Started on Monday, 9 November 2020, 5:54 PM
State Finished
Completed on Monday, 9 November 2020, 6:45 PM
Time taken 50 mins 49 secs
Grade **25.00** out of 25.00 (**100**%)

Information

INTEGRAL UNIVERSITY
LUCKNOW INDIA

Mid-sem Unit Exam, Session (2020-21)

Program : BCA

Course Code and Name: Computer based Numerical and Statistical Techniques (MT202)

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: 1901018176

Course Code and Name: MT-202

Program: BCA

Year /Semester: 2nd/3rd

Section/Group: C

Question **2**

Complete

Mark 1.00 out of 1.00

The symbol which is used for shift operator is

Select one:

a. λ

b. D

c. E

d. μ

Question **3**

Complete

Mark 1.00 out of 1.00

Choose the correct relations between the operators

Select one:

a.
$E=1+\Delta$

b.
$E=1-\Delta$

c.
$E=\nabla+1$

d. All of the above

Question **4**

Complete

Mark 1.00 out of 1.00

Let h be the finite difference, the backward difference operator is defined as

Select one:

a. f(x+h)-f(x)

b. f(x+h)

c. f(x-h)-f(x)

d. None of the Above

Question **5**

Complete

Mark 1.00 out of 1.00

The central difference operator is denoted by

Select one:

a.
Δ

b.
∇

c.
E

d.
δ

Question **6**

Complete

Mark 1.00 out of 1.00

The process of finding the values corresponding the point inside the interval (x_0, x_1) is called

Select one:

a. Interpolation

b. Extrapolation

c. Iteration

d. Integration

Question **7**

Complete

Mark 1.00 out of 1.00

Newton Gregory backward interpolation formula can be used

Select one:

- a. When intervals are not equally spaced and we need to interpolate near to the end of the table.
- b. When intervals are equally spaced and we need to interpolate near to the end of the table
- c. Can be used for both equally and unequally spaced intervals.
- d. When the given values are large.

Question **8**

Complete

Mark 1.00 out of 1.00

If $x_0 = 75$, $x_n = 100$ and h= 5 then n=?

Select one:

- a. 2
- b. 3
- c. 4
- d. 5

Question **9**

Complete

Mark 1.00 out of 1.00

Interpolation formulae are based upon the fundamental assumption that data can be expressed as

Select one:

- a. A linear function
- b. A polynomial
- c. A cubic function
- d. Exponential function

Question **10**

Complete

Mark 1.00 out of 1.00

If 5 values of x and corresponding values of y are given, then Lagrange's interpolation formula will give

Select one:

- a. A polynomial of degree 4 in y.
- b. A polynomial of degree 4 in x.
- c. A polynomial whose each term has degree 4.
- d. A constant polynomial.

Question **11**

Complete

Mark 1.00 out of 1.00

The (n+1)th divided difference of polynomial of degree n are

Select one:

- a. Unequal
- b. Variable
- c. Zero
- d. One

Question **12**

Complete

Mark 1.00 out of 1.00

Newton's divided difference formula is used to interpolate the value of y

Select one:

- a. Near the beginning of the table.
- b. Near the end of the table.
- c. Near the mid of the table.
- d. All of the above.

Question **13**

Complete

Mark 1.00 out of 1.00

Find Newton's first divided difference for the given values

x: 1 3

y: 6 28

Select one:

- a. 22
- b. 11
- c. 10
- d. 21

Question **14**

Complete

Mark 1.00 out of 1.00

For given two distinct points x_0, x_1 the first order Newton divided difference is given by

Select one:

- a. $\frac{x - x_0}{f(x_1) - f(x_0)}$
- b. $\frac{f(x_1) + f(x_0)}{x_1 + x_0}$
- c. $\frac{f(x_1) - f(x_0)}{x_1 - x_0}$
- d. $\frac{x_1 + x_0}{f(x_1) + f(x_0)}$

Question **15**

Complete

Mark 1.00 out of 1.00

Symbol used for Backward difference operator is

Select one:

a. Δ

b. δ

c. ∇

d. E

Question **16**

Complete

Mark 1.00 out of 1.00

If $y_0 = 0.5$ and $y_1 = 1.0$, then the value of Δy_0 is

Select one:

a. 0

b. 0.5

c. 0.25

d. 0.75

Question **17**

Complete

Mark 1.00 out of 1.00

The formula $f(x) = \frac{(x-x_1)(x-x_2)...(x-x_n)}{(x_0-x_1)(x_0-x_2)...(x_0)} f(x_0) + \frac{(x-x_0)(x-x_2)...(x-x_n)}{x_1-x_0)(x_1-x_2)...(x_1-x_n)} f(x_1) + ...$
$\frac{(x-x_0)(x-x_1)...(x-x_{n-1})}{(x_n-x_0)(x_n-x_1)...(x_n-x_{n-1})} f(x_n)$ is known as

Select one:

a. Newton's divided difference formula

b. Stirling formula

c. Bessel Formula

d. Lagrange's Formula

Question **18**

Complete

Mark 1.00 out of 1.00

The given set of data (1,5), (4,9), (7,24), (10,96) and (13,156)

Select one:

a. Is not equally spaced with h=3

b. Is equally spaced with h=3

c. Data is not equally spaced because h=3

d. a and c both are correct.

Question **19**

Complete

Mark 1.00 out of 1.00

Which one of the following is false

Select one:

a. $\Delta = E - 1$

b. $E = e^{hD}$

c. $\nabla = 1 - E$

d. None of the Above

Question **20**

Complete

Mark 1.00 out of 1.00

Which of the following is not true

Select one:

a. $(\Delta + 1)(1 - \nabla) = 1$

b. $(\Delta - 1)(1 + \nabla) = |$

c. $(\Delta - 1)(1 - \nabla) = 1$

d. All of the above

Question **21**

Complete

Mark 1.00 out of 1.00

The process of computing the value of function outside the given range is called

Select one:

a. Interpolation

b. Extra interpolation

c. Extrapolation

d. Differentiation

Question **22**

Complete

Mark 1.00 out of 1.00

For the given set of data, the value of $\Delta(y_0)$ is

x: 5. 10. 15

y: 9962. 9848. 9659

Select one:

a. 114

b. 75

c. -75

d. -114

Question **23**

Complete

Mark 1.00 out of 1.00

The correct factorial notation for $[x]^3$ with h=1 is

Select one:

- a. x(x-1)
- b. (x-1)(x-2)
- c. x(x-1)(x-2)
- d. x(x-2)

Question **24**

Complete

Mark 1.00 out of 1.00

Gauss forward difference formula is applicable when u lies between

Select one:

- a. 0 and 1
- b. -1/2 and 0
- c. 0 and 1/2
- d. All of the above

Question **25**

Complete

Mark 1.00 out of 1.00

Stirling's formula gives best results when

Select one:

- a. 0<u<1
- b. -1/2<u<1\2
- c. -1/4<u<1\4
- d. For every value of u

Question **26**

Complete

Mark 1.00 out of 1.00

Find the value of $E(y_0)$, where $y_0=4$, $x_0=2$, $y= x^2$ and h=1

Select one:

- a. 5
- b. 6
- c. 3
- d. 9

◄ PRACTICE QUIZ UNIT 2 Jump to... LEARNING RESOURCES OF UNIT ►

E-mail: ili@iul.ac.in, sdc@iul.ac.in

Started on Monday, 9 November 2020, 5:54 PM
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Course Code and Name: MT-202

Program: BCA

Year /Semester: 2nd/3rd

Section/Group: C

Question **2**
Correct
Mark 1.00 out of 1.00

The symbol which is used for shift operator is

Select one:

a. λ

b. D

c. E ✔

d. μ

Your answer is correct.

The correct answer is:

E

Question **3**

Correct

Mark 1.00 out of 1.00

Choose the correct relations between the operators

Select one:

a. $E=1+\Delta$ ✔

b. $E=1-\Delta$

c. $E=\nabla+1$

d. All of the above

Your answer is correct.

The correct answer is: $E=1+\Delta$

Question **4**

Correct

Mark 1.00 out of 1.00

Let h be the finite difference, the backward difference operator is defined as

Select one:

a. f(x+h)-f(x)

b. f(x+h)

c. f(x-h)-f(x) ✔

d. None of the Above

Your answer is correct.

The correct answer is: f(x-h)-f(x)

Question **5**

Correct

Mark 1.00 out of 1.00

The central difference operator is denoted by

Select one:

a. Δ

b. ∇

c. E

d. δ ✔

Your answer is correct.

The correct answer is: δ

Question **6**

Correct

Mark 1.00 out of 1.00

The process of finding the values corresponding the point inside the interval (x_0, x_1) is called

Select one:

- a. Interpolation ✔
- b. Extrapolation
- c. Iteration
- d. Integration

Your answer is correct.

The correct answer is: Interpolation

Question **7**

Correct

Mark 1.00 out of 1.00

Newton Gregory backward interpolation formula can be used

Select one:

- a. When intervals are not equally spaced and we need to interpolate near to the end of the table.
- b. When intervals are equally spaced and we need to interpolate near to the end of the table ✔
- c. Can be used for both equally and unequally spaced intervals.
- d. When the given values are large.

Your answer is correct.

The correct answer is: When intervals are equally spaced and we need to interpolate near to the end of the table

Question **8**

Correct

Mark 1.00 out of 1.00

If $x_0 = 75$, $x_n = 100$ and $h = 5$ then n=?

Select one:

- a. 2
- b. 3
- c. 4
- d. 5 ✔

Your answer is correct.

The correct answer is: 5

Question **9**

Correct

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Interpolation formulae are based upon the fundamental assumption that data can be expressed as

Select one:

- a. A linear function
- b. A polynomial ✔
- c. A cubic function
- d. Exponential function

Your answer is correct.

The correct answer is: A polynomial

Question **10**

Correct

Mark 1.00 out of 1.00

If 5 values of x and corresponding values of y are given, then Lagrange's interpolation formula will give

Select one:

- a. A polynomial of degree 4 in y.
- b. A polynomial of degree 4 in x. ✔
- c. A polynomial whose each term has degree 4.
- d. A constant polynomial.

Your answer is correct.

The correct answer is: A polynomial of degree 4 in x.

Question **11**

Correct

Mark 1.00 out of 1.00

The (n+1)th divided difference of polynomial of degree n are

Select one:

- a. Unequal
- b. Variable
- c. Zero ✔
- d. One

Your answer is correct.

The correct answer is: Zero

Question **12**

Correct

Mark 1.00 out of 1.00

Newton's divided difference formula is used to interpolate the value of y

Select one:

- a. Near the beginning of the table.
- b. Near the end of the table.
- c. Near the mid of the table.
- d. All of the above. ✔

Your answer is correct.

The correct answer is: All of the above.

Question **13**

Correct

Mark 1.00 out of 1.00

Find Newton's first divided difference for the given values

x: 1 3

y: 6 28

Select one:

- a. 22
- b. 11 ✔
- c. 10
- d. 21

Your answer is correct.

The correct answer is: 11

Question **14**

Correct

Mark 1.00 out of 1.00

For given two distinct points x_0, x_1 the first order Newton divided difference is given by

Select one:

a.
$$\frac{x-x_0}{f(x_1)-f(x_0)}$$

b.
$$\frac{f(x_1)+f(x_0)}{x_1+x_0}$$

c.
$$\frac{f(x_1)-f(x_0)}{x_1-x_0}$$ ✔

d.
$$\frac{x_1+x_0}{f(x_1)+f(x_0)}$$

Your answer is correct.

