Structured Programming

Test 2, 17.12.2014, Group: $\boxed{\text{A}}$

*Each question has exactly **one correct** answer.*

Name: ―――――――――――――――――――

ID: ―――――――――――――――――――

1. Which of the following declaration is **not** a valid function prototype:

    (a)   `int func(char,char);`

    (b)   `double funcion;`

    (c)   `void func();`

    (d)   `float funcion();`

2. What will be the output after execution of the following code segment?

    ```
    char *t = "prezime";
    t += 4;
    printf("%s", t);
    ```

    (a)   nothing, it's compilation error

    (b)   `ime`

    (c)   `prezime`

    (d)   `qrezime`

3. What will be the output after execution of the following code segment?

    ```
    int a = 3, *b, *c;
    b = &a; c = b; *c = 5;
    printf("%d\n", *b);
    ```

    (a)   `1`

    (b)   `3`

    (c)   `5`

    (d)   can not be determined

4. Which is the correct expression for accessing the last element of the array defined as: `int elements[] = { 5, 4, 3, 2, 1 };`

    (a)   `*(elements + 4 * sizeof(int))`

    (b)   `elements + 5`

    (c)   `*(elements + 4)`

    (d)   `elements[5]`

5. What will be the value of `a` after the execution of the following code segment?

    ```
    int a = 0; char *word = "deleveled";
    char *begin = word, *end = word + strlen(word) - 1;
    while(begin++ <= end--) a += (*begin == *end);
    ```

    (a)   `5`

    (b)   `4`

    (c)   `3`

    (d)   undefined

6. What will be the value of `len` after the execution of the following code segment?

```c
char a[] = { '3', '2', '1', 0 , '\n', '\0'};
int len = strlen(a);
```

(a) 5

(b) 3

(c) 4

(d) undetermined

7. Which is the correct expression in C to open a file named `"in.dat"` in readonly mode?

(a) `fopen("in.txt","rb");`

(b) `fopen("in.dat","w");`

(c) `fopen("in.dat", "read");`

(d) `fopen("in.dat", "r");`

8. Which of the following functions is used to write a character in a file in C?

(a) `void writef(file f)`

(b) `int fputc(int character, FILE *f);`

(c) `void fileput(int c, F* file);`

(d) `int putchar(int character);`

9. What will be the output after execution of the following code segment?

```c
int f (int a) {
    printf("%d\t", a * a);
    if (a > 1) f(a - 2);
    printf("%d\t", a * a);
}
int main() { f(7); return 0; }
```

(a) 49 25 9 1 1 9 25 49

(b) 49 25 9 1

(c) 1 9 25 49

(d) could not be determined

10. What will be the output after execution of the following code segment?

```c
int a[10] = {0,1,2,3}, b[10] = {1,2,3}, c[10] = {1,2};
printf("%d\n",*(a + b[a[c[1]]]));
```

(a) 0

(b) 1

(c) 2

(d) 3

Answer Key for Exam $\boxed{\text{A}}$

1. Which of the following declaration is **not** a valid function prototype:

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    (b)   `elements + 5`

    $\boxed{\text{(c)}}$ `*(elements + 4)`

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6. What will be the value of `len` after the execution of the following code segment?

```c
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int len = strlen(a);
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(a) 5

(b) 3

(c) 4

(d) undetermined

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int a[10] = {0,1,2,3}, b[10] = {1,2,3}, c[10] = {1,2};
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(a) 0

(b) 1

(c) 2

(d) 3