

מבחן פרויקט עובדי הוראה - אנגולר

קרא בעיון את ההוראות להלן:

- משך המבחן הוא עד שעתיים וחצי
- המבחן הוא מבחן אמריקאי
- יש להקיף את התשובה/ת הנכונות בגוף המבחן
- הצלחה במבחן היא תנאי הכרחי להמשך תהליך הגיוס
- יש להפקיד את הטלפון הסלולרי במהלך המבחן

המבחן מורכב משלושה פרקים

1. פרק javascript & CSS – בפרק זה 17 שאלות – משקל הפרק במבחן 30%
2. פרק Angular 2+ - בפרק זה 30 שאלות – משקל הפרק במבחן 50%
3. פרק בנושא .NET. – בפרק זה 22 שאלות – משקל הפרק במבחן 20%

על מנת לעבור את המבחן, חובה לצבור נקודות בכל אחד משלושת הפרקים

פרק ראשון – Java Script + CSS

Surround the letter corresponding to the correct answer/s

1. Which of the following is NOT a valid CSS length unit?
 - A. cm
 - ✓ B. dm
 - C. em
 - D. mm

2. Which CSS property allows you to hide an element but still maintain the space it occupies in the web page?
 - A. display
 - ✓ B. visibility
 - C. opacity
 - D. float

3. Which snippet of CSS is commonly used to center a website horizontally?
 - A. site-align: center;
 - B. margin: center;
 - C. margin: auto 0;
 - D. margin: 0 auto;

4. How do you display a border like this:
The top border = 10 pixels
The bottom border = 5 pixels
The left border = 20 pixels
The right border = 1pixel?
 - A. border-width:10px 20px 5px 1px
 - B. border-width:10px 1px 5px 20px
 - C. border-width:5px 20px 10px 1px
 - D. border-width:10px 5px 20px 1px

5. What's the color of the <h1> element in the following example?

HTML

```
<div class="container">
  <div class="post">
    <h1>My Blog Post Title</h1>
    <p>This is my blog post.</p>
  </div>
</div>
```

CSS

```
.container .post h1 {
  color: yellow;
}
.post h1 {
  color: red;
}
h1 {
  color: blue;
}
div.container div.post h1[class="heading"] {
  color: green;
}
```

A. yellow

B. red

C. blue

D. green

6. How can you get the type of arguments passed to a function ?

A. using typeof operator

B. using getType function

C. Both of the above.

D. None of the above.

7. A variable declared without var keyword inside a function will become _____ variable.

- A. local
- B. global
- C. block
- D. undefined

8. Which of the following is not a valid keyword in JavaScript (ECMAScript 3)?

- A. function
- B. this
- C. class
- D. try

9. What will be the output of the following JavaScript code?

```
var x = 0  
  
do{ console.log(x) }while(x > 0)
```

- A. 0
- B. null
- C. 1
- D. No output

10. How to apply strict mode in JavaScript?

- A. "strict mode"
- B. "strict"
- C. "use strict"
- D. "apply strict"

11. Which of the following is NOT a JavaScript object?

- A. `var obj = {};`
- B. `var obj = { name: "Steve"};`
- C. `var obj = { name = "Steve"};`
- D. `var obj = new Object();`

12. What the values of num1, num2 and result are?

```
var num1 = 5,  
    num2 = 10,  
    result = num1+++num2;
```

- A. 5, 10, 15
- B. 6, 11, 17
- C. 6, 10, 15
- D. 5, 11, 16

13. What does the above statement evaluate to?

```
"1" + 2 + "3" + 4;
```

- A. 10
- B. 1234
- C. 37
- D. 46

14. What is printed in the console?

```
var myArr = ['foo', 'bar', 'baz'];  
myArr.length = 0;  
myArr.push('bin');  
console.log(myArr);
```

- A. ['foo', 'bar', 'baz']
- B. ['foo', 'bar', 'baz', 'bin']
- C. ['bin', 'foo', 'bar', 'baz']
- D. ['bin']