The correct answer is:
$$\frac{f(x_1)-f(x_0)}{x_1-x_0}$$

Question **15**

Correct

Mark 1.00 out of 1.00

Symbol used for Backward difference operator is

Select one:

a.
Δ

b.
δ

c.
∇ ✔

d. E

Your answer is correct.

The correct answer is:
∇

Question **16**

Correct

Mark 1.00 out of 1.00

If $y_0 = 0.5$ and $y_1 = 1.0$, then the value of Δy_0 is

Select one:

- a. 0
- b. 0.5 ✔
- c. 0.25
- d. 0.75

Your answer is correct.

The correct answer is: 0.5

Question **17**

Correct

Mark 1.00 out of 1.00

The formula $f(x) = \frac{(x-x_1)(x-x_2)...(x-x_n)}{(x_0-x_1)(x_0-x_2)...(x_0)} f(x_0) + \frac{(x-x_0)(x-x_2)...(x-x_n)}{x_1-x_0)(x_1-x_2)...(x_1-x_n)} f(x_1) + ... \frac{(x-x_0)(x-x_1)...(x-x_{n-1})}{(x_n-x_0)(x_n-x_1)...(x_n-x_{n-1})} f(x_n)$ is known as

Select one:

- a. Newton's divided difference formula
- b. Stirling formula
- c. Bessel Formula
- d. Lagrange's Formula ✔

Your answer is correct.

The correct answer is: Lagrange's Formula

Question **18**

Correct

Mark 1.00 out of 1.00

The given set of data (1,5), (4,9), (7,24), (10,96) and (13,156)

Select one:

- a. Is not equally spaced with h=3
- b. Is equally spaced with h=3 ✔
- c. Data is not equally spaced because h=3
- d. a and c both are correct.

Your answer is correct.

The correct answer is: Is equally spaced with h=3

Question **19**

Correct

Mark 1.00 out of 1.00

Which one of the following is false

Select one:

a. $\Delta = E - 1$

b. $E = e^{hD}$

c. $\nabla = 1 - E$ ✔

d. None of the Above

Your answer is correct.

The correct answer is:
$\nabla = 1 - E$

Question **20**

Correct

Mark 1.00 out of 1.00

Which of the following is not true

Select one:

a. $(\Delta + 1)(1 - \nabla) = 1$

b. $(\Delta - 1)(1 + \nabla) = |$

c. $(\Delta - 1)(1 - \nabla) = 1$ ✔

d. All of the above

Your answer is correct.

The correct answer is:
$(\Delta - 1)(1 - \nabla) = 1$

Question **21**

Correct

Mark 1.00 out of 1.00

The process of computing the value of function outside the given range is called

Select one:

a. Interpolation

b. Extra interpolation

c. Extrapolation ✔

d. Differentiation

Your answer is correct.

The correct answer is: Extrapolation

Question **22**

Correct

Mark 1.00 out of 1.00

For the given set of data, the value of $\Delta(y_0)$ is

x: 5. 10. 15

y: 9962. 9848. 9659

Select one:

- a. 114
- b. 75
- c. -75
- d. -114 ✔

Your answer is correct.

The correct answer is: -114

Question **23**

Correct

Mark 1.00 out of 1.00

The correct factorial notation for $[x]^3$ with h=1 is

Select one:

- a. x(x-1)
- b. (x-1)(x-2)
- c. x(x-1)(x-2) ✔
- d. x(x-2)

Your answer is correct.

The correct answer is: x(x-1)(x-2)

Question **24**

Correct

Mark 1.00 out of 1.00

Gauss forward difference formula is applicable when u lies between

Select one:

- a. 0 and 1
- b. -1/2 and 0
- c. 0 and 1/2 ✔
- d. All of the above

Your answer is correct.

The correct answer is: 0 and 1/2

Question **25**

Correct

Mark 1.00 out of 1.00

Stirling's formula gives best results when

Select one:

- a. 0<u<1
- b. -1/2<u<1\2
- c. -1/4<u<1\4 ✔
- d. For every value of u

Your answer is correct.

The correct answer is: -1/4<u<1\4

Question **26**

Correct

Mark 1.00 out of 1.00

Find the value of $E(y_0)$, where $y_0=4$, $x_0=2$, $y= x^2$ and $h=1$

Select one:

- a. 5
- b. 6
- c. 3
- d. 9 ✔

Your answer is correct.

The correct answer is: 9

◄ PRACTICE QUIZ UNIT 2 Jump to... LEARNING RESOURCES OF UNIT ►

Started on Monday, 9 November 2020, 6:27 PM
State Finished
Completed on Monday, 9 November 2020, 6:30 PM
Time taken 2 mins 53 secs
Grade **6.00** out of 25.00 (**24**%)

Information

INTEGRAL UNIVERSITY
LUCKNOW INDIA

Mid-sem Unit Exam, Session (2020-21)

Program: BCA

Course Code and Name: MT202 Computer based numerical and statistical techniques

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: 1901018001

Course Code and Name:MT202

Program: BCA

Year /Semester:2nd/3rd

Section/Group: A

Question **2**

Incorrect

Mark 0.00 out of 1.00

Simpson's 3/8 rule should be used when

Select one:

- n is multiple of 2
- n is any positive number ✖
- n is multiple of 3
- None of these

The correct answer is: n is multiple of 3

Question **3**

Incorrect

Mark 0.00 out of 1.00

In numerical integration when the number of sub intervals (n) is a multiple of 4, then we use

Select one:

- Simpson's 3/8 rule
- Boole's rule
- Weddle's rule ✖
- None of these

The correct answer is: Boole's rule

Question **4**

Incorrect

Mark 0.00 out of 1.00

Numerical differentiation gives

Select one:

- Exact value ✖
- Approximate value
- No value
- Negative value

The correct answer is: Approximate value

Question **5**

Correct

Mark 1.00 out of 1.00

To apply trapezoidal rule, always divide the given range of integration into n parts, where n is:

Select one:

- Even
- Odd
- 1, 2, 3, ... ✔
- 5, 6, 7, ...

The correct answer is: 1, 2, 3, ...

Question **6**

Incorrect

Mark 0.00 out of 1.00

What is the value of h(interval of differencing) in the following data?

x (Age)	46	51	56	61	66
$y = f(x)$ (Premium)	116	97	83	74	68

Select one:

- 4 ✖
- 5
- 6
- Can't define

The correct answer is: 5

Question **7**

Incorrect

Mark 0.00 out of 1.00

In numerical integration, to get better result we select n as

Select one:

- Even
- Odd ✖
- Large as possible
- None of these

The correct answer is: Large as possible

Question **8**

Incorrect

Mark 0.00 out of 1.00

For $\int_0^{12} f(x)dx$ in Trapezoidal rule for h=1, what is the value of n

Select one:

- 6 ✖
- 12
- 24
- None

The correct answer is: 12

Question **9**

Correct

Mark 1.00 out of 1.00

How many minimum ordinates in Weddle's rule are necessary

Select one:

- 6
- 7 ✔
- 8
- 9

The correct answer is: 7

Question **10**

Incorrect

Mark 0.00 out of 1.00

Evaluate $\int_0^1 x^3 dx$ by trapezoidal rule considering five subintervals

Select one:

- 0.46 ✖
- 0.36
- 0.26
- 0.16

The correct answer is: 0.26

Question **11**

Incorrect

Mark 0.00 out of 1.00

Given formula is called as $\int_{x_0}^{x_0+nh} f(x)\,dx = \frac{h}{2}[(y_0+y_n)+2(y_1+y_2+\ldots\ldots+y_{n-1})]$

Select one:

- Trapezoidal rule
- Simpson's 1/3 rule
- Simpson's 3/8 rule
- None of these ✖

The correct answer is: Trapezoidal rule

Question **12**

Correct

Mark 1.00 out of 1.00

Given differentiation formula is known as

$$\left(\frac{dy}{dx}\right)_{x=a} = \frac{1}{h}\left[\Delta y_0 - \frac{1}{2}\Delta^2 y_0 + \frac{1}{3}\Delta^3 y_0 - \frac{1}{4}\Delta^4 y_0 + \frac{1}{5}\Delta^5 y_0 - \ldots\right]$$

Select one:

- Newton forward difference formula ✔
- Newton backward difference formula
- Lagrange's formula
- Gauss's formula

The correct answer is: Newton forward difference formula

Question **13**

Incorrect

Mark 0.00 out of 1.00

Trapezoidal rule is applicable when n is a

Select one:

- Natural number
- Integer
- Rational number ✖
- Real Number

The correct answer is: Natural number

Question **14**

Incorrect

Mark 0.00 out of 1.00

Simpson's 1/3 rule is applicable when n is

Select one:

- even natural number
- odd natural number ✖
- any natural number
- none of these

The correct answer is: even natural number

Question **15**

Incorrect

Mark 0.00 out of 1.00

If number of subintervals (n) is 12 then we can apply

Select one:

- Trapezoidal rule ✖
- Boole's rule
- Weddle's rule
- All of above rules

The correct answer is: All of above rules

Question **16**

Correct

Mark 1.00 out of 1.00

Given formula is known as $\int_{x_0}^{x_0+nh} f(x)\,dx = \frac{2h}{45}\left[\begin{array}{l} 7(y_0+y_n)+32(y_1+y_3+y_5+\ldots) \\ +12(y_2+y_6+y_{10}+\ldots)+14(y_4+y_8+y_{12}+\ldots)\end{array}\right]$

Select one:

- Boole's rule ✔
- Weddle's rule
- Euler Maclaurin's rule
- None of these

The correct answer is: Boole's rule

Question **17**

Incorrect

Mark 0.00 out of 1.00

Which of the following methods is for integration

Select one:

- Gauss-Siedel Method
- Newton-Raphson Method ✖
- Euler-Maclaurin Method
- None of these

The correct answer is: Euler-Maclaurin Method

Question **18**

Correct

Mark 1.00 out of 1.00

The process of evaluating a definite integral from a set of tabulated values of the integrand f(x) is called

Select one:

- Numerical value
- Numerical differentiation
- Numerical integration ✔
- None of these

The correct answer is: Numerical integration

Question **19**

Incorrect

Mark 0.00 out of 1.00

To evaluate $\int_0^1 f(x)dx$ approximately which of the following method is used when the value of f(x) is given only at x = 0, 1/3, 2/3, 1

Select one:

- Trapezoidal rule
- Simpson's 3/8 rule ✖
- Both of the above
- None of the above

The correct answer is: Both of the above

Question **20**

Incorrect

Mark 0.00 out of 1.00

To evaluate $\int_0^1 f(x)dx$ approximately which of the following method is used when the value of f(x) is given only at x = 0, 1/3, 2/3, 1

Select one:

- Simpson's 1/3 rule
- Weddle's rule ✖
- Both of the above
- None of the above

The correct answer is: None of the above

Question **21**

Incorrect

Mark 0.00 out of 1.00

In numerical integration when the number of subintervals (n) is 7 then we use

Select one:

- Trapezoidal rule
- Weddle's rule
- Boole's rule ✖
- None of the above

The correct answer is: Trapezoidal rule

Question **22**

Incorrect

Mark 0.00 out of 1.00

To use the given formula the number of subintervals (n) should be multiple of

$$\int_{x_0}^{x_0+nh} f(x)\,dx = \frac{2h}{45}\left[7(y_0+y_n)+32(y_1+y_3+y_5+\ldots)+12(y_2+y_6+y_{10}+\ldots)+14(y_4+y_8+y_{12}+\ldots)\right]$$

