Introdução à Engenharia de Software
1º Semestre, 2023/24

Exame Época Normal
15 de janeiro de 2024

Número mecanográfico: _____
Nome: _____

O exame tem 20 perguntas, sendo que 17 são de escolha múltipla e 03 de preenchimento de espaços vazios.
As perguntas de escolha múltipla tem apenas uma resposta correta, devem ser respondidas na grelha presente nesta página do enunciado com um **X**. Para anular uma resposta, o aluno deve preencher a célula. As respostas anuladas não descontam, mas as erradas **descontam** (cotação/(hipóteses − 1)).
As perguntas de preenchimento de espaços vazios não descontam.
A duração total do exame é de **1h30**.
A pergunta adicional, no final, servirá **apenas** para lidar com situações próximas da nota mínima.

The exam has 20 *questions, with* 17 *being multiple-choice and* 03 *being focused on completing empty spaces. The multiple-choice questions have only one correct answer.*
The multiple-choice questions have only one correct answer and should be answered in the grid provided on this page of the exam with an ***X****. To cancel an answer, the student should fill in the cell. Canceled answers do not result in deductions, but incorrect answers* ***deduct*** *(score/(options − 1)).*
The fill-in-the-blank questions do not result in deductions.
The total duration of the exam is ***1h30****.*
The aditional question, at the end, will be used ***only*** *to tackle situations close to the minimum grade.*

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
A																	
B																	
C																	
D																	

1. (1.2 pts) Solve: 3(x-2) = 9
   A. x = 11
   B. x = 7
   C. x = 3
   D. x = 5
2. (0.6 pts) sin squared theta + cos squared theta = ?
   A. 1
   B. theta
   C. 0
   D. 2
3. (1.2 pts) What is the quotient rule numerator?
   A. fg prime
   B. f prime g plus fg prime
   C. f prime g prime
   D. f prime g minus fg prime
4. (0.9 pts) Sum of angles in a quadrilateral?
   A. 270 degrees
   B. 360 degrees
   C. 540 degrees
   D. 180 degrees
5. (1.2 pts) Solve: x squared = 16
   A. x = plus or minus 4
   B. x = 8

C. x = 256
D. x = 4

6. (1.2 pts) What is the derivative of x cubed?
   A. x squared
   B. 3x
   C. x cubed
   D. 3x squared

7. (0.9 pts) Probability of rolling a 3 on a die?
   A. 1/2
   B. 1/6
   C. 1/3
   D. 1/12

8. (1.2 pts) Factor: x squared - 9
   A. x(x-9)
   B. (x-9)(x+1)
   C. (x-3) squared
   D. (x-3)(x+3)

9. (0.9 pts) What is the sample space of a coin flip?
   A. 1,2
   B. 0,1
   C. H,T,E
   D. H,T

10. (0.9 pts) Area of a rectangle 5 by 3?
    A. 18
    B. 30
    C. 15
    D. 8

11. (0.6 pts) What is sin(90 degrees)?
    A. sqrt2/2
    B. 1
    C. -1
    D. 0

12. (1.2 pts) Solve: absolute value of x = 5
    A. x = 5
    B. x = -5
    C. x = plus or minus 5
    D. x = 25

13. (1.2 pts) What is d/dx(cos x)?
    A. -cos x
    B. -sin x
    C. sin x
    D. cos x

14. (1.2 pts) What is d/dx(sin x)?
    A. cos x
    B. -cos x
    C. sin x
    D. -sin x

15. (0.9 pts) Pythagorean theorem: a squared + b squared = ?
    A. 2c
    B. a+b

C. c squared
D. ab

16. (0.9 pts) Range of 10,20,30,40?
    A. 30
    B. 20
    C. 40
    D. 50

17. (0.6 pts) What is cos(0 degrees)?
    A. 1
    B. sqrt3/2
    C. 0
    D. -1

18. (0.9 pts) In a normal distribution, mean equals?
    A. Median
    B. Both
    C. Mode
    D. Neither

19. (1.2 pts) What is the derivative of a constant?
    A. constant
    B. 1
    C. 0
    D. undefined

20. (1.2 pts) Simplify: 3x squared times 2x
    A. 6x squared
    B. 5x cubed
    C. 6x cubed
    D. 5x squared