



Only some of the processes will receive the final result

all statements are correct

22. متعدد الاختيارات: ...which of the below functions does the

which of the below functions does the following:  
(divides the data into a number of chunks in a single process, then sends all different chunks/partitions of the data to all the processes)

MPI\_Bcast

MPI\_Allgather

MPI\_reduce

MPI\_Scatter

23. متعدد الاختيارات: ... how many error/incorrect argument in

how many error/incorrect argument in the following code?

```
if(myRank == 0)
```



متعدد الاختيارات: ... which of the following MPI functions

which of the following MPI functions is a collective communication function?

MPI\_Reduce

MPI\_Allreduce

MPI\_Gather

all answers are correct ✓

تعديل: الكل  تحديد حسب النوع: نوع السؤال -

إخفاء تفاصيل السؤال

تحديث وإعادة التغير

التعليق

حذف وإعادة التغير

متعدد الاختيارات: ... which of the following statements is

which of the following statements is correct when dealing with inputs from the user in MPI while using the default communicator

only process 0 can read input from the user ✓

only the last process can read input from the user

all processes except process 0 can read input from the user

all processes can read inputs from the user

متعدد الاختيارات: ... which of the following MPI functions

which of the following MPI functions is a collective communication function?

MPI\_Reduce

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3

4

...which of the following approached can : تعدد الاختيارات

which of the following approached can be used for synpronization

Locks

Semaphores

Synchronized methods

all answers are correct



...which of the following methods can be : تعدد الاختيارات

which of the following methods can be used to generate a thread pool with exactly 4 threads

ExecutorService threadPool = Executors.newCachedThreadPool();

ExecutorService threadPool = Executors.newSingleThreadExecutor();

MPI\_Allgather

21. متعدد الاختيارات: ... which of the following is true about

سؤال

which of the following is true about the function MPI\_Allreduce()?

إجابة

- All processes will receive the final result
- Only one process will receive the final result
- Only some of the processes will receive the final result
- all statements are correct

22. متعدد الاختيارات: ...which of the below functions does the

سؤال

which of the below functions does the following:  
sends the data into a number of chunks in a single process, then sends all different chunks/partitions of the data to all the processes)

إجابة

MPI\_Bcast

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MPI\_Scatter

23. متعدد الاختيارات: ... how many error/incorrect argument in

سؤال

how many error/incorrect argument in the following code?

```
if(myRank == 0)
{
    for(int i=0; i<comm_size; i++)
    {
        MPI_Send(&x, 1, MPI_INT, i, 0, MPI_COMM_WORLD);
    } else{
        MPI_Recv(&x, 0, MPI_DOUBLE, i, 0, MPI_COMM_WORLD);
    }
}
```

إجابة

- 0
- 1
- 2
- 3

24. متعدد الاختيارات: ... which of the following statements is

19. متعدد الاختيارات: ...which of the following naming-conven

which of the following naming-conventions are used by all MPI methods and data-types?

starts with "MPI\_" and then all following letters are small

starts with "MPI\_" and then all following letters are capital

starts with "MPI\_" and only the first letter of each word is capital and the rest are small

starts with "MPI\_" and only the first letter of each word is small and the rest are capital

20. متعدد الاختيارات: ... which of the following MPI functions

which of the following MPI functions has a behaviour similar to the figure below

Only some of the processes will receive the final result

all statements are correct

22. متعدد الاختيارات: which of the below functions does the

which of the below functions does the following: (divides the data into a number of chunks in a single process, then sends all different chunks/partitions of the data to all the processes)

MPI\_Bcast

MPI\_Allgather

MPI\_reduce

MPI\_Scatter

23. متعدد الاختيارات: ... how many error/incorrect argument in

how many error/incorrect argument in the following code?

```
if(myRank == 0)
```

0.8

...Which of the following concepts appear in the code below?

```
class MyThread extends Thread{
    private static int taskNum;
    static Object obj1 = new Object();
    static Object obj2 = new Object();
    public void run(){
        synchronized(obj1){
            synchronized(obj2)
            {
                taskNum++;
            }
        }
    }
}
```

Synchronization

Deadlock





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Race condition

Fairness Policy

0.8

...what is the maximum number of threads : الإجابات

what is the maximum number of threads that can access the critical section (simultaneously)?

```
class Task implements Runnable{
    static Semaphore sem = new Semaphore(4);
    public void run(){
        1 sem.acquire();
        2 sem.acquire();
        3 System.out.println("hello");
        4 sem.release();
        1 sem.release();
    }
}
```

1

2



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what is the output of the code below?