Select one:

- 2 ✖
- 3
- 4
- 6

The correct answer is: 4

Question **23**

Incorrect

Mark 0.00 out of 1.00

The process of calculating the derivative of a function at some particular value of independent variable by means of a set of given values of that function is

Select one:

- Numerical value ✖
- Numerical differentiation
- Numerical integration
- None of these

The correct answer is: Numerical differentiation

Question **24**

Incorrect

Mark 0.00 out of 1.00

In Newton's forward difference formula, what is u _____

Select one:

- $\frac{x-x_0}{h}$
- $\frac{x-x_n}{h}$
- $\frac{(x-x_0)^2}{h}$ ✖
- None of these

The correct answer is:

$\frac{x-x_0}{h}$

Question **25**

Incorrect

Mark 0.00 out of 1.00

In Newton's backward difference formula, what is u _____

Select one:

- $\frac{x-x_0}{h}$ ✖
- $\frac{x-x_n}{h}$
- $\frac{(x-x_n)^2}{h}$
- None of these

The correct answer is:
$\frac{x-x_n}{h}$

Question **26**

Correct

Mark 1.00 out of 1.00

Simpson's 1/3 rule is used only when

Select one:

- Ordinates are even
- Ordinates are odd ✔
- Ordinate is any positive integer
- None of these

The correct answer is: Ordinates are odd

Started on Wednesday, 9 December 2020, 6:44 PM
State Finished
Completed on Wednesday, 9 December 2020, 6:50 PM
Time taken 5 mins 37 secs
Grade **25.00** out of 25.00 (**100**%)

Information

INTEGRAL UNIVERSITY
LUCKNOW INDIA

Mid-sem Unit Exam, Session (2020-21)

Program

Course Code and Name:

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: 1901018305

Course Code and Name:MT202

Program: BCA

Year /Semester:2nd/3rd

Section/Group: 4/D

Question **2**

Correct

Mark 1.00 out of 1.00

If the intervals are unequal, derivative can be find by

Select one:

- i. Newton divided difference method
- ii. Lagrange interpolation formula
- iii. (i) And (ii) both are correct ✔
- iv. (i) and (ii) both are incorrect

Your answer is correct.

The correct answer is: (i) And (ii) both are correct

Question **3**

Correct

Mark 1.00 out of 1.00

In numerical integration when the number of sub intervals (n) is a multiple of 4, then we use

Select one:

- Simpson's 3/8 rule
- Boole's rule ✔
- Weddle's rule
- None of these

Your answer is correct.

The correct answer is: Boole's rule

Question **4**

Correct

Mark 1.00 out of 1.00

Numerical differentiation gives

Select one:

- Exact value
- Approximate value ✔
- No value
- Negative value

Your answer is correct.

The correct answer is: Approximate value

Question **5**

Correct

Mark 1.00 out of 1.00

If the value of the derivation is to be find near to mid of the table, we use

Select one:

- Newton forward
- Newton backword
- Bessel formula ✔
- all are incorrect

Your answer is correct.

The correct answer is: Bessel formula

Question **6**

Correct

Mark 1.00 out of 1.00

Using Lagrange's interpolation formula, the derivative at any point

Select one:

- i. can be found without finding the polynomial
- ii. can be found only after finding the polynomial ✔
  1.
- iii. (i) and (ii) both are correct
- iv. (i) and (ii) both are incorrect

Your answer is correct.

The correct answer is: can be found only after finding the polynomial

Question **7**

Correct

Mark 1.00 out of 1.00

In numerical integration, to get better result we select n as

Select one:

- Even
- Odd
- Large as possible ✔
- None of these

Your answer is correct.

The correct answer is: Large as possible

Question **8**

Correct

Mark 1.00 out of 1.00

For $\int_0^{12} f(x)\mathrm{d}x$ in Trapezoidal rule for h=1, what is the value of n

Select one:

- 6
- 12 ✔
- 24
- None

Your answer is correct.

The correct answer is: 12

Question **9**

Correct

Mark 1.00 out of 1.00

How many minimum sub-intervals in Weddle's rule are necessary

Select one:

- 6 ✔
- 7
- 8
- 9

Your answer is correct.

The correct answer is: 6

Question **10**

Correct

Mark 1.00 out of 1.00

Evaluate $\int_0^1 x^3\mathrm{d}x$ by trapezoidal rule considering three subintervals

Select one:

- 0.46
- 0.36
- 2.5 ✔
- 0.16

Your answer is correct.

The correct answer is: 2.5

The correct answer is: 2.5

Question **11**

Correct

Mark 1.00 out of 1.00

$$\int_{x_0}^{x_0+nh} f(x)\,dx = \frac{h}{2}[(y_0 + y_n) + 2(y_1 + y_2 + \ldots\ldots + y_{n-1})]$$

Given formula is called as

Select one:

- Trapezoidal rule ✔
- Simpson's 1/3 rule
- Simpson's 3/8 rule
- None of these

Your answer is correct.

The correct answer is: Trapezoidal rule

Question **12**

Correct

Mark 1.00 out of 1.00

Given differentiation formula is known as $\left(\frac{dy}{dx}\right)_{x=a} = \frac{1}{h}\left[\Delta y_0 - \frac{1}{2}\Delta^2 y_0 + \frac{1}{3}\Delta^3 y_0 - \frac{1}{4}\Delta^4 y_0 + \frac{1}{5}\Delta^5 y_0 - \ldots\right]$

Select one:

- Newton forward difference formula for derivative ✔
- Newton backward difference formula for derivative
- Lagrange's formula
- Gauss's formula for derivative

Your answer is correct.

The correct answer is: Newton forward difference formula for derivative

Question **13**

Correct

Mark 1.00 out of 1.00

In Trapezoidal rule the minimum value of n is

Select one:

- 1 ✔
- 2
- 3
- 4

Your answer is correct.

The correct answer is: 1

Question **14**

Correct

Mark 1.00 out of 1.00

Simpson's 1/3 rule is applicable when n is

Select one:

- even natural number ✔
- odd natural number
- any natural number
- none of these

Your answer is correct.

The correct answer is: even natural number

Question **15**

Correct

Mark 1.00 out of 1.00

If number of subintervals (n) is 12 then we can apply

Select one:

- Trapezoidal rule
- Boole's rule
- Weddle's rule
- All of above rules ✔

Your answer is correct.

The correct answer is: All of above rules

Question **16**

Correct

Mark 1.00 out of 1.00

Given formula is known as $\int_{x_0}^{x_0+nh} f(x)\,dx = \frac{2h}{45}\left[\begin{array}{l} 7(y_0+y_n)+32(y_1+y_3+y_5+\ldots) \\ +12(y_2+y_6+y_{10}+\ldots)+14(y_4+y_8+y_{12}+\ldots)\end{array}\right]$

Select one:

- Boole's rule ✔
- Weddle's rule
- Euler Maclaurin's rule
- None of these

Your answer is correct.

The correct answer is: Boole's rule

Question **17**

Correct

Mark 1.00 out of 1.00

Which of the following methods is for integration

Select one:

- Gauss-Siedel Method
- Newton-Raphson Method
- Bool's rule ✔
- None of these

Your answer is correct.

The correct answer is: Bool's rule

Question **18**

Correct

Mark 1.00 out of 1.00

The process of evaluating a definite integral from a set of tabulated values of the integrand f(x) is called

Select one:

- Numerical value
- Numerical differentiation
- Numerical integration ✔
- None of these

Your answer is correct.

The correct answer is: Numerical integration

Question **19**

Correct

Mark 1.00 out of 1.00

To evaluate $\int_0^1 f(x)dx$ approximately which of the following method is used when the value of f(x) is given only at x = 0, 1/3, 2/3, 1

Select one:

- Trapezoidal rule
- Simpson's 3/8 rule
- Both of the above ✔
- None of the above

Your answer is correct.

The correct answer is: Both of the above

Question **20**

Correct

Mark 1.00 out of 1.00

To evaluate $\int_0^1 f(x)dx$ approximately which of the following method is used when the value of f(x) is given only at x = 0, 1/3, 2/3, 1

Select one:

- Simpson's 1/3 rule
- Weddle's rule
- Both of the above
- None of the above ✔

Your answer is correct.

The correct answer is: None of the above

Question **21**

Correct

Mark 1.00 out of 1.00

In numerical integration when the number of subintervals (n) is 7 then we use

Select one:

- Trapezoidal rule ✔
- Weddle's rule
- Boole's rule
- None of the above

Your answer is correct.

The correct answer is: Trapezoidal rule

Question **22**

Correct

Mark 1.00 out of 1.00

To use the given formula the number of subintervals (n) should be multiple of

$$\int_{x_0}^{x_0+nh} f(x)\,dx = \frac{2h}{45}\left[\begin{array}{l} 7(y_0+y_n)+32(y_1+y_3+y_5+\ldots) \\ \quad +12(y_2+y_6+y_{10}+\ldots)+14(y_4+y_8+y_{12}+\ldots)\end{array}\right]$$

Select one:

- 2
- 3
- 4 ✔
- 6

Your answer is correct.

The correct answer is: 4

Question **23**

Correct

Mark 1.00 out of 1.00

The process of calculating the derivative of a function at some particular value of independent variable by means of a set of given values of that function is

Select one:

- Numerical value
- Numerical differentiation ✔
- Numerical integration
- None of these

Your answer is correct.

The correct answer is: Numerical differentiation

Question **24**

Correct

Mark 1.00 out of 1.00

In Newton's forward difference formula for derivative, what is u _____

Select one:

- $\frac{x-x_0}{h}$ ✔
- $\frac{x-x_n}{h}$
- $\frac{(x-x_0)^2}{h}$
- None of these

Your answer is correct.

The correct answer is:

$\frac{x-x_0}{h}$

Question **25**

Correct

Mark 1.00 out of 1.00

In Newton's backward difference formula, what is u _____

Select one:

- $\frac{x-x_0}{h}$
- $\frac{x-x_n}{h}$ ✔
- $\frac{(x-x_n)^2}{h}$
- None of these

Your answer is correct.

The correct answer is:

$\frac{x-x_n}{h}$

Question **26**

Correct

Mark 1.00 out of 1.00

In trapezoidal rule the polynomial is

Select one:

- linear ✔
- quadratic
- cubic
- None of these

Your answer is correct.