15. Which of the following function of Array object removes the first element from an array and returns that element?

- A. [reverse\(\)](#)
- B. [shift\(\)](#)
- C. [slice\(\)](#)
- D. [some\(\)](#)

16. What value is displayed in the alert?

```
function foo(a) {  
    alert(arguments.length);  
}  
foo(1, 2, 3);
```

- A. 1
- B. 2
- C. 3
- D. undefined

17. What value is displayed in the alert?

```
var x = 5,  
    o = {  
        x: 10,  
        doIt: function doIt(){  
            var x = 20;  
            setTimeout(function(){  
                alert(this.x);  
            }, 10);  
        }  
    };  
o.doIt();
```

- A. 5
 - B. 10
 - C. 20
 - D. undefined
-

פרק שני – Angular 2+

Surround the letter corresponding to the correct answer/s

1. In Angular, which directive allows us to iterate through a collection.

- A. NgRepeat
- B. NgWhile
- C. NgIf
- D. NgFor

2. Both the following examples involving the directives are identical:

```
<div *ngFor="let i of [1, 2, 3]">{{i}}</div>
```

```
<template ngFor #i [ngForOf]="[1, 2, 3]">  
<div>{{i}}</div>  
</template>
```

- A. True
- B. False

3. Which of the below syntax will clone and inject pieces of templated HTML snippets in the markup, removing it from the DOM when the condition evaluates to false.

- A. *ngIf="conditional"
- B. [hidden]="conditional"
- C. ngIf*="conditional"
- D. None of above

4. Angular component life cycle hook are:

- A. Constructor, ngOnChanges, ngOnInit, ngAfterContentInit, ngDoCheck, ngAfterContentChecked, ngAfterViewChecked, ngOnDestroy
- B. Constructor, ngOnInit, ngAfterContentInit, ngDoCheck, ngAfterContentChecked, ngAfterViewInit, ngAfterViewChecked, ngOnDestroy
- C. Constructor, ngOnInit, ngDoCheck, ngAfterContentInit, ngAfterContentChecked, ngAfterViewChecked, ngOnDestroy
- D. Constructor, ngOnChanges, ngOnInit, ngDoCheck, ngAfterContentInit, ngAfterContentChecked, ngAfterViewInit, ngAfterViewChecked, ngOnDestroy

5. Consider the statement "Every component must be declared in one and only one Angular module". Is it true or false?
- A. True
 - B. Not necessary
 - C. Not always
 - D. False
6. They used to invoke events on the parent component from child components in the hierarchy of components.
- A. Inputs
 - B. Outputs
 - C. Blueprints
 - D. hooks
7. There are four different guard types we can use to protect our routes, one of these is:
- A. CanActivate
 - B. CanStart
 - C. CanNavigate
 - D. CanStop
8. In Angular, _____ represents an event triggered when a navigation starts.
- A. RouteStart
 - B. RouteInitial
 - C. NavigationStart
 - D. NavigateStart
9. What is need to be passed as a parameter in the event callback from the template to capture the event object
- A. \$event.start
 - B. \$events
 - C. \$eventobj
 - D. \$event

10. What will be the output of below program?

```
function f(input: boolean) {  
    let a = 100;  
  
    if (input) {  
        let b = a + 1;  
        return b;  
    }  
    return b;  
}
```

- A. Undefined
- B. 101
- C. Compilation error for a
- D. Compilation error for b

