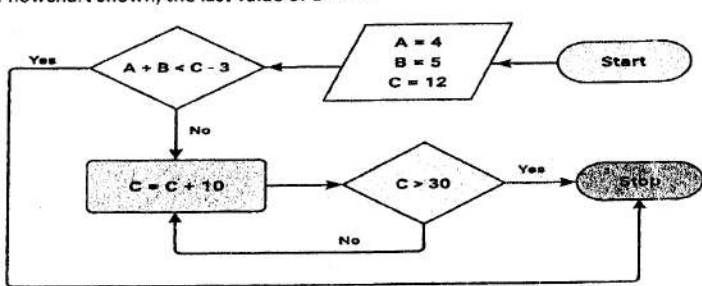


	Assiut University- Faculty of Science Second Semester- Final Exam 2025-2026 Mathematics Department		Program: Pure Mathematics Level: (1) Date: 17/5/2026 Time: 2 h		
			Course Title: Computer		
Instructors: Dr. Sayed A. Dahy & Dr. M. A. Yousof					
Important:	No. of pages 3	No. Of Questions 2	Total Mark: 50		

Answer the following Questions

Question 1 Choose the correct answer

(2 marks per point)

1) The following script gives last value of $K = \dots$ <pre> X = 15; Y = 9; if X - 5 >= Y + 3 K = 2; elseif X == Y + 6 K = 0; else K = -2; end </pre>							
A	-2	B	0	C	2	D	9
2) For $M = \begin{bmatrix} 1 & 0 & 3 \end{bmatrix}$ and $N = \begin{bmatrix} 2 & 3 & 2 \end{bmatrix}$, then performing $N * M = \dots$							
A	Incorrect dimensions error	B	$\begin{bmatrix} 2 & 0 & 0 \end{bmatrix}$	C	$\begin{bmatrix} 2 & 0 & 6 \\ 3 & 0 & 9 \\ 2 & 0 & 6 \end{bmatrix}$	D	8
3) The binary number $(11010111)_2$ is equal todecimal							
A	215	B	217	C	219	D	221
4) According to the flowchart shown, the last value of $C = \dots$							
							
A	18	B	22	C	32	D	42
5) According to the order of operations, the result of $(9^{2/3}) + (5 * 3) = \dots$							
A	18	B	22	C	32	D	42

Please turn the paper over ...

6) The MATLAB code <code>>> B = 3 * ones(2,2);</code> <code>>> F = max(sum(B.^2)) - 1</code> returns				
A	F = 17	B	F = 18	C F = 19
D	F = 20			
7) To generate a matrix of size 2 × 3 contains random numbers in the range [3,9] we use the code				
A	<code>6 * rand(2,2) + 9</code>	B	<code>3 * rand(3,3) + 9</code>	C <code>6 * rand(2,3) + 3</code>
D	<code>12 * rand(3,2) - 3</code>			
8) The MATLAB code: <code>>> polyfit(X,Y,2)</code> returns a fit curve to the points (X,Y) as				
A	Straight line	B	Quadratic curve	C Cubic curve
D	Square root curve			
9) To draw the function $f(x) = \sqrt{x}$ on the definite domain [0,8] we perform				
A	<code>>> syms x</code> <code>> plot('x','sqrt(x'))</code>	B	<code>>> x = 0:8</code> <code>> figure('x','sqrt(x'))</code>	C <code>>> sym x</code> <code>> plot(sqrt(x))</code>
D	<code>>> x = 0:8;</code> <code>> plot(x,sqrt(x))</code>			
10) Which of the following is a valid name in MATLAB				
A	My+Work	B	*My_Variable	C 2myVariable
D	my_variable22			
11) Which of the following is incorrect way to create a row vector in MATLAB?				
A	<code>X = [1 4 7 10]</code>	B	<code>X = 1 : 3 : 10</code>	C <code>X = (1 4 7 10)</code>
D	<code>X=linspace(1,10,4)</code>			
12) What does 'r' specify in the following expression <code>>> plot(x,y,'r')</code>				
A	Marker type	B	Line width	C Line color
D	Grid style			
13) To keep the workspace variables at W.mat file				
A	<code>save (W.mat)</code>	B	<code>whos (W.mat)</code>	C <code>keep (W.mat)</code>
D	<code>what (W.mat)</code>			
14) The MATLAB code: <code>>> F = sqrt(max([4 9 16]))</code> returns				
A	F=2	B	F=4	C F=16
D	F=3			
15) The integers at interval [8,15] are represented by binary numbers of				
A	2 digits	B	3 digits	C 4 digits
D	5 digits			
16) The variable 'Inf' means				
A	-1	B	0	C ∞
D	π			
17) When performing the following code, the last form of Q is equivalent to <code>>> W = [1 0 1; 0 1 1; 1 1 0];</code> <code>>> Q = W*W - 1</code>				
A	Zero matrix	B	Transpose of W	C Identity matrix
D	Determinant of W			
18) The function length ([12, 22, 32, 42]) returns?				
A	0	B	4	C 108
D	1 × 4			