The correct answer is: linear

◄ PRACTICE QUIZ UNIT 3 Jump to... LEARNING RESOURCES OF UNIT ►

Started on Monday, 30 November 2020, 9:24 PM
State Finished
Completed on Monday, 30 November 2020, 9:41 PM
Time taken 17 mins 6 secs
Grade **24.00** out of 25.00 (**96**%)

Information

INTEGRAL UNIVERSITY LUCKNOW INDIA

Mid-sem Unit Exam, Session (2020-21)

Program: BCA

Course Code and Name: MT202 Computer based numerical and statistical techniques

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: Aakib taufik 1901018001

Course Code and Name:mt202

Program: bca

Year /Semester:2/3

Section/Group: A

Question **2**

Correct

Mark 1.00 out of 1.00

Equations by solving least square methods are known as

Select one:

- Normal equations ✔
- Auxiliary equations
- Both of the above
- None of these

The correct answer is: Normal equations

Question **3**

Correct

Mark 1.00 out of 1.00

Q. In Euler's method $y_{n+1} =$

$a) y_n$
$b) y_n + f(x_n, y_n)$
$c) y_n + hf(x_n, y_n)$
$d)$None of these

Select one:

- a
- b
- c ✔
- d

The correct answer is: c

Question **4**

Correct

Mark 1.00 out of 1.00

Q. In Runge-Kutta fourth order method $K_4 =$

$a) hf(x_0 + h, y_0 + k_3)$
$b) hf(x_0 + h, y_0 + k_2)$
$c) hf(x_0 + h, y_0 + k_1)$
$d) f(x_0 + h, y_0 + k_3)$

Select one:

- a ✔
- b
- c
- d

The correct answer is: a

Question **5**

Incorrect

Mark 0.00 out of 1.00

Least square methods are used to fit

Select one:

- Straight line ✖
- Parabola
- Both
- None of the above

The correct answer is: Both

Question **6**

Correct

Mark 1.00 out of 1.00

Number of normal equations in fitting of straight lines

Select one:

- 1
- 2 ✔
- 3
- 4

The correct answer is: 2

Question **7**

Correct

Mark 1.00 out of 1.00

Number of normal equations in fitting of parabola

Select one:

- 1
- 2
- 3 ✔
- 4

The correct answer is: 3

Question **8**

Correct

Mark 1.00 out of 1.00

The most common and accurate Runge-Kutta method, we used:

i) First order Runge-Kutta method
ii) Second order Runge-Kutta method
iii) Third order Runge-Kutta method
iv) Fourth order Runge–Kutta method

Select one:

- a
- b
- c
- d ✔

The correct answer is: d

Question **9**

Correct

Mark 1.00 out of 1.00

Taylor's series method is for

Select one:

- Boundary value problem
- Initial value problem ✔
- valued problem
- None of the above

The correct answer is: Initial value problem

Question **10**

Correct

Mark 1.00 out of 1.00

Quadratic equations always fit a

Select one:

- Straight line
- Parabola ✔
- Hyperbola
- None of the above

The correct answer is: Parabola

Question **11**

Correct

Mark 1.00 out of 1.00

There is a class of methods called - - - - which do not require the calculations of higher order derivatives and give greater accuracy.

Select one:

- Euler's method
- Euler's modified method
- Runge-Kutta method ✔
- None

The correct answer is: Runge-Kutta method

Question **12**

Correct

Mark 1.00 out of 1.00

From the following which one gives more accurate value

Select one:

- Euler's method
- Euler's modified method ✔
- Both of the above
- None of the above

The correct answer is: Euler's modified method

Question **13**

Correct

Mark 1.00 out of 1.00

Various types of Runge-Kutta methods are classified according to their

Select one:

- Degree
- Order ✔
- Rank
- None of the above

The correct answer is: Order

Question **14**

Correct

Mark 1.00 out of 1.00

The general problem of finding equations of approximating curves which fit a given data is called

Select one:

- Curve fitting ✔
- Approximating curve
- Linear form
- None of the above

The correct answer is: Curve fitting

Question **15**

Correct

Mark 1.00 out of 1.00

The best representative curve to the given set of points for which sum of the square of the errors is a minimum is known as

Select one:

- Curve fitting
- Approximating curve
- Principles of least squares ✔
- None

The correct answer is: Principles of least squares

Question **16**

Correct

Mark 1.00 out of 1.00

The simplest method in finding the approximate solutions to the first order equation is

Select one:

- Euler's method ✔
- Modified euler's method
- Runge-Kutta method
- Taylor's mehtod

The correct answer is: Euler's method

Question **17**

Correct

Mark 1.00 out of 1.00

$y(x+h)=y(x)+h\,f(x,y)$ is referred as _____ method.

Select one:

- Euler's ✔
- Modified Euler's
- Runge-Kutta
- Taylor series

The correct answer is: Euler's

Question **18**

Correct

Mark 1.00 out of 1.00

When more than one value is involved then the problem is known as

Select one:

- Initial value problem
- Boundary value problem ✔
- Interpolation
- Extrapolation

The correct answer is: Boundary value problem

Question **19**

Correct

Mark 1.00 out of 1.00

The line obtained by the method of least square is known as the line of _____.

Select one:

- Approximation
- best fit ✔
- Both of the above
- None

The correct answer is: best fit

Question **20**

Correct

Mark 1.00 out of 1.00

Problems in which all the conditions are specified at the initial point only are called

Select one:

- Initial value problem ✔
- Boundary value problem
- Both of the above
- None of the above

The correct answer is: Initial value problem

Question **21**

Correct

Mark 1.00 out of 1.00

Q . *Given* $\frac{dy}{dx} = \frac{y-x}{y+x}$ *with* $y = 1$ *for* $x = 0$. *Find* y *approximately for* $x = 0.1$ *by Euler's method.*

Select one:

- 0.1
- 1.1 ✔
- 2.1
- 3.1

The correct answer is: 1.1

Question **22**

Correct

Mark 1.00 out of 1.00

Runge-Kutta method is better than Taylor's method because

Select one:

- it does not require prior calculations of higher derivatives ✔
- It require at most first order derivatives
- It require prior calculations of higher derivatives
- All the above

The correct answer is: it does not require prior calculations of higher derivatives

Question **23**

Correct

Mark 1.00 out of 1.00

In Euler's method, if h is small, the method is too slow and if h is large, it gives _____ value

Select one:

- Inaccurate ✔
- Accurate
- Zero
- None of these

The correct answer is: Inaccurate

Question **24**

Correct

Mark 1.00 out of 1.00

Runge-kutta formulas involve the computation of f(x,y) at various points instead of calculation of-------order derivatives of f(x,y)

Select one:

- Lower
- Middle
- Higher ✔
- None of these

The correct answer is: Higher

Question **25**

Correct

Mark 1.00 out of 1.00

Euler’s modified formula is a particular case of ------order Runge-kutta method.

Select one:

- First
- Second ✔
- Third
- Fourth

The correct answer is: Second

Question **26**

Correct

Mark 1.00 out of 1.00

The numerical solution of a first order differential equation will give a result is

Select one:

- A set of tabulated values of x and y
- Value of x and y ✔
- Zero
- None of the above

The correct answer is: Value of x and y

◄ PRACTICE QUIZ UNIT 4

Jump to...

QUIZ 2 ►

Started on Sunday, 20 December 2020, 11:03 AM
State Finished
Completed on Sunday, 20 December 2020, 11:15 AM
Time taken 11 mins 9 secs
Grade **25.00** out of 25.00 (**100**%)

Information

Mid-sem Unit Exam, Session (2020-21)

Program

Course Code and Name:

Question **1**
Complete
Not graded

Enter your Full Name and Roll number

Roll Number: 1901018305

Course Code and Name:MT 202

Program: BCA

Year /Semester:2nd/3rd

Section/Group: D

Question **2**
Correct
Mark 1.00 out of 1.00

Secular trends is the characteristic of time series which extends ..... throughout the entire period of time

Select one:

- a. consistently ✔
- b. inconsistently
- c. either consistently of inconsistently
- d. none of these

Your answer is correct.

The correct answer is: consistently

Question **3**
Correct
Mark 1.00 out of 1.00

Seasonal variations are called

Select one:

- a. long term variations
- b. short term variations ✔

c. random variation

d. cyclic variations

Your answer is correct.

The correct answer is: short term variations

Question **4**

Correct

Mark 1.00 out of 1.00

In semi average method , the time series is divided into

Select one:

a. five equal halves

b. four equal halves

c. three equal halves

d. two equal halves ✔

Your answer is correct.

The correct answer is: two equal halves

Question **5**

Correct

Mark 1.00 out of 1.00

The simplest and most commonly used forecasting method is

Select one:

a. semi average method

b. moving average method ✔

c. graphical method

d. all are incorrect

Your answer is correct.

The correct answer is: moving average method

Question **6**

Correct

Mark 1.00 out of 1.00

When the series data is recorded yearly in forecasting,.....component vanishes

Select one:

a. secular

b. cyclical

c. seasonal ✔

d. irregular component

Your answer is correct.

The correct answer is: seasonal

Question **7**

Correct

Mark 1.00 out of 1.00

Student's t-test is applicable in case of

Select one:

a. small samples of size less than 30 ✔

b. large samples

c. both (i) and (ii) are true

d. none of these

Your answer is correct.

The correct answer is: small samples of size less than 30

Question **8**

Correct

Mark 1.00 out of 1.00

The degree of freedom for statistic t for paired t-test based on n pairs of observations is

Select one:

- a. 2(n-1)
- b. n-1 ✔
- c. 2n-1
- d. none of these

Your answer is correct.

The correct answer is: n-1

Question **9**

Correct

Mark 1.00 out of 1.00

The null hypothesis asserts that there is .....difference between the sample statistic and population parameter.

Select one:

- a. no significant ✔
- b. significant
- c. may or may not be significant
- d. all are incorrect

Your answer is correct.

The correct answer is: no significant

Question **10**

Correct

Mark 1.00 out of 1.00

In student t-test the standard deviation is

Select one:

- a. known
- b. unknown ✔
- c. may or may not be known
- d. 1

Your answer is correct.

The correct answer is: unknown

Question **11**

Correct

Mark 1.00 out of 1.00

By student's t-test we test that

Select one:

- a. sample mean differ significantly with population mean ✔
- b. sample variance differ significantly with population variance
- c. both (i) and (ii) are correct
- d. both (i) and (ii) are incorrect

Your answer is correct.

The correct answer is: sample mean differ significantly with population mean

Question **12**

Correct

Mark 1.00 out of 1.00

F-test uses

Select one:

- a. mean ratio
- b. frequency ratio
- c. median ratio
- d. variance ratio ✔

Your answer is correct.

The correct answer is: variance ratio

Question **13**

Correct

Mark 1.00 out of 1.00

In F-test, two samples are drawn from the populations with

Select one:

- a. different mean
- b. same mean
- c. different variance
- d. same variance ✔

Your answer is correct.

The correct answer is: same variance

Question **14**

Correct

Mark 1.00 out of 1.00

In F-test the greater variance is taken as

Select one:

- a. denominator
- b. numerator ✔
- c. constant
- d. all are incorrect

Your answer is correct.

The correct answer is: numerator

Question **15**

Correct

Mark 1.00 out of 1.00

In F-test two samples

Select one:

- a. must have same size
- b. must have different size
- c. are independent ✔
- d. are dependent

Your answer is correct.

The correct answer is: are independent

Question **16**

Correct

Mark 1.00 out of 1.00

Chi-square test measures the discrepancy between

Select one:

- a. frequencies ✔
- b. mean
- c. variance
- d. standard deviation

Your answer is correct.

The correct answer is: frequencies

Question **17**

Correct

Mark 1.00 out of 1.00

If null hypothesis is true in chi-square test, then

Select one:

- a. observed frequencies are equal to expected frequencies
- b. observed frequencies are not equal to expected frequencies
- c. sum of observed frequencies is equal to sum of expected frequencies ✔
- d. sum of observed frequencies are not equal to expected frequencies

Your answer is correct.

The correct answer is: sum of observed frequencies is equal to sum of expected frequencies

Question **18**

Correct

Mark 1.00 out of 1.00

Chi -square assumes

Select one:

- a. all values
- b. only negative values
- c. only positive values ✔
- d. only integer values

Your answer is correct.

The correct answer is: only positive values

Question **19**

Correct

Mark 1.00 out of 1.00

The chi-square test ..... a goodness of fit

Select one:

- a. provides ✔
- b. does not provide
- c. may or may not provide
- d. all are incorrect

Your answer is correct.