11. In Angular, you can pass data from parent component to child component using...

- A. @Output()
- B. @Input()
- C. Input
- D. Output

12. You can create local HTML reference of HTML tag using variable which starts with character

- A. @
- B. #
- C. *
- D. &

13. Select correct form control class name which is set to true via [(ngModel)] whenever value is modified

- A. .ng-invalid
- B. .ng-pending
- C. .ng-pristine
- D. .ng-dirty

14. If you provide a custom service in two components' "providers" section of @Component decorator, how many instances of service shall get created?
- A. 1
 - B. 2
 - C. 3
 - D. 4
15. In Angular routing, below tag is used to render matched component via active route.
- A. <router></router>
 - B. <router-output></router-output>
 - C. <router-outlet></router-outlet>
 - D. <router-display></router-display>
16. Async Pipe subscribes to observer and update expression whenever there is data sent from observer.
- A. True
 - B. Not necessary
 - C. Not always
 - D. False
17. Below command is used to run Static Code analysis of Angular application
- A. ng build
 - B. ng profile
 - C. ng lint
 - D. ng serve
18. Below component represent "target/host" DOM element inside Directive's constructor
- A. Element
 - B. ElementRef
 - C. Host
 - D. Target

19. To build application in production mode, use below command
- A. ng build
 - B. ng serve
 - C. ng build --prod
 - D. ng lint
20. Directive can listen to host/target events using below decoarator
- A. @Listener
 - B. @HostListener
 - C. @OnListener
 - D. @TargetListener
21. Using below wild card we can define page not found route
- A. **
 - B. *
 - C. 404
 - D. ^
22. Below service can be used to extract route parameters inside component
- A. Router
 - B. Route
 - C. ActivatedRoute
 - D. CurrentRoute
23. HTTP service's get/put/post/delete function returns
- A. object of type "any"
 - B. Observable
 - C. Json data
 - D. callback function

24. Observer sends data to multiple clients via below method
- A. send()
 - B. next()
 - C. emit()
 - D. publish()
25. By default, component's change detection strategy is set to
- A. OnPush
 - B. Default
 - C. Reactive
 - D. OnPull
26. To use HttpClient component you need to import below module
- A. HttpClientModule
 - B. HttpClientModule
 - C. Http
 - D. None of the above
27. A component can have child route defined using below property
- A. children routes
 - B. routes
 - C. routeCollection
 - D. None of the above
28. OnPush is faster in performance than Default change detection strategy
- A. True
 - B. Not necessary
 - C. Not always
 - D. False

29. Consider the following application module:

```
import { NgModule }           from '@angular/core';
import { RouterModule, Routes } from '@angular/router';
import { HomeComponent }       from './home.component';
import { ItemDetailComponent } from './item-detail.component';
const routes: Routes = [
  { path: '', redirectTo: '/home', pathMatch: 'full' },
  { path: 'home', component: HomeComponent },
  { path: 'detail/:id', component: ItemDetailComponent, outlet: 'route1' }
];
@NgModule({
  imports: [ RouterModule.forRoot(routes) ],
  exports: [ RouterModule ]
})
export class AppRoutingModule {}
```

Which of the following statements about the routers behavior are correct?

- A. The home component can only be accessed via the root URL redirect.
- B. The id parameter is optional when a call is made to the /detail/ URL.
- C. Optional parameters can be passed to any component via the query parameters of the ActivatedRoute.
- D. /detail/100 will use the <router-outlet name='route1'> to determine the position of the view.
- E. Specifying an outlet name is a requirement for a component with multiple outlet routes.

30. Which of the following statements about components in Angular are correct?

- A. The properties of a component's children are available in the component's constructor.
 - B. When a component depends on a service, the injector can be used to configure dependency injection.
 - C. A component defines its input parameters with the @Input decorator.
 - D. A component is a type of directive and as such, should be defined by the Directive class decorator.
 - E. A component selector must reference the class name in lowercase hyphenated format.
 - F. A components ngOnDestroy method is called just before Angular destroys the component.
-

פרק שלישי – .NET

Surround the letter corresponding to the correct answer/s

1. Which of the following is the correct output for the C#.NET program given below?

```
int i = 20 ;
for( ; ; )
{
    Console.Write(i + " ");
    if (i >= -10)
        i -= 4;
    else
        break;
}
```

- A. 20 16 12 8 4 0 -4 -8
 - B. 20 16 12 8 4 0
 - C. 20 16 12 8 4 0 -4 -8 -12
 - D. 16 12 8 4 0
 - E. 16 8 0 -8
2. Which of the following can be used to terminate a *while* loop and transfer control outside the loop?
- 1. exit while
 - 2. continue
 - 3. exit statement
 - 4. break
 - 5. goto
- A. 1, 3
 - B. 2, 4
 - C. 3, 5
 - D. 4, 5
 - E. None of these
3. The space required for structure variables is allocated on stack.
- A. True
 - B. False