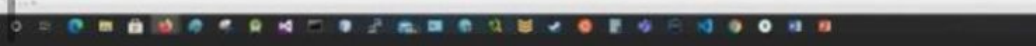
```
public class JavaApplication45 extends Thread{
    public void run(){
        System.out.println("hello");
    }
    public static void main(String[] args) throws Exception{
        ArrayList<Thread> list = new ArrayList();
        JavaApplication45 t1 = new JavaApplication45();
        Thread.currentThread().join();
        t1.start();
    }
}
```

hello

hellohello

hellohellohello

(no output) ✓





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How many error() the code below

```
public class JavaApplication45 extends Thread{  
    private void run(){  
        System.out.println("hello");  
    }  
    public static void main(String[] args) throws Exception{  
        ArrayList<Thread> list = new ArrayList();  
        JavaApplication45 t1 = new JavaApplication45();  
        t1.join();  
    }  
}
```

0  
1  
2  
3

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3

11. متعدد الاختيارات: ... which of the following statements is true about multi-threading:

which of the following statements is true about multi-threading:

there is no benefit in running multiple threads on a single processor

running multiple threads on a single processor will enhance performance

the concept of time-sharing can be applied on both single and multiple processors system

all statements are not true

12. متعدد الاختيارات: ?how many error() the code below:

how many error() the code below?

```
class JavaApplication45 extends Thread{
    ate void run(){
        System.out.println("hello");
    }
    ic static void main(String[] args) throws Exception{
        ArrayList<Thread> list = new ArrayList();
    }
}
```



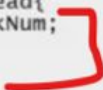
...Which of the following concepts appear in the code below?

Which of the following concepts appear in the code below?

```

public class JavaApplication45{
    public static void main(String[] args) throws Exception{
        MyThread t1 = new MyThread();
        MyThread t2 = new MyThread();
        t1.start();
        t2.start();
    }
}
class MyThread extends Thread{
    private static int taskNum;
    public void run(){
        taskNum++;
    }
}

```

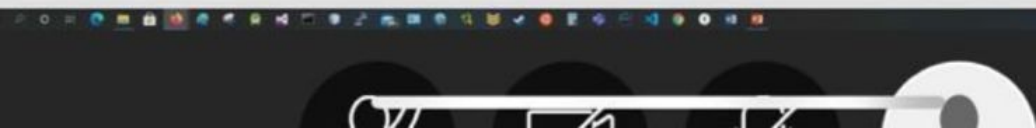


Synchronization

Deadlock

Race condition

Fairness Policy



4. متعدد الاختيارات: ...which of the following can be consider

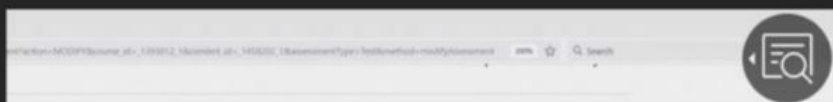
which of the following can be considered "Data-Parallelism"?

each thread processes all the data in an array

each thread processes a portion of the data in an array

each thread applies a different operation on the data in an array

only one thread processes all the data in an array and applies all different operations on them



the system does not contain any memory unit in its architecture

all statements are not true

8. متعدد الاختيارات: ... which of the following is true about

which of the following is true about distributed memory" architecture?

all cores or nodes can directly access the same memory

each core or node has its own private memory

the system does not contain any memory unit in its architecture

all statements are not true

9. متعدد الاختيارات: ...Which of the following is not true ab

Which of the following is not true about threads?

A thread is considered the smallest independent unit of a program execution



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all statements are not true

تعدد الاختيارات: ...Which of the following is not true ab

Which of the following is not true about threads?

A thread is considered the smallest independent unit of a program execution

All threads contain the same exact execution path

A thread is a lightweight sub process

All statements are true

تعدد الاختيارات: ...In Java, what is the minimum number o

In Java, what is the minimum number of threads in any program?

0

1

2





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some threads should be busy while other threads should stay idle

only one thread can process the data while other threads should stay idle

7. متعدد الاختيارات: ... which of the following is true about

which of the following is true about "shared memory" architecture?

all cores or nodes can directly access the same memory

each core or node has its own private memory

the system does not contain any memory unit in its architecture

all statements are not true

8. متعدد الاختيارات: ... which of the following is true about

which of the following is true about distributed memory" architecture?

all cores or nodes can directly access the same memory

each core or node has its own private memory



فيصل قاره





parallel computation only needed in large systems and super-computers

...what is the problem with increasing  $t$ : الاختيارات:

what is the problem with increasing the density of transistors in the CPU?

it decreases the CPU performance

it increases the CPU heat

it increases the CPU price

it decreases the CPU power consumption

which of the following is true about...