The correct answer is: provides

Question **20**
Correct
Mark 1.00 out of 1.00

The chi square test is used for

Select one:

- a. independence of attributes ✔
- b. independence of mean
- c. independence of variance
- d. all are incorrect

Your answer is correct.

The correct answer is: independence of attributes

Question **21**
Correct
Mark 1.00 out of 1.00

If there are 2 rows and 2 columns then order of contingency table is

Select one:

- a. 2+2
- b. 2X2 ✔
- c. 4
- d. 0

Your answer is correct.

The correct answer is: 2X2

Question **22**
Correct
Mark 1.00 out of 1.00

While testing independence of attributes, the row sum

Select one:

- a. is 0
- b. is equal to number of rows
- c. is equal to number of columns
- d. is equal to sum of columns ✔

Your answer is correct.

The correct answer is: is equal to sum of columns

Question **23**
Correct
Mark 1.00 out of 1.00

In analysis of variance the total variance is splitted into

Select one:

- a. five types
- b. four types
- c. six types
- d. two types ✔

Your answer is correct.

The correct answer is: two types

Question **24**
Correct
Mark 1.00 out of 1.00

In analysis of variance the effect of various component are

Select one:

- a. multiplicative
- b. additive ✔
- c. unknown
- d. all are correct

Your answer is correct.

The correct answer is: additive

Question **25**
Correct
Mark 1.00 out of 1.00

Analysis of variance is used in

Select one:

- a. one way classification
- b. two way classification
- c. (i) and (ii) both are correct ✔
- d. (i) and (ii) both are incorrect

Your answer is correct.

The correct answer is: (i) and (ii) both are correct

Question **26**
Correct
Mark 1.00 out of 1.00

In two way classification the variance is broken into

Select one:

- a. two parts
- b. three parts ✔
- c. four parts
- d. five parts

Your answer is correct.

The correct answer is: three parts

◄ PRACTICE QUIZ UNIT 5 Jump to... QUIZ 2 ►

Started on Thursday, 10 December 2020, 10:15 PM
State Finished
Completed on Thursday, 10 December 2020, 10:42 PM
Time taken 26 mins 55 secs
Grade **25.00** out of 25.00 (**100**%)

Information

INTEGRAL UNIVERSITY LUCKNOW INDIA

Mid-Sem Unit Exam, Session (2020-21)

Program: BCA

Course Code and Name: CA203 (Object Oriented Programming Using C++)

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: 1901018305

Course Code and Name:ca203/opps using c++

Program: BCA

Year /Semester:2nd/3rd

Section/Group: 4/d

Question **2**

Correct

Mark 1.00 out of 1.00

The main objective of an abstract base class is to provide some traits to the derived class and to create a ..... required for achieving run time polymorphism.

Select one:

- a. void pointers
- b. null pointers
- c. base pointer ✔
- d. this pointer

The correct answer is: base pointer

Question **3**

Correct

Mark 1.00 out of 1.00

How do define the user-defined exceptions?

Select one:

- a. Inherting class functionlity
- b. None of the above
- c. Inherting & overriding exception class functionlity ✔
- d. Overriding class functionlity

The correct answer is: Inherting & overriding exception class functionlity

Question **4**

Correct

Mark 1.00 out of 1.00

Run time polymorphism is achieved only when a …… is accessed through a pointer to the base class.

Select one:

- a. static function
- b. virtual function ✔
- c. member function
- d. real function

The correct answer is: virtual function

Question **5**

Correct

Mark 1.00 out of 1.00

…… is useful in creating objects at run time.

Select one:

- a. object pointer ✔
- b. null pointer
- c. void pointer
- d. this pointer

The correct answer is: object pointer

Question **6**

Correct

Mark 1.00 out of 1.00

A .....binding means that an object is bound to its function call at compile time.

Select one:

- a. fixed
- b. dynamic
- c. static ✔
- d. late

The correct answer is: static

Question **7**

Correct

Mark 1.00 out of 1.00

If a …… is defined in the base class. it need not be necessarily redefined in the derived class.

Select one:

- a. member function
- b. real function
- c. virtual function ✔
- d. static function

The correct answer is: virtual function

Question **8**

Correct

Mark 1.00 out of 1.00

Which keyword is used to handle the expection?

Select one:

- a. Try
- b. Catch ✔
- c. None of the above
- d. Throw

The correct answer is: Catch

Question **9**

Correct

Mark 1.00 out of 1.00

In nested try block, if inner catch handler gets executed, then _____?

Select one:

- a. Compiler will jump to the outer catch handler and then executes remaining executable statements of main().
- b. Program execution stops immediately.
- c. Compiler will execute remaining executable statements of outer try block and then the main(). ✔
- d. Outer catch handler will also get executed.

The correct answer is: Compiler will execute remaining executable statements of outer try block and then the main().

Question **10**

Correct

Mark 1.00 out of 1.00

The pointer to a function is known as …… function.

Select one:

- a. backward
- b. callback ✔
- c. forward
- d. pointer

The correct answer is: callback

Question **11**

Correct

Mark 1.00 out of 1.00

If we attempt to dereference an uninitialized pointer it will ……. by referring to any other location in memory.

Select one:

- a. run time error
- b. executes
- c. cause a compile-time error
- d. cause run time error ✔

The correct answer is: cause run time error

Information

Question Paper

Question **12**

Correct

Mark 1.00 out of 1.00

…… is a function declared in a base class that has no definition relative to the base class.

Select one:

- a. pure function
- b. pure virtual function ✔
- c. member function
- d. virtual function

The correct answer is: pure virtual function

Question **13**

Correct

Mark 2.00 out of 2.00

```
#include<iostream>
using namespace std;

class Base {};
class Derived: public Base {};
int main()
{
Derived d;
try {
        throw d;
}
catch(Base b) {
                cout<<"Caught Base Exception";
}
catch(Derived d) {
                cout<<"Caught Derived Exception";
}
return 0;
}
```

Select one:

- A. Caught Derived Exception
- B. None of the above
- C. Compiler Error
- D. Caught Base Exception ✔

Your answer is correct.

The correct answer is: Caught Base Exception

Question **14**

Correct

Mark 1.00 out of 1.00

The …… cannot be directly used to access all the members of the derived class.

Select one:

- a. void pointers
- b. base pointer ✔
- c. this pointer
- d. null pointers

The correct answer is: base pointer

Question **15**

Correct

Mark 1.00 out of 1.00

Return type of uncaught_exception() is:

Select one:

- a. char *
- b. double
- c. bool ✔
- d. int

The correct answer is: bool

Question **16**

Correct

Mark 1.00 out of 1.00

We can manipulate a pointer with the indirection operator (*), which is also known as ……

Select one:

- a. reference operator
- b. direction operator
- c. dereference operator ✔
- d. indirection operator

The correct answer is: dereference operator

Question **17**

Correct

Mark 1.00 out of 1.00

A …… refers to an object that that currently invokes a member function.

Select one:

- a. this pointer ✔
- b. base pointer
- c. null pointers
- d. void pointers

The correct answer is: this pointer

Question **18**

Correct

Mark 1.00 out of 1.00

…… are also known as generic pointers which refer to variables of any type.

Select one:

- a. base pointer
- b. null pointers
- c. void pointers ✔
- d. this pointer

The correct answer is: void pointers

Question **19**

Correct

Mark 1.00 out of 1.00

In compiletime polymorphism are also known as

Select one:

- a. static binding
- b. All of the above ✔
- c. early binding
- d. static linking

The correct answer is: All of the above

Question **20**

Correct

Mark 1.00 out of 1.00

The pointers which are not initialized in a program are called.

Select one:

- a. void pointers
- b. this pointer
- c. base pointer
- d. null pointers ✔

The correct answer is: null pointers

Question **21**

Correct

Mark 1.00 out of 1.00

C++ supports run time polymorphism with the help of virtual functions called:

Select one:

- a. static
- b. early binding
- c. dynamic ✔
- d. run time

The correct answer is: dynamic

Question **22**

Correct

Mark 1.00 out of 1.00

Using the …… we can change the contents of the memory location.

Select one:

- a. reference operator
- b. dereference operator ✔
- c. direction operator
- d. indirection operator

The correct answer is: dereference operator

Question **23**

Correct

Mark 1.00 out of 1.00

The important application of …… is to return the object it points to.

Select one:

- a. void pointers
- b. null pointers
- c. base pointer
- d. this pointer ✔

The correct answer is: this pointer

Question **24**

Correct

Mark 2.00 out of 2.00

```
#include <iostream>
using namespace std;
int main()
{
int x = -1;
try {
      cout << "Inside try \n";
if (x < 0)
{
      throw x;
      cout << "After throw \n";
}
}
catch (int x ) {
      cout << "Exception Caught \n";
}

cout << "After catch \n";
return 0;
}
```

Select one:

- A.
  Inside try
  Exception Caught
  After catch ✔
- B.
  Inside try
  After throw
  After catch
- C.
  Inside try
  Exception Caught
- D.
  Inside try
  Exception Caught
  After throw
  After catch

Your answer is correct.

The correct answer is:
Inside try
Exception Caught
After catch

Started on Wednesday, 14 October 2020, 3:32 PM
State Finished
Completed on Wednesday, 14 October 2020, 4:17 PM
Time taken 44 mins 59 secs
Grade **14.00** out of 25.00 (**56**%)

Information

INTEGRAL UNIVERSITY
LUCKNOW INDIA

Mid-sem Unit Exam, Session (2020-21)

Program : BCA

Course Code and Name: Computer based Numerical and Statistical Techniques (MT202)

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: 1901018176

Course Code and Name: MT 202

Program: BCA

Year /Semester: 2ND/3RD

Section/Group:

Question **2**

Complete

Mark 1.00 out of 1.00

Multiply 0.6644E15 by 0.2311E13

Select one:

- a. 0.1535E195
- b. 0.1535E28
- c. 0.1535E15
- d. 0.1535E13

The correct answer is: 0.1535E28

Question **3**

Complete

Mark 1.00 out of 1.00

The number of significant digits in 8.00312

Select one:

- a. 3
- b. 4
- c. 5
- d. 6

The correct answer is: 6

Question **4**

Complete

Mark 0.00 out of 1.00

The regula falsi first approximation of $x^3-9x+1=0$ between 2 and 4 is

Select one:

- a. 2.4
- b. 2.5
- c. 2.6
- d. 3

The correct answer is: 2.6

Question **5**

Complete

Mark 0.00 out of 1.00

Add (i) 0.3952E4 and (ii) 0.2213E4

Select one:

- a. 0.3952E3
- b. 0.2213E2
- c. 0.5805E4
- d. 0.5805E8

The correct answer is: 0.5805E4

Question **6**

Complete

Mark 1.00 out of 1.00

_____ is an approach for solving complex mathematical problem using only simple basic arithmetic operations

Select one:

- a. Arithmetical computing
- b. Factorial computing
- c. Numerical computing
- d. Binary computing

The correct answer is: Numerical computing

Question **7**

Complete

Mark 1.00 out of 1.00

To find the root of equation f(x)=0, in (a,b) the false position method is given as

Select one:

a. $\frac{af(b)-b(f(a)}{f(a)-f(b)}$

b. $\frac{af(b)-bf(a)}{f(b)-f(a)}$

c. $\frac{bf(b)-af(b)}{f(a)-f(b)}$

d. $\frac{bf(a)-af(a)}{f(a)-f(b)}$

The correct answer is:
$\frac{af(b)-bf(a)}{f(b)-f(a)}$

Question **8**

Complete

Mark 1.00 out of 1.00

The equation $\cos x-3x=1=0$, can be solved by

Select one:

a. Iteration method

b. Gauss Siedal Method

c. Both a and b

d. None of the Above

The correct answer is: Iteration method

Question **9**

Complete

Mark 1.00 out of 1.00

If p is a root of f(x), then the value of f(p) is

Select one:

a. Infinite

b. Zero

c. One

d. Always negative

The correct answer is: Zero

Question **10**

Complete

Mark 1.00 out of 1.00

The Bisection method of finding roots of non linear equations falls under the category of a (an) _____ method.