4. Which of the following statements are correct about the C#.NET code snippet given below?

```
int[ , ] intMyArr = {{7, 1, 3}, {2, 9, 6}};
```

1. `intMyArr` represents rectangular array of 2 rows and 3 columns.
2. `intMyArr.GetUpperBound(1)` will yield 2.
3. `intMyArr.Length` will yield 24.
4. `intMyArr` represents 1-D array of 5 integers.
5. `intMyArr.GetUpperBound(0)` will yield 2.

A. 1, 2

B. 2, 3

C. 2, 5

D. 1, 4

E. 3, 4

5. How will you complete the foreach loop in the C#.NET code snippet given below such that it correctly prints all elements of the array a?

```
int[][] a = new int[2][];  
a[0] = new int[4]{6, 1, 4, 3};  
a[1] = new int[3]{9, 2, 7};  
foreach (int[] i in a)  
{  
    /* Add loop here */  
    Console.Write(j + " ");  
    Console.WriteLine();  
}
```

A. `foreach (int j = 1; j < a(0).GetUpperBound; j++)`

B. `foreach (int j = 1; j < a.GetUpperBound (0); j++)`

C. `foreach (int j in a.Length)`

D. `foreach (int j in i)`

E. `foreach (int j in a.Length -1)`

6. A `Student` class has a property called `rollNo` and `stu` is a reference to a `Student` object and we want the statement `stu.RollNo = 28` to fail. Which of the following options will ensure this functionality?

A. Declare `rollNo` property with both get and set accessors.

B. Declare `rollNo` property with only set accessor.

C. Declare `rollNo` property with get, set and normal accessors.

D. Declare `rollNo` property with only get accessor.

E. None of the above

7. If a *Student* class has an indexed property which is used to store or retrieve values to/from an array of 5 integers, then which of the following are the correct ways to use this indexed property?

```
1. Student[3] = 34;

2. Student s = new Student();
   s[3] = 34;

3. Student s = new Student();
   Console.WriteLine(s[3]);

4. Console.WriteLine(Student[3]);

5. Student.this s = new Student.this();
   s[3] = 34;
```

A. 1, 2

B. 2, 3

C. 3, 4

D. 3, 5

8. Which of the following statements are valid about generics in .NET Framework?

Generics is a language feature.

We can create a generic class, however, we cannot create a generic interface in C#.NET.

Generics delegates are not allowed in C#.NET.

Generics are useful in collection classes in .NET framework.

None of the above

A. 1 and 2 Only

B. 1, 2 and 3 Only

C. 1 and 4 Only

D. All of the above

E. None of the above

9. Which of the following statements is valid about generic procedures in C#.NET?

- A. All procedures in a Generic class are generic.
- B. Only those procedures labeled as Generic are generic.
- C. Generic procedures can take at the most one generic parameter.
- D. Generic procedures must take at least one type parameter.
- E. None of the above.

10. For the code snippet given below, which of the following statements is valid?

```
public class Generic<T>
{
    public T Field;
}
class Program
{
    static void Main(string[] args)
    {
        Generic<String> g = new Generic<String>();
        g.Field = "Hello";
        Console.WriteLine(g.Field);
    }
}
```

- A. It will print string "Hello" on the console.
- B. Name *Generic* cannot be used as a class name because it's a keyword.
- C. Compiler will give an error.
- D. Member Field of class *Generic* is not accessible directly.
- E. None of the above.

11. Which of the following statements are correct about an `ArrayList` collection that implements the `IEnumerable` interface?

