Iniziato	venerdì, 26 giugno 2020, 12:03
Stato	Completato
Terminato	venerdì, 26 giugno 2020, 12:17
Tempo impiegato	14 min. 16 secondi
Punteggio	9,00/10,00
Valutazione	**27,90** su un massimo di 31,00 (**90**%)

Domanda **1**

Risposta corretta

Punteggio ottenuto 2,00 su 2,00

Let f, g be the functions defined as $f(n) = 10^3 n \log n$ and $g(n) = \frac{n^2}{10^5 \log n}$.

Scegli una o più alternative:

- ☐ $f \in \Omega(g)$
- ☐ $f \in \Theta(g)$
- ☑ $f \in O(g)$ ✔

Your answer is correct.

La risposta corretta è: $f \in O(g)$

Domanda **2**

Risposta corretta

Punteggio ottenuto 2,00 su 2,00

Turing Machines:

Scegli una o più alternative:

- ☑ Can sometime work in polynomial time ✔
- ☐ Always work in a time bounded by a total function f
- ☑ Can simulate any other computational model with polynomial overhead ✔
- ☑ Are such that the presence of multiple tapes changes what can be computed in linear time. ✔

Your answer is correct.

Le risposte corrette sono: Can sometime work in polynomial time, Can simulate any other computational model with polynomial overhead, Are such that the presence of multiple tapes changes what can be computed in linear time.

Domanda 3

Risposta corretta

Punteggio ottenuto 2,00 su 2,00

The universal Turing machine:

Scegli una o più alternative:

- ☑ Can simulate every Turing machine, with a polynomial overhead. ✔
- ☐ Can simulate every Turing machine, but not itself
- ☐ Works in polynomial time.
- ☑ Is an essential ingredient of in the proof of existence of uncomputable problems. ✔

Your answer is correct.

Le risposte corrette sono: Can simulate every Turing machine, with a polynomial overhead., Is an essential ingredient of in the proof of existence of uncomputable problems.

Domanda 4

Parzialmente corretta

Punteggio ottenuto 1,00 su 2,00

Suppose a language $\mathcal{L}$ is in **EXP** but not in **P**. Then:

Scegli una o più alternative:

- ☐ $\mathcal{L}$ is necessarily **NP**-complete.
- ☐ The classes **NP** and **P** are different.
- ☐ $\mathcal{L}$ can be computed in polynomial time.
- ☑ There could be a nondeterministic polytime TM computing $\mathcal{L}$ ✔

Your answer is partially correct.

Hai selezionato correttamente 1.
Le risposte corrette sono: $\mathcal{L}$ can be computed in polynomial time., There could be a nondeterministic polytime TM computing $\mathcal{L}$

Domanda 5

Risposta corretta

Punteggio ottenuto 2,00 su 2,00

The notion of PAC-learnable concept class:

Scegli una o più alternative:

- ☐ Cannot be reached when the underlying concept class is the one conjunctions of literals.
- ☐ Requires the output concept to have probability of error ε, in all cases
- ☑ Does not make any reference to the time complexity of the learning algorithm ✔
- ☑ Needs to hold for every distribution **D** on the instance class. ✔

Your answer is correct.

Le risposte corrette sono: Needs to hold for every distribution **D** on the instance class., Does not make any reference to the time complexity of the learning algorithm