Select one:

- a. Graphical
- b. Random
- c. Open
- d. Bracketing

The correct answer is: Bracketing

Question **11**

Complete

Mark 0.00 out of 1.00

The positive root of $\log(x)-1.2=0$ does not lie between [2,3]

Select one:

- a. True
- b. False
- c. Root can not be determined
- d. None of the above

The correct answer is: True

Question **12**

Complete

Mark 0.00 out of 1.00

To Solve $x^2-x-2=0$ by Newton-Raphson method we choose $x_0=1$, then the value of x_1 is

Select one:

- a. 0
- b. 1
- c. 2
- d. 3

The correct answer is: 3

Question **13**

Complete

Mark 1.00 out of 1.00

If 5/6 $\cong$ 0.8333 then percentage error is _____ %

Select one:

- a. 0.0003
- b. 0.004
- c. 0.0004
- d. 0.003

The correct answer is: 0.004

Question **14**

Complete

Mark 1.00 out of 1.00

Newton-Raphson method is applicable to the solution of the

Select one:

- a. Algebraic equations only.
- b. Transcendental equations only.
- c. Both Algebraic and Transcendental equations.
- d. Both Algebraic and Transcendental equations and also used when the roots are complex.

The correct answer is: Both Algebraic and Transcendental equations.

Question **15**

Complete

Mark 1.00 out of 1.00

If a function is real and continous in the region from a to b and f(a) and f(b) have opposite signs then there is no real root between a and b.

Select one:

- a. True
- b. False
- c. Exactly two roots are there.
- d. No roots at all.

The correct answer is: False

Question **16**

Complete

Mark 0.00 out of 1.00

The smallest positive root of the equation $x^3-5x+3=0$ lies between

Select one:

- a. 2 and 3
- b. 1 and 2
- c. 0 and 1
- d. None of these

The correct answer is: 0 and 1

Question **17**

Complete

Mark 0.00 out of 1.00

The fixed point iteration method $x_{n+1} = \phi(x_n)$ converges (gives the approximation to the root) if

Select one:

a. $|\phi'(x)| = 2$

b. $|\phi'(x)| > 1$

c. $|\phi'(x)| < 1$

d. Always Converges

The correct answer is: $|\phi'(x)| < 1$

Question **18**

Complete

Mark 0.00 out of 1.00

Newton’s method fails to find the root of f(x)=0 if

Select one:

a. f'(x)=10

b. f'(x) = 0

c. f'(x) > 0

d. f'(x) < 0

The correct answer is: f'(x) = 0

Question **19**

Complete

Mark 1.00 out of 1.00

If a + ib is a root of f(x) = 0 then the other root is

Select one:

a. ia

b. ib

c. a-ib

d. We can not determine the other root.

The correct answer is: a-ib

Question **20**

Complete

Mark 0.00 out of 1.00

The equation $x^3 - \log(x) - \sin(x) = 0$ is known as

Select one:

- a. Polynomial Equation
- b. Algebraic equation
- c. Transcendental equation
- d. None of the above

The correct answer is: Transcendental equation

Question **21**

Complete

Mark 0.00 out of 1.00

Which of the following method is employed for solving the system of linear equations?

Select one:

- a. Runge Kutta
- b. Newton Raphson
- c. Gauss Seidel
- d. Simpson's Rule

The correct answer is: Gauss Seidel

Question **22**

Complete

Mark 1.00 out of 1.00

5. For an equation like $x^2 = 0$, a root exists at $x = 0$. The bisection method cannot be adopted to solve this equation in spite of the root existing at $x = 0$ because the function $f(x) = x^2$

Select one:

- a. Has a slope equal to zero at x = 0
- b. Is always non-negative
- c. Has repeated roots at x = 0
- d. Is a polynomial

The correct answer is: Is always non-negative

Question **23**

Complete

Mark 1.00 out of 1.00

In which of the following methods proper choice of initial value is very important?

Select one:

- a. Bisection method
- b. False position
- c. Newton-Raphson
- d. Bairsto method

The correct answer is: Newton-Raphson

Question **24**

Complete

Mark 0.00 out of 1.00

Let the system of linear equation AX=b, then which of the following is true for Gauss Seidal Method

Select one:

- a. Diagonal elements are dominant.
- b. We can find solution with only one equation without using the other equations.
- c. Equations can be solved at all
- d. None of the above

The correct answer is: Diagonal elements are dominant.

Question **25**

Complete

Mark 1.00 out of 1.00

Newton’s method has _____ convergence

Select one:

- a. Cubic
- b. Linear
- c. Quadratic
- d. None of these

The correct answer is: Quadratic

Question **26**

Complete

Mark 0.00 out of 1.00

Every algebraic equation of nth degree, where n is a positive integer, has only

Select one:

- a. n – 1 roots
- b. n + 1 roots
- c. 2n roots
- d. n roots

The correct answer is: n roots

◄ PRACTICE QUIZ UNIT 1 Jump to... LEARNING RESOURCES OF UNIT ►

Integral University, Kursi Road, Lucknow(india)

E-mail: ili@iul.ac.in, sdc@iul.ac.in

Started on Thursday, 5 November 2020, 6:04 PM
State Finished
Completed on Thursday, 5 November 2020, 6:16 PM
Time taken 12 mins 36 secs
Grade **25.00** out of 25.00 (**100**%)

Information

INTEGRAL UNIVERSITY LUCKNOW INDIA

Mid-sem Unit 2 Exam, Session (2020-21)

Program: B.C.A.

Course Code and Name: MT202 Computer Based Numerical and Statistical Techniques

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: 1901018136

Name of Student:Irshad Akaram

Course Code and Name: MT202 Computer Oriented Numerical and Statistical Techniques

Program: B.C.A.

Year /Semester: II/III

Section/Group: BCA-B

Question **2**

Complete

Mark 1.00 out of 1.00

$1 + \Delta = ?$

(a) $E - 1$ (b) ∇

(c) E (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: c

Question **3**

Complete

Mark 1.00 out of 1.00

Which one is true?

(a) $\nabla = E - 1$

(b) $\nabla = 1 - E^{-1}$

(c) $\nabla = 1 + E^{-1}$

(d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: b

Question **4**

Complete

Mark 1.00 out of 1.00

Which of the following relation is true?

(a) $\delta = \frac{1}{2}(E^{\frac{1}{2}} + E^{\frac{-1}{2}})$

(b) $\delta = \frac{1}{2}(E^{\frac{1}{2}} - E^{\frac{-1}{2}})$

(c) $\delta = (E^{\frac{1}{2}} - E^{\frac{-1}{2}})$

(d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: c

Question **5**

Complete

Mark 1.00 out of 1.00

The technique for computing the value of the function outside the given range of argument is called

Select one:

- a. interpolation
- b. extrapolation
- c. inverse interpolation
- d. none of these

The correct answer is: extrapolation

Question **6**

Complete

Mark 1.00 out of 1.00

Regarding factorial notations, which one is true?

(a) $x^{(3)} = x(x-1)(x-2), h = 1$ (b) $x^{(3)} = x(x+1)(x+2), h = 1$

(c) $x^{(3)} = (x+1)(x+2)\,(x+3)), h = 1$ (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: a

Question **7**

Complete

Mark 1.00 out of 1.00

$\Delta x^{(3)}$ with h=1 is given by

(a) $\frac{x^{(4)}}{4}$ (b) $3.1.x^{(2)}$

(c) $3.1.x^{(3)}$ (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: b

Question **8**

Complete

Mark 1.00 out of 1.00

Expansion of $(1+x)^{-1}$ gives

(a) $1 + x + x^2 + x^3 + x^4 + \cdots$ (b) $1 - x + x^2 - x^3 + x^4 - \cdots$

(c) $1 + x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \cdots$ (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: b

Question **9**

Complete

Mark 1.00 out of 1.00

For the given distributed data find the value of $\Delta^2 y_0$

x	2	4	6	8
y	1	4	8	10

(a) 1
(b) 3
(c) 4
(d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: a

Question **10**

Complete

Mark 1.00 out of 1.00

How much maximum order differences are possible, If there are 6 values of dependent variable

Select one:

- a. 5^{th} order
- b. 4^{th} order
- c. 6^{th} order
- d. d

The correct answer is: 5^{th} order

Question **11**

Complete

Mark 1.00 out of 1.00

Newton forward interpolation formula is applicable if $u = \frac{x - x_0}{h}$ is

(a) u<0
(b) u=0
(c) u>0
(d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: c

Question **12**

Complete

Mark 1.00 out of 1.00

If interpolation is required at a point which lies in the last of the given range of x, which formula will be applicable?

Select one:

- a. Newton's forward formula
- b. Newton's backward formula
- c. Gauss forward formula
- d. none of these

The correct answer is: Newton's backward formula

Question **13**

Complete

Mark 1.00 out of 1.00

If interpolation is required at a point which lies in the center of the given range of x, which formula will be applicable?

Select one:

- a. Newton's backward formula
- b. Newton's forward formula
- c. Gauss forward formula
- d. none of these

The correct answer is: Gauss forward formula

Question **14**

Complete

Mark 1.00 out of 1.00

To apply Gauss backward interpolation formula, the value of $u = \frac{x - x_0}{h}$ must satifies

(a) $0 < u < 1$ (b) $-1 < u < 0$

(c) $-\frac{1}{2} < u < \frac{1}{2}$ (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: b

Question **15**

Complete

Mark 1.00 out of 1.00

What type of difference table is required to apply Newton backward interpolation formula?

Select one:

- a. Divided difference table
- b. forward difference table
- c. backward difference table
- d. none of these

The correct answer is: backward difference table

Question **16**

Complete

Mark 1.00 out of 1.00

To apply Gauss forward interpolation formula, the value of $u = \frac{x - x_0}{h}$ must satifies

(a) $0 < u < 1$ (b) $-1 < u < 0$

(c) $-\frac{1}{2} < u < \frac{1}{2}$ (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: a

Question **17**

Complete

Mark 1.00 out of 1.00

Which formula is not applicable when the arguments are not at equal intervals?

Select one:

- a. Lagrange's formula
- b. Newton's divided difference formula
- c. Stirling's formula
- d. none of these

The correct answer is: Stirling's formula

Question **18**

Complete

Mark 1.00 out of 1.00

Stirling's formula is the average of

Select one:

- a. Gauss forward and Backward formula
- b. Gauss forward and Newton forward formula
- c. Gauss forward and Newton backward formula
- d. none of these

The correct answer is: Gauss forward and Backward formula

Question **19**

Complete

Mark 1.00 out of 1.00

Which formula gives the best result when the value of $u = \frac{x - x_0}{h}$ is exactly ½ ?

(a) stirling's formula (b) Bessel's formula

(c) Laplace Everett's formula (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: b

Question **20**

Complete

Mark 1.00 out of 1.00

If $-\frac{1}{2} < u < \frac{1}{2}$, which formula of interpolation is applicable?

