

Hall Ticket Number:

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Code No. : 31027 TS

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (Civil Engg.) III Year I-Semester Main & Backlog Examinations, December-2017

Finishing School-III: Technical Skills

Time $1\frac{1}{2}$ hours

Max. Marks 35

Note: Answer ALL questions in Part-A and any FIVE from Part-B

NOTE: Part-A carries 10 marks and Part B carries 25 marks

Answer ALL questions from Part-A and ANY FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. State the syntax of if-else structure.
2. **Compute** the output of the following code:

```
a=20;  
b=6;  
c = rem(a,b)^2;  
fprintf(1,'c=%d\n', c);
```
3. **Compute** the output of the following code:

```
a = floor(-4.3);  
b = a^3;  
fprintf(1,'b=%d\n',b);
```
4. **Compute** the output of the following code

```
sum=0;  
for i=1:2:13  
sum = sum+i^2 ;  
end  
fprintf(1,'sum = %d\n',sum);
```
5. **Compute** the output of the following code

```
term = 5;  
sum = 0;  
while(term>=0)  
sum = sum+term^3;  
term = term-1;  
end  
fprintf(1,'sum = %f\n',sum);
```

Part-B (5 × 5 = 25 Marks)

6. a) What is the output of the following lines of code [1]

```
a = asind(0.5);  
b = cosd(a);  
fprintf(1,' b= %f\n',b);
```


b) Write a MATLAB program to compute the area a and perimeter c of a circle, given [4]
its radius r .

7. a) What is the output of the following lines of code [1]
`a = round(5.9);`
`b = a^2-4;`
`fprintf(1,'b=%d\n',b);`
- b) Write a MATLAB program that accepts an integer N from the user and computes the factorial of all numbers less than or equal to N [4]
8. a) What is the output of the following code? [1]
`a=2;`
`if(odd(a))`
`fprintf(1,'option A\n');`
`else`
`fprintf(1,'option B\n');`
`end`
- b) Write a MATLAB program to compute the roots of a quadratic equation. [4]
9. a) What is the output of the following code [2]
`a = [1 2 3 ; 4 5 6];`
`a(:,4) = [7 8]';`
`b = a';`
`fprintf(1,'b is\n');`
`b`
- b) Write the output of the following code [3]
`a = [1 2 4 5; 5 6 7 8];`
`a(3:4,:) = [9 10 11 12; 13 14 15 16]`
`fprintf(1,'a is\n');`
`a`
`b = trace(a);`
`fprintf(1,'b is %f\n',b);`
10. a) Citing relevant example, explain how the functions *fopen* and *fclose* are used in MATLAB [4]
- b) What is the output of the following lines of code when the input file sample.txt is missing? [1]
`fid = fopen('sample.txt', 'r');`
`fprintf(1,'fid =%d\n',fid);`
11. Write short notes on the following, citing relevant code as example:
 a) switch statement [3]
 b) break statement [2]
12. Write short notes on any *two* the following:
 a) Write down the output of the following lines of code. [5]
`a = [1;3;5];`
`b = [2;6;10];`
`c = a./b;`
`fprintf(1,'c is\n');`
`c`
 b) for loop
 c) diag function