...which of the following can be considered a "Task-Parallelism"? الاختيارات:

which of the following can be considered a "Task-Parallelism"?

each thread processes all the data in an array

each thread processes a portion of the data in an array

each thread applies a different operation on the data in an array

only one thread processes all the data in an array and applies all different operations on them





تعدد الاختيارات: ... which of the following is true about

which of the following is true about "translation program" that translates serial-applications to parallel-application?

very difficult to build but very successful

very difficult to build and not very successful

very easy to build but not very successful

very easy to build and very successful

~~which of the following can be consider~~ تعدد الاختيارات:

...what does "Load Balancing" means in p: حدد الاختيارات

what does "Load Balancing" means in parallel computing?

all threads should work on different tasks that requires different execution time

all threads should work for an equivalent amount of time ✓

some threads should be busy while other threads should stay idle

only one thread can process the data while other threads should stay idle



→ ⚠ Click Submit to complete this assessment.

### Question 25

which of the following is true about "translation program" that translates serial-applications to parallel-application?

- very difficult to build but very successful
- very difficult to build and not very successful
- very easy to build but not very successful
- very easy to build and very successful

→ ⚠ Click Submit to complete this assessment.

Moving to the next question prevents changes to this answer.

any error) the code below?

```
public class JavaApplication45 extends Thread{  
    private void run(){  
        System.out.println("hello");  
    }  
    public static void main(String[] args) throws Exception  
    {  
        ArrayList<Thread> list = new ArrayList();  
        JavaApplication45 t1 = new JavaApplication45();  
        t1.join();  
    }  
}
```

Moving to the next question prevents changes to this answer.

→ ⚠ Moving to the next question prevents changes to this answer.

### Question 22

which of the following nameing-conventions are used by all MPI methods and data-types?

- starts with "MPI\_" and then all following letters are small
- starts with "MPI\_" and then all following letters are capital
- starts with "MPI\_" and only the first letter of <sup>first</sup> each word is capital and the rest are small
- starts with "MPI\_" and only the first letter of each word is small and the rest are capital

→ ⚠ Moving to the next question prevents changes to this answer.

↳ ⚠ Moving to the next question prevents changes to this answer.

### Question 17

which of the following is true about "shared memory" architecture?

- all cores or nodes can directly access the same memory
- each core or node has its own private memory
- the system does not contain any memory unit in its architecture
- all statements are not true

↳ ⚠ Moving to the next question prevents changes to this answer.

↳ ⚠ Moving to the next question prevents changes to this answer.

### Question 21

which of the following can be considered "Data-Parallelism"?

- each thread processes all the data in an array
- each thread processes a portion of the data in an array
- each thread applies a different operation on the data in an array
- only one thread processes all the data in an array and applies all different operations on them

↳ ⚠ Moving to the next question prevents changes to this answer.

↳ ⚠ Moving to the next question prevents changes to this answer.

### Question 24

which of the following statements is true about multi-threading:

- there is no benefit in running multiple threads on a single processor
- running multiple threads on a single processor will enhance performance
- the concept of time-sharing can be applied on both single and multiple processors systems
- all statements are not true

↳ ⚠ Moving to the next question prevents changes to this answer.

↳ ⚠ Click Submit to complete this assessment.

### Question 25

which of the following is true about "translation error"?

Question 18

what is the output of the code below?

```
public class JavaApplication45 extends Thread{  
    public void run(){  
        System.out.println("hello");  
    }  
    public static void main(String[] args) throws Exception{  
        ArrayList<Thread> list = new ArrayList();  
        JavaApplication45 t1 = new JavaApplication45();  
        Thread.currentThread().join();  
        t1.start();  
    }  
}
```

hello  
 hellohello  
 hellohellohello  
 the output

↓  
توقف  
الطاعة

→ ⚠ Moving to the next question prevents changes to this answer.

→ ⚠ Moving to the next question prevents changes to this answer.

Question 19

which of the following can be considered a "Task-Parallelism"?

each thread processes all the data in an array

each thread processes a portion of the data in an array *data Parallelism*

each thread applies a different operation on the data in an array

only one thread processes all the data in an array and applies all different operations on them

→ ⚠ Moving to the next question prevents changes to this answer.

→ ⚠ Moving to the next question prevents changes to this answer.

Question 20

which of the following approached can be used for synchronization

Locks

Semaphores

Synchronized methods

all answers are correct

→ ⚠ Moving to the next question prevents changes to this answer.