1. The `ArrayList` class contains an inner class that implements the `IEnumerator` interface.
2. An `ArrayList` Collection cannot be accessed simultaneously by different threads.
3. The inner class of `ArrayList` can access `ArrayList` class's members.
4. To access members of `ArrayList` from the inner class, it is necessary to pass `ArrayList` class's reference to it.
5. Enumerator's of `ArrayList` Collection can manipulate the array.

- A. 1 and 2 only
- B. 1 and 3 and 4 only
- C. 2 and 5 only
- D. All of the above
- E. None of the above

12. Which of the following statements are correct about the C#.NET code snippet given below?

```
Stack st = new Stack();  
st.Push("hello");  
st.Push(8.2);  
st.Push(5);  
st.Push('b');  
st.Push(true);
```

- A. Dissimilar elements like `"hello"`, `8.2`, `5` cannot be stored in the same `Stack` collection.
- B. Boolean values can never be stored in `Stack` collection.
- C. In the fourth call to `Push()`, we should write `"b"` in place of `'b'`.
- D. To store dissimilar elements in a `Stack` collection, a method `PushAnyType()` should be used in place of `Push()`.
- E. This is a perfectly workable code.

13. Which of the following is an 8-byte Integer?

- A. [Char](#)
- B. [Long](#)
- C. [Short](#)
- D. [Byte](#)
- E. [Integer](#)

14. Which of the following are value types?

- 1. *Integer*
- 2. *Array*
- 3. *Single*
- 4. *String*
- 5. *Long*

- A. [1, 2, 5](#)
- B. [1, 3, 5](#)
- C. [2, 4](#)
- D. [3, 5](#)

15. What will be the output of the following code snippet when it is executed?

```
int x = 1;
float y = 1.1f;
short z = 1;
Console.WriteLine((float) x + y * z - (x += (short) y));
```

- A. [0.1](#)
- B. [1.0](#)
- C. [1.1](#)
- D. [11](#)

16. Which of the following statements are correct about the *Collection* Classes available in Framework Class Library?

- A. Elements of a collection cannot be transmitted over a network.
- B. Elements stored in a collection can be retrieved but cannot be modified.
- C. It is not easy to adopt the existing Collection classes for newtype of objects.
- D. Elements stored in a collection can be modified only if allelements are of similar types.
- E. They use efficient algorithms to manage the collection, thereby improving the performance of the program.

17. Which statement will you add in the function *fun ()* of class *B*, if it is to produce the output "*Welcome to IndiaBIX.com!*"?

```
namespace IndiabixConsoleApplication
{
    class A
    {
        public void fun()
        {
            Console.Write("Welcome");
        }
    }
    class B: A
    {
        public void fun()
        {
            // [*** Add statement here ***]
            Console.WriteLine(" to IndiaBIX.com!");
        }
    }
    class MyProgram
    {
        static void Main (string[ ] args)
        {
            B b = new B();
            b.fun();
        }
    }
}
```

- A. *base.fun () ;*
- B. *A::fun () ;*
- C. *fun () ;*
- D. *mybase.fun () ;*
- E. *A.fun () ;*

18. ASP.NET validation controls works (handle validation) at

- [A.](#) Client side only.
- [B.](#) Server side only.
- [C.](#) Both client side and server side.
- [D.](#) None of the above.

19. There is a button on page name cancel and it should bypass validation when cancel button is clicked. What will you do?

- [A.](#) set CausesValidation = false.
- [B.](#) set RemoveValidation=true
- [C.](#) set cancel=true
- [D.](#) None of the above.

20. What is/are the advantages of master page?

- [A.](#) It helps to display common content in multiple pages.
- [B.](#) They allow you to centralize the common functionality of your pages so that you can make updates in just one place.
- [C.](#) It helps to create a common page layout.
- [D.](#) All of the above.

21. How to implement authentication via web.config?

- [A.](#) Include the authentication element.
- [B.](#) Include the authorization element.
- [C.](#) Include the identity element.
- [D.](#) Include the deny element.

22. What is the file extension of web service in ASP.NET?

- [A.](#) .ascx
 - [B.](#) .asmx
 - [C.](#) .aspx
 - [D.](#) .docx
-