**QUESTION 1**

var a = 3;

var printName(name){

console.log(name)

}

function printName("YAVTECH");

console.log(a)

output->

YAVTECH

3

Reasoning->

PHASE 1

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| a:undefined |  |
| printName:function (name){  console.log(name)  } |  |

PHASE 2

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| a:3 | a=3 |
| printName:function (name){  console.log(name)  } | printName(“YAVTECH”);//IT WILL CALL THE FUNCTION AND PRINT YAVTECH in console  console.log(a);//IT WILL PRINT 3 in console |

**QUESTION 2**

printName("YAVTECH");

console.log(a);

var a = 3;

function printName(name){

console.log(name)

}

Output->

YAVTECH

undefined

Reasoning->

PHASE 1 (Memory Alocation )

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| a:undefined |  |
| printName:function (name){  console.log(name)  } |  |

PHASE 2 (Comiple Code)

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| a:undefined  printName:function (name){  console.log(name)  } | printName(“YAVTECH”);//IT WILL CALL THE FUNCTION AND PRINT YAVTECH in console  as in phase 1 printName stores function body in it self  console.log(a);//IT WILL PRINT undefined in console as undefined is stored in a for now |
| a:{3} | a=3  now a will get initialised |

**QUESTION 3**

console.log(printName);

console.log(a);

var a = 3;

**var printName = (name) => {**

console.log(name)

}

OUTPUT ->

Undefined

Undefined

Reasoning->

PHASE 1 (Memory Alocation )

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| a:undefined |  |
| printName:undefined |  |

Now here function is passed as Expression hence instead of its body undefined is stored in printName variable.

PHASE 2 (Comiple Code)

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| a:undefined  printName:undefined | Console.log(printName);//IT WILL console THE variable printName and it will print undefined in console because printName is not initialized till now  console.log(a);//IT WILL PRINT undefined in console as undefined is stored in a for now |
| a:{3}  printName:function (name){  console.log(name)  } | a=3  now a will get initialized  printName=(name)=>{  console.log(name)  }  now printName will get initialized |

**QUESTION 4**

console.log(printName);

console.log(a);

var a = 3;

**var printName = function (name) {**

console.log(name)

}

OUTPUT ->

Undefined

Undefined

Reasoning->

PHASE 1 (Memory Alocation )

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| a:undefined |  |
| printName:undefined |  |

Now here function is again passed as Expression hence instead of its body undefined is stored in printName variable.

PHASE 2 (Comiple Code)

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| a:undefined  printName:undefined | Console.log(printName);//IT WILL console THE variable printName and it will print undefined in console because printName is not initialized till now  console.log(a);//IT WILL PRINT undefined in console as undefined is stored in a for now |
| a:{3}  printName:function (name){  console.log(name)  } | a=3  now a will get initialized  printName=(name)=>{  console.log(name)  }  now printName will get initialized |

**QUESTION 5**

console.log(printName);

console.log(a);

//commented var a=5

**var printName = function (name) {**

console.log(name)

}

Reasoning->

PHASE 1 (Memory Alocation )

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| printName:undefined |  |
|  |  |

Now here function is again passed as Expression hence instead of its body undefined is stored in printName variable.

PHASE 2 (Comiple Code)

|  |  |
| --- | --- |
| MEMORY COMPONENT | CODE |
| printName:undefined | Console.log(printName);//IT WILL console THE variable printName and it will print undefined in console because printName is not initialized till now  console.log(a);//IT WILL give error undefined a is not defined since a is not present in memory |
| printName:function (name){  console.log(name)  } | printName=(name)=>{  console.log(name)  }  now printName will get initialized |