a flowchart that will output the factorial of a given number.	CO1	2
Q3	Evaluate the following given expressions. a) $20 \% 3 + 5 * 2$ b) $(5 + 2 * 3 > 10) \&\& (18 / 2 == 9)$ c) $(12 - 3 * 2 < 8) \parallel (20 \% 6 > 2)$	CO2	1.5
Q4	Perform the following conversions and all steps for your calculations: a) $(245.25)_{10} = (?)_2$ b) $(10010101)_2 = (?)_{10}$ c) $(A85)_{16} = (?)_{10}$	CO2	1.5
Q5	Given $a = 14$ and $b = 11$, convert both decimal values into their binary equivalents and perform the following binary operations. Show all intermediate steps clearly, including carry and borrow wherever applicable. a) Binary subtraction: $(a - b)$ b) $a \&b$	CO2	2
Q6	Write a C program to declare an integer variable, accept its value from the keyboard, and determine whether the entered number is positive, negative, or zero using an if-else if-else statement.	CO2	2

Q7	Find the output for the following given program segments and justify your answers. Assume there is no syntax error(s). a) void main(){ int a=2, b=3, c=5, x=8; x=(a,b,c); printf("x=%d\n",x);} b) void main(){ printf("%05d, %5d, %-5d", 32, 32, 32);} c) void main(){ float a = 1234.25; printf("%10.2f",a);} d) void main(){ int x,y; x=10; y=++x; --x; y--; x=y++; y=--x; x=y++; printf("x=%d\n",x); printf("y=%d\n",y);}	CO2	4
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