(a) stirling's formula (b) Bessel's formula

(c) Laplace Everett's formula (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: a

Question **21**

Complete

Mark 1.00 out of 1.00

$E^2 f(x) = ?$

(a) $f(x - 2h)$ (b) $f(x + 2h)$

(c) $f(x)$ (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: b

Question **22**

Complete

Mark 1.00 out of 1.00

If 3rd order differences are constants, we will get a polynomial of degree

Select one:

- a. 4
- b. 2
- c. 3
- d. none of these

The correct answer is: 3

Question **23**

Complete

Mark 1.00 out of 1.00

In Laplace Everett's formula

Select one:

- a. Only odd order differences are used
- b. Only even order differences are used
- c. all order difference are used
- d. none of these

The correct answer is: Only even order differences are used

Question **24**

Complete

Mark 1.00 out of 1.00

For the given distributed data, the value of $f(x_0, x_1)$ is

x	1	3	4	7
y	1	4	8	10

(a) 3 (b) 1.5

(c) 2.5 (d) none of these

Select one:

- a
- b
- c
- d

The correct answer is: b

Question **25**

Complete

Mark 1.00 out of 1.00

Which one is true with reference to the interpolation?

Select one:

- a. Lagrange's formula and Newton divided difference formula are used for unequal intervals
- b. Lagrange's formula and Newton divided difference formula are used for equal intervals
- c. Lagrange's formula is used for equal intervals while Newton divided difference formula is used for unequal intervals
- d. none of these

The correct answer is: Lagrange's formula and Newton divided difference formula are used for unequal intervals

Question **26**

Complete

Mark 1.00 out of 1.00

For a given set of values of x and y, the process of finding x for a given y is called

Select one:

- a. interpolation
- b. extrapolation
- c. inverse interpolation
- d. none of these

The correct answer is: inverse interpolation

◄ PRACTICE QUIZ UNIT 2 Jump to... FEEDBACK UNIT 2 ►

Started on Friday, 4 December 2020, 6:26 PM
State Finished
Completed on Friday, 4 December 2020, 6:56 PM
Time taken 30 mins 24 secs
Grade **25.00** out of 25.00 (**100**%)

Information

INTEGRAL UNIVERSITY
LUCKNOW INDIA

Mid-sem Unit Exam, Session (2020-21)

Program

Course Code and Name:

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: 1900101101

Course Code and Name:MT 202/computer based numerical and static technique

Program: BCA

Year /Semester:2/3

Section/Group: 4/d

Question **2**

Correct

Mark 1.00 out of 1.00

Newton-Gregory Backward Interpolation formula can be used for

Select one:

- a. for equally spaced intervals ✔
- b. for unequally spaced intervals
- c. for both equally and unequally spaced intervals
- d. None of the above

Your answer is correct.

The correct answer is: for equally spaced intervals

Question **3**

Correct

Mark 1.00 out of 1.00

If $x_0 = 0.75825$, x = 0.759 and h = 0.00005 then n = ?

Select one:

- a. 1.5
- b. 5
- c. 15 ✔
- d. 25

Your answer is correct.

The correct answer is: 15

Question **4**

Correct

Mark 1.00 out of 1.00

The n^{th} forward difference of polynomial of degree n-1 is

Select one:

- a. unequal
- b. zero ✔
- c. variable
- d. None of the above

Your answer is correct.

The correct answer is: zero

Question **5**

Correct

Mark 1.00 out of 1.00

The shift operator is denoted by

Select one:

- a. Δ
- b. ∇
- c. δ
- d. None of these ✔

Your answer is correct.

The correct answer is: None of these

Question **6**

Correct

Mark 1.00 out of 1.00

Newton's forward interpolation formula is used to interpolate the value of y

Select one:

- a. Near the beginning of the table ✔
- b. None of the above
- c. in middle of the table
- d. Near the end of the table

Your answer is correct.

The correct answer is: Near the beginning of the table

Question **7**

Correct

Mark 1.00 out of 1.00

Interpolation formulae are based on the fundamental assumption that data can be expressed as

Select one:

- a. a linear function
- b. a quadratic function
- c. a polynomial ✔
- d. None of the above

Your answer is correct.

The correct answer is: a polynomial

Question **8**

Correct

Mark 1.00 out of 1.00

Which of the following is true

Select one:

- a. $Ef(x) = f(x+h)$ ✔
- b. $Ef(x) = f(x-h)$
- c. Both of the above
- d. None of the above

Your answer is correct.

The correct answer is: $Ef(x) = f(x+h)$

Question **9**

Correct

Mark 1.00 out of 1.00

The process of finding the values corresponding the point inside the interval (x_0 , x_n) is called

Select one:

- a. Interpolation ✔
- b. Extrapolation
- c. Iteration
- d. None of these

Your answer is correct.

The correct answer is: Interpolation

Question **10**

Correct

Mark 1.00 out of 1.00

Given three data points (1, 6), (3, 28) and (10, 231), it is found that the function $y = 2x^2 + 3x + 1$ passes through the three data points. Then your estimate of y at x = 2 is

Select one:

- a. 6
- b. 15 ✔
- c. 17
- d. 28

Your answer is correct.

The correct answer is: 15

Question **11**

Correct

Mark 1.00 out of 1.00

If $\Delta f(x) = f(x+h) - f(x)$, then for constant k, $\Delta k = ?$

Select one:

- a. 0 ✔
- b. 1
- c. f(k)+f(0)
- d. None of the above

Your answer is correct.

The correct answer is: 0

Question **12**

Correct

Mark 1.00 out of 1.00

what is the relation between *E and* Δ ?

Select one:

- a. $E = 1 + \Delta$ ✔
- b. $E = 1 - \Delta$
- c. $E = \Delta - 1$
- d. None of these

Your answer is correct.

The correct answer is:
$E = 1 + \Delta$

Question **13**

Correct

Mark 1.00 out of 1.00

Bessel's formula gives better result when

Select one:

- a. 1/4 < u < 3/4 ✔
- b. -3/4 < u < -1/4
- c. u is any real number
- d. None of the above

Your answer is correct.

The correct answer is: 1/4 < u < 3/4

Question **14**

Correct

Mark 1.00 out of 1.00

If f(x) = cos x, a = 0.2 and b = 0.3, then first order newton divided difference will be

Select one:

- a. 0.247
- b. -0.247 ✔
- c. 0.342
- d. -0.342

Your answer is correct.

The correct answer is: -0.247

Question **15**

Correct

Mark 1.00 out of 1.00

If there are n+1 set of values then nth order divided difference is

Select one:

- a. constant ✔
- b. 0
- c. Both of the above
- d. None of the above

Your answer is correct.

The correct answer is: constant

Question **16**

Correct

Mark 1.00 out of 1.00

Symbol used for backward difference operator

Select one:

a.
Δ

b.
∇ ✔

c.
δ

d.
μ

Your answer is correct.

The correct answer is:
∇

Question **17**

Correct

Mark 1.00 out of 1.00

Which of the following is false

Select one:

a.
$\Delta = E - 1$

b.
$\nabla = 1 - E$ ✔

c.
$E = e^{hD}$

d. None of the above

Your answer is correct.

The correct answer is:
$\nabla = 1 - E$

Question **18**

Correct

Mark 1.00 out of 1.00

$$f(x)=\frac{(x-x_1)(x-x_2)....(x-x_n)}{(x_0-x_1)(x_0-x_2)....(x_0-x_n)}f(x_0)+\frac{(x-x_0)(x-x_2)....(x-x_n)}{(x_1-x_0)(x_1-x_2)....(x_1-x_n)}f(x_1)$$
$$+.....+\frac{(x-x_0)(x-x_1)....(x-x_{n-1})}{(x_n-x_0)(x_n-x_1)....(x_n-x_{n-1})}f(x_n)$$

Given formula is known as

Select one:

- a. newton divided difference formula
- b. Stirling formula
- c. Bessel formula
- d. Lagrange's formula ✔

Your answer is correct.

The correct answer is: Lagrange's formula

Question **19**

Correct

Mark 1.00 out of 1.00

The symbol used for average operator

Select one:

- a. λ
- b. D
- c. E
- d. μ ✔

Your answer is correct.

The correct answer is: μ

Question **20**

Correct

Mark 1.00 out of 1.00

If (n+1) values of x and corresponding values of y are given, then Lagrange's Interpolation formula will give

Select one:

- a. A polynomial of degree n in x ✔
- b. A polynomial of degree n in y
- c. A polynomial in x in which each term has degree n.
- d. A polynomial with highest degree 1

Your answer is correct.

The correct answer is: A polynomial of degree n in x

Question **21**

Correct

Mark 1.00 out of 1.00

Let h be finite difference, then forward difference operator of f(x) is defined by

Select one:

- a. f(x+h) - f(x) ✔
- b. f(x) - f(x-h)
- c. f(x.h) - f(x)
- d. None of these

Your answer is correct.

The correct answer is: f(x+h) - f(x)

Question **22**

Correct

Mark 1.00 out of 1.00

For given two distinct point x_0, x_1, first order Newton divided difference is given by

Select one:

- a. $\frac{x_1 - x_0}{f(x_1) - f(x_0)}$
- b. $\frac{f(x_1) - f(x_0)}{x_1 - x_0}$ ✔
- c. $\frac{f(x_1) + f(x_0)}{x_1 + x_0}$
- d. $\frac{x_1 + x_0}{f(x_1) + f(x_0)}$

Your answer is correct.

The correct answer is:
$\frac{f(x_1) - f(x_0)}{x_1 - x_0}$

Question **23**

Correct

Mark 1.00 out of 1.00

Using the following values find the divided difference of third and fourth term is

x:	*−4*	*−1*	*0*	*2*	*5*
f(x):	*1245*	*33*	*5*	*9*	*1335*

Select one:

- a. 1
- b. 2 ✔
- c. 3
- d. 4

Your answer is correct.

The correct answer is: 2

Question **24**

Correct

Mark 1.00 out of 1.00

What is the value of h in data given as (1,5), (4,9), (7, 24), (10, 96) and (13, 156).

Select one:

- a. 1
- b. 2
- c. 3 ✔
- d. 4

Your answer is correct.

The correct answer is: 3

Question **25**

Correct

Mark 1.00 out of 1.00

The bessel formula is used to calculate the values near to

Select one:

- a. beginning of the table
- b. mid of the table ✔
- c. end of the table
- d. all are correct

Your answer is correct.

The correct answer is: mid of the table

Question **26**

Correct

Mark 1.00 out of 1.00

Stirling's formula gives best results when

Select one:

- a. u = 1/4
- b. u = -1/4
- c. -1/4 < u < 1/4 ✔
- d. None of the above

Your answer is correct.

The correct answer is: -1/4 < u < 1/4

◄ PRACTICE QUIZ UNIT 2

Jump to...

FEEDBACK UNIT 2 ►

Started on Saturday, 5 December 2020, 8:42 PM
State Finished
Completed on Saturday, 5 December 2020, 8:46 PM
Time taken 3 mins 31 secs

Information

INTEGRAL UNIVERSITY LUCKNOW INDIA

Mid-sem Unit 3 Exam, Session (2020-21)

Program: B.C.A.

Course Code and Name: MT202 Computer Based Numerical and Statistical Techniques

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: 1901018136

Name of Student:Irshad Akaram

Course Code and Name: MT202 Computer Oriented Numerical and Statistical Techniques

Program: B.C.A.

