Question 1

Complete

Mark 1.00 out of 1.00

Which scheduling policy is most suitable for time shared operating systems?

Select one or more:

- [x] a. Round Robin

  Round robin is used in time shared operating system, as it is more responsible.

- [ ] b. Elevator
- [ ] c. First come First Serve
- [ ] d. Shortest Job First

Your answer is correct.

Question 2

Complete

Mark 1.00 out of 1.00

Which address class does the IP address 227.12.85.123 belong to?

Select one:

- (•) a. Class D

  Detail Solution:
  Class A addresses start with “0”,
  class B addresses start with “10”,
  class C addresses start with “110”,
  and class D addresses start with “1110”.
  For the given IP address, the first byte 227 = 11100011 in binary, this starts with “1110”.
  Hence, this is a class D address.

- ( ) b. Class A
- ( ) c. Class B
- ( ) d. Class C

Your answer is correct.

Question 3

Complete

Mark 1.00 out of 1.00

Given the following classes, which of the following can independently replace INSERT IMPORTS HERE to make the code compile? (Choose all that apply)

```
package aquarium;
public class Tank { }
package aquarium.jellies;
public class Jelly { }
package visitor;
INSERT IMPORTS HERE
public class AquariumVisitor {
public void admire(Jelly jelly) {
}
}
```

Select one or more:

- [ ] a. import aquarium.jellies.Jelly.*;
- [ ] b. import aquarium.*.Jelly;
- [ ] c. None of these can make the code compile
- [ ] d. import aquarium.*;
- [x] e. import aquarium.jellies.*;

  Option C is correct because it imports Jelly by classname. Option D is correct because it imports all the classes in the jellies package, which includes Jelly.

- [x] f. import aquarium.jellies.Jelly;

Your answer is correct.

Question 4

Complete

Mark 1.00 out of 1.00

Given the following class, which of the following calls print out Blue Jay? (Choose all that apply)

```
public class BirdDisplay {
public static void main(String[] name) {
System.out.println(name[1]);
}
}
```

Select one or more:

- [x] a. java BirdDisplay Sparrow "Blue Jay"

  Option B is correct because arrays start counting from zero and strings with spaces must be in quotes.

- [ ] b. Does not compile.
- [ ] c. java BirdDisplay.class Sparrow "Blue Jay"
- [ ] d. java BirdDisplay "Blue Jay" Sparrow
- [ ] e. Java BirdDisplay.class "Blue Jay" Sparrow
- [ ] f. java BirdDisplay Blue Jay Sparrow
- [ ] g. java BirdDisplay Sparrow Blue Jay

Your answer is correct.

Question 5

Complete

Mark 1.00 out of 1.00

Four Jobs to be executed on a single processor system arrive at time 0 in the order A,B, C,D. Their burst CPU time requirements are 4,1,8,1 time units, respectively. The completion time of A under round robin scheduling with time slice of one time unit is

Select one or more:

- [ ] a. 8
- [ ] b. 10
- [x] c. 9

  Using round robin with time slice of 1 unit Job A completes at 9th Unit.

- [ ] d. 4

Your answer is correct.

Question 6

Complete

Mark 1.00 out of 1.00

What is the subnet address if the destination IP address is 144.16.34.124 and the subnet mask is 255.255.240.0?

Select one:

- (•) a. 144.16.32.0

  Let us express the two numbers in binary:
  144.16.34.124 = 10010000 00010000 00100010 01111100
  255.255.240.0 = 11111111 11111111 11110000 00000000
  If we take bit-by-bit AND, we shall get the subnet address as
  10010000 00010000 00100000 0000 = 144.16.32.0

- ( ) b. None of these
- ( ) c. 144.16.34.0
- ( ) d. 144.16.0.0

Your answer is correct.

Question 7

Complete

Mark 1.00 out of 1.00

Consider the following four processes with the arrival time and length of CPU burst given in milliseconds :

Process	Arrival Time	Burst Time
P1	0	8
P2	1	4
P3	2	9
P4	3	5

The average waiting time for preemptive SJF scheduling algorithm is .....

Select one or more:

- [ ] a. 7.5 ms
- [x] b. 6.5 ms

First we will make gantt chart of given process
then we will calculate turn around time and waiting time of individual process.

```
-------------------------------------------------
|  P1  |  P2  |  P4  |  P1  |  P3  |
-------------------------------------------------
0      1      5      10     17     26
```

```
Pid  |  CT  |  TAT  |  WT  |
----------------------------------------
P1   |  17  |  17   |  9   |
P2   |  5   |  4    |  0   |
P3   |  26  |  24   |  15  |
P4   |  10  |  7    |  2   |
----------------------------------------
```

So, Now we have to calculate average waiting time for schedule:
avg waiting time = wt(P1 + P2 + P3 + P4)/number of process.
ie. (9 + 0 + 15 + 2) / 4
= 26 / 4
= 6.5

- [ ] c. 6.75 ms
- [ ] d. 7.75 ms

Your answer is correct.

Question 8

Complete

Mark 1.00 out of 1.00

Which of the following are true? (Choose all that apply)

Select one or more:

- [ ] a. A local variable of type boolean defaults to true.
- [ ] b. A local variable of type float defaults to 0.
- [ ] c. A local variable of type boolean defaults to false.
- [x] d. None of the above.

Option G is correct because local variables do not get assigned default values. The code fails to compile if a local variable is not explicitly initialized. If this question were about instance variables, options D and F would be correct. A boolean primitive defaults to false and a float primitive defaults to 0.0.

- [ ] e. A local variable of type boolean defaults to null.
- [ ] f. A local variable of type Object defaults to null.
- [ ] g. A local variable of type float defaults to 0.0.

Your answer is correct.

Question 9

Complete

Mark 1.00 out of 1.00

Which of the following are true? (Choose all that apply)

```
4: short numPets = 5;
5: int numGrains = 5.6;
6: String name = "Scruffy";
7: numPets.length();
8: numGrains.length();
9: name.length();
```

Select one or more:

- [ ] a. Line 9 generates a compiler error.
- [ ] b. The code compiles as is
- [x] c. Line 7 generates a compiler error.

  Options D and E (lines 7 and 8) do not compile because short and int are primitives. Primitives do not allow methods to be called on them.

- [x] d. Line 8 generates a compiler error.

  Options D and E (lines 7 and 8) do not compile because short and int are primitives. Primitives do not allow methods to be called on them.

- [ ] e. Line 4 generates a compiler error.
- [ ] f. Line 6 generates a compiler error.
- [x] g. Line 5 generates a compiler error.

  Option B (line 5) generates a compiler error because int is an integral type, but 5.6 is a floating-point type

Your answer is correct.

Question 10

Complete

Mark 1.00 out of 1.00

Which of the following lines of code compile? (Choose all that apply)

Select one or more:

- [ ] a. double d1 = 1_234_.0;
- [ ] b. None of the above
- [x] c. int i1 = 1_234;
- [ ] d. double d3 = 1_234.0_;
- [x] e. double d4 = 1_234.0;

  Underscores are allowed as long as they are directly between two other digits.
  This means options A and E are correct. Options B and C are incorrect because the underscore is adjacent to the decimal point. Option D is incorrect because the underscore is the last character.

- [ ] f. double d2 = 1_234._0;

Your answer is correct.