Reg. No.:

Name :

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Mid-Term Examinations – April 2023					
Programme	:	**B.Tech**	Semester	:	**Summer 2022-23**
Course Title/ Course Code	:	**Introduction to Problem Solving and Programming**	Slot	:	**A21-A27**
Time	:	**1 ½ hours**	Max. Marks	:	**50**

Answer all the Questions

Q.No.	Question Description	Marks
1	Prepare an algorithm to find second highest number in an integer array. Use appropriate variable and naming with justification.	**10**

2	Draw the flowchart for the below given algorithm.
	• *Start*
	• *Read a, b, c values*
	• *Compute d = b^2*4*a*c*
	• *if d > 0 then*
	  ○ *r1 = b+ sqrt (d)/(2*a)*
	  ○ *r2 = b-sqrt(d)/(2*a)*
	• *Otherwise, if d = 0 then*
	  ○ *compute r1 = -b/2a, r2=-b/2a*
	  ○ *print r1, r2 values*
	• *Otherwise, if d < 0 then print roots are imaginary*
	• *Stop*
		10

3	Inspect the following code and answer the questions.
	`for i in range(10):`
	`  i=i+2`
	`  for j in range(10):`
	`  j=j+1`
	`  print(i)`
	How many values of will be printed for i?
	How many times each value of i will be printed?
	Modify the code to print i values from 35 to 40 & each value should be printed for 3 times only.
		10

4	Provide an example for function in python. Highlight how function could be used for computing simple interest.	**10**
5	Provide any five situations where python list could be used with proper examples.	**10**

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