Year /Semester: II/III

Section/Group: BCA-B

Question **2**

Complete

Marked out of 1.00

When derivatives requires at the beginning of the table values. we use the formula obtained from

Select one:

- a. Newton forward interpolation formula
- b. Newton backward interpolation formula
- c. any central interpolation formula
- d. none of these

Your answer is correct.

Question **3**

Complete

Marked out of 1.00

First derivatives formula at the point $x = x_0$ is given by

(a) $\frac{dy}{dx} = \frac{1}{h}\left[\Delta y_0 - \frac{1}{2}\Delta^2 y_0 - \frac{1}{3}\Delta^3 y_0 - \frac{1}{4}\Delta^4 y_0 - \ldots..\right]$

(b) $\frac{dy}{dx} = \frac{1}{h}\left[\Delta y_0 - \frac{1}{2}\Delta^2 y_0 + \frac{1}{3}\Delta^3 y_0 - \frac{1}{4}\Delta^4 y_0 + \ldots..\right]$

(c) $\frac{dy}{dx} = \frac{1}{h}\left[\Delta y_0 + \frac{1}{2}\Delta^2 y_0 + \frac{1}{3}\Delta^3 y_0 + \frac{1}{4}\Delta^4 y_0 + \ldots..\right]$

(d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **4**

Complete

Marked out of 1.00

Central interpolation formula is used to find the derivatives formula when it is required at the

Select one:

- a. beginning of the table
- b. center of the table
- c. center of the table
- d. none of these

Your answer is correct.

Question **5**

Complete

Marked out of 1.00

For unequal intervals, derivatives are calculated from

Select one:

- a. Either Lagrange or Newton divided difference formula
- b. Newton backward interpolation formula
- c. any central interpolation formula
- d. none of these

Your answer is correct.

Question **6**

Complete

Marked out of 1.00

First derivatives formula at the point $x = x_n$ is given by

(a) $\frac{dy}{dx} = \frac{1}{h}\left[\nabla y_n - \frac{1}{2}\nabla^2 y_n + \frac{1}{3}\nabla^3 y_n - \frac{1}{4}\nabla^4 y_n + \ldots..\right]$

(b) $\frac{dy}{dx} = \frac{1}{h}\left[\nabla y_n - \frac{1}{2}\nabla^2 y_n - \frac{1}{3}\nabla^3 y_n - \frac{1}{4}\nabla^4 y_n - \ldots..\right]$

(c) $\frac{dy}{dx} = \frac{1}{h}\left[\nabla y_n + \frac{1}{2}\nabla^2 y_n + \frac{1}{3}\nabla^3 y_n + \frac{1}{4}\nabla^4 y_n + \ldots..\right]$

(d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **7**

Complete

Marked out of 1.00

What is b in the calculation of $h = \frac{b-a}{n}$ used in numerical integration?

(a) lower limit of integration

(b) upper limit of integration

(c) no of subintervals

(d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **8**

Complete

Marked out of 1.00

In trapezoidal formula curve is replace by

Select one:

- a. straight line
- b. second degree curve
- c. third degree polynomial
- d. none of these

Your answer is correct.

Question **9**

Complete

Marked out of 1.00

Euler-Maclaurin's formula gives the correction in

Select one:

- a. Simpson's 1/3 rule
- b. Simpson's 3/8 rule
- c. Trapezoidal rule
- d. none of these

Your answer is correct.

Question **10**

Complete

Marked out of 1.00

To apply Boole's rule, number of subintervals n must be

Select one:

- a. multiple of 2
- b. multiple of 4
- c. multiple of 3
- d. none of these

Your answer is correct.

Question **11**

Complete

Marked out of 1.00

For better approximation to numerical integration, what condition on interval width h must be satisfied?

(a) h must be small (b) h must be large

(c) h may have any value (d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **12**

Complete

Marked out of 1.00

If there are 7 ordinates, how many intervals will be there?

Select one:

- a. 6
- b. 7
- c. 8
- d. none of these

Your answer is correct.

Question **13**

Complete

Marked out of 1.00

If there are 6 intervals, which formula is not applicable?

Select one:

- a. Simpson's 1/3 rule
- b. Boole's rule
- c. Weddle's rule
- d. Weddle's rule

Your answer is correct.

Question **14**

Complete

Marked out of 1.00

Sum of the series $1^2+2^2+3^2+\ldots\ldots+n^2$ is equal to

(a) $\frac{n.(n+1)}{2}$ (b) $\left[\frac{n.(n+1)}{2}\right]^2$

(c) $\frac{n.(n+1)(2n+1)}{6}$ (d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **15**

Complete

Marked out of 1.00

$\int \frac{1}{x^2}\,dx$ is equal to

(a) $\frac{-2}{x^3}$ (b) $\frac{-1}{x}$

(c) $\frac{1}{x}$ (d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **16**

Complete

Marked out of 1.00

Simpson's 1/3 formula is given by

(a) $\int_a^b y\,dx = \frac{h}{2}[(y_0 + y_n) + 2(y_1 + y_2 + y_3 + \ldots . + y_{n-1})]$

(b) $\int_a^b y\,dx = \frac{h}{3}[(y_0 + y_n) + 3(y_1 + y_3 + \ldots . + y_{n-1}) + 2(y_2 + y_2 + \ldots . + y_{n-2})]$

(c) $\int_a^b y\,dx = \frac{h}{3}[(y_0 + y_n) + 4(y_1 + y_3 + \ldots . + y_{n-1}) + 2(y_2 + y_2 + \ldots . + y_{n-2})]$

(d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **17**

Complete

Marked out of 1.00

Which integration formula can be used to find the sum of series up to n terms?

Select one:

- a. Simpson's 1/3 formula
- b. Euler Maclaurin's formula
- c. Weddle's formula
- d. none of these

Your answer is correct.

Question **18**

Complete

Marked out of 1.00

$\int_a^b y\,dx = \frac{h}{2}[(y_0 + y_n) + 2(y_1 + y_2 + y_3 + \ldots . + y_{n-1})]$ formula is known as

(a) Simpson's 1/3 formula

(b) Euler Maclaurin's formula

(c) Trapezoidal formula

(d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **19**

Complete

Marked out of 1.00

If a=0, b=1 and number of sub intervals are 5, what is the value of h?

Select one:

- a. 5
- b. 0.2
- c. 0.1
- d. none of these

Your answer is correct.

Question **20**

Complete

Marked out of 1.00

If $y = \frac{1}{x}, y' = ?$

(a) $\frac{-1}{x}$ (b) $\frac{-1}{x^2}$

(c) $\frac{1}{x^2}$ (d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **21**

Complete

Marked out of 1.00

If there are 8 intervals, which formula is not applicable?

Select one:

- a. Simpson's 1/3 rule
- b. Boole's rule
- c. Weddle's rule
- d. none of these

Your answer is correct.

Question **22**

Complete

Marked out of 1.00

General quadrature formula from which other numerical integration formulae are obtained is known as

Select one:

- a. Newton Cote's quadrature formula
- b. Gaussian quadrature formula
- c. Euler's quadrature formula
- d. none of these

Your answer is correct.

Your answer is correct.

Question **23**

Complete

Marked out of 1.00

Boole's formula is given by

(a) $\int_a^b y\,dx = \frac{h}{2}[(y_0 + y_n) + 2(y_1 + y_2 + y_3 + \ldots . + y_{n-1})]$

(b) $\int_a^b y\,dx = \frac{2h}{45}[7y_0 + 32y_1 + 12y_2 + 32y_3 + 7y_4 + \ldots \ldots]$

(c) $\int_a^b y\,dx = \frac{2h}{45}[y_0 + 5y_1 + y_2 + 6y_3 + y_4 + 5y_5 + y_6 + \ldots \ldots]$

(d) none of these

Select one:

- a
- b
- c
- d

Your answer is correct.

Question **24**

Complete

Marked out of 1.00

Area under the curve bounded by x axis, x=a and x=b is calculated by

Select one:

- a. Numerical integration formula
- b. Numerical differentiation formula
- c. Interpolation formula
- d. none of these

Your answer is correct.

Question **25**

Complete

Marked out of 1.00

If table values of distance and time are given. To find velocity, we apply

Select one:

- a. If table values of distance and time are given. To find velocity, we apply
- b. Numerical differentiation formula
- c. Interpolation formula
- d. none of these

Your answer is correct.

Question **26**

Complete

Marked out of 1.00

If number of ordinates are 8, which integration formula is applicable?

Select one:

- a. Simpson's 1/3 formula
- b. Simpson's 3/8 formula
- c. Trapezoidal formula
- d. none of these

Your answer is correct

Your answer is correct.

◄ PRACTICE QUIZ UNIT 3

Jump to...

FEEDBACK UNIT 3 ►

Started on Monday, 9 November 2020, 6:11 PM
State Finished
Completed on Monday, 9 November 2020, 6:55 PM
Time taken 44 mins 25 secs
Grade **21.00** out of 25.00 (**84**%)

Information

INTEGRAL UNIVERSITY LUCKNOW INDIA

Mid-sem Unit Exam, Session (2020-21)

Program: BCA

Course Code and Name: MT202 Computer based numerical and statistical techniques

Question **1**
Complete
Not graded

Enter your Full Name and Roll number

Roll Number: 1901018372

Course Code and Name: MT202 Computer based numerical and statistical techniques

Program: BCA

Year /Semester:2nd/3rd

Section/Group: A

Question **2**
Correct
Mark 1.00 out of 1.00

Simpson's 3/8 rule should be used when

Select one:

- n is multiple of 2
- n is any positive number
- n is multiple of 3 ✔
- None of these

The correct answer is: n is multiple of 3

Question **3**

Correct

Mark 1.00 out of 1.00

In numerical integration when the number of sub intervals (n) is a multiple of 4, then we use

Select one:

- Simpson's 3/8 rule
- Boole's rule ✔
- Weddle's rule
- None of these

The correct answer is: Boole's rule

Question **4**

Incorrect

Mark 0.00 out of 1.00

Numerical differentiation gives

Select one:

- Exact value ✖
- Approximate value
- No value
- Negative value

The correct answer is: Approximate value

Question **5**

Correct

Mark 1.00 out of 1.00

To apply trapezoidal rule, always divide the given range of integration into n parts, where n is:

Select one:

- Even
- Odd
- 1, 2, 3, ... ✔
- 5, 6, 7, ...

The correct answer is: 1, 2, 3, ...

Question **6**

Correct

Mark 1.00 out of 1.00

What is the value of h(interval of differencing) in the following data?

x (Age)	46	51	56	61	66
$y = f(x)$ (Premium)	116	97	83	74	68

Select one:

- 4
- 5 ✔
- 6
- Can't define

The correct answer is: 5

Question **7**

Correct

Mark 1.00 out of 1.00

In numerical integration, to get better result we select n as

Select one:

- Even
- Odd
- Large as possible ✔
- None of these

The correct answer is: Large as possible

Question **8**

Correct

Mark 1.00 out of 1.00

For $\int_0^{12} f(x)dx$ in Trapezoidal rule for h=1, what is the value of n

Select one:

- 6
- 12 ✔
- 24
- None

The correct answer is: 12

Question **9**

Correct

Mark 1.00 out of 1.00

How many minimum ordinates in Weddle's rule are necessary

Select one:

- 6
- 7 ✔
- 8
- 9

The correct answer is: 7

Question **10**

Incorrect

Mark 0.00