Please turn the paper over ...

19) The code <code>A*inv(A)</code> in MATLAB returns			
A	Matrix determinant	B	Matrix inverse
C	Matrix transpose	D	Identity matrix
20) To call a function code in MATLAB you need			
A	its name and arguments	B	its outputs
C	its inputs	D	the toolbox

Question 2 Put (✓) or (✗)

(1 mark per point)

1) For any real number N , the MATLAB expressions <code>floor(cell(N))</code> and <code>cell(floor(N))</code> are equivalent.	
2) Plain English is a textual method of representing algorithms.	
3) The largest decimal number you can write for five digits binary number is 54	
4) The process $(1\ 1\ 1\ 0)_2 \times (1\ 0\ 1\ 1)_2$ in the binary system results $(154)_{10}$ in the decimal system.	
5) For $A = \text{rand}(3,3)$, the MATLAB command <code>>> A * eye(3)</code> results A .	
6) $X = (\text{mod}(N,2) == 0)$; if $X=0$, this means N is not a number	
7) We use command <code>>> size(G)</code> to obtain the maximum value of the vector G .	
8) Command History in MATLAB is designed to store the in used variables and constants.	
9) At loop: for $I = \text{zeros}(3,7)$ the number of iterations is 7	
10) We can define a function in MATLAB including to inputs $T1, T2$ using the expression <code>function Out = My_Table(T1 + T2)</code> .	

End of Exam

Best Wishes Dr. M. A. Yousof
Dr. Sayed A. Dahy

	Assiut University- Faculty of Science Second Semester- Final Exam 2025-2026 Mathematics Department	Program: Pure Mathematics Level: (1) Date: 17/5/2026 Time: 2 h	
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Important:	No. of pages 3	No. Of Questions 2	Total Mark: 50

Answer the following Questions

Question 1 Choose the correct answer

(2 marks per point)

1) The following script gives last value of $K = \dots$
 $X = 15; Y = 9;$
 if $X - 5 \geq Y + 3$
 $K = 2;$
 elseif $X == Y + 6$
 $K = 0;$
 else
 $K = -2;$
 end

A	-2	B	0	C	2	D	9
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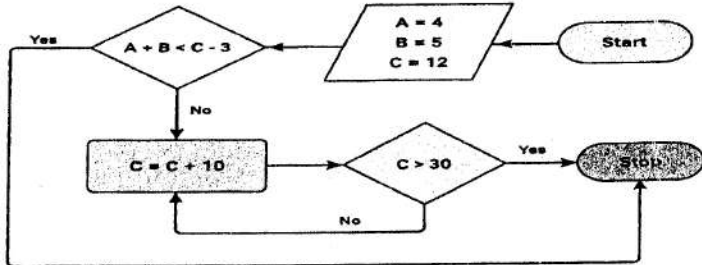
2) For $M = \begin{bmatrix} 1 & 0 & 3 \end{bmatrix}$ and $N = \begin{bmatrix} 2 & 3 & 2 \end{bmatrix}$, then performing $N * M = \dots$

A	Incorrect dimensions error	B	$\begin{bmatrix} 2 & 0 & 0 \end{bmatrix}$	C	$\begin{bmatrix} 2 & 0 & 6 \\ 3 & 0 & 9 \\ 2 & 0 & 6 \end{bmatrix}$	D	8
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3) The binary number $(11010111)_2$ is equal todecimal

A	215	B	217	C	219	D	221
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4) According to the flowchart shown, the last value of $C = \dots$



A	18	B	22	C	32	D	42
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5) According to the order of operations, the result of $(9^{2/3}) + (5 * 3) = \dots$

A	18	B	22	C	32	D	42
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Please turn the paper over ...