

1. What is the output of the last statement?

```
for i =1:1:3
    a(i,i)=0;
end
for i=1:1:3
    a(i,i)=a(i,i)+7;
end
a(3,3)
```

---

2. Give an example of a tridiagonal matrix of size 4x4 with elements that has as many non-zero elements as possible.

3. Give an example of a 4x4 diagonal matrix with as many nonzero elements as possible

4. Given

```
function out=valfun(a,b)
% a= input real number
% b= input real number
out=sqrt(a^2+b^2)
```

is saved in valfun.m file, what would be the output of the last line of the following test program

```
outvalue=valfun(3,4)
```

---

5. The output of the last line is

```
i=0
while (i<=4)
    i=i+1;
    j=i*3;
end
j
```

---

6. The output of the last line is

```
i=0
while (i<=4)
    j=i*3;
    i=i+1;
end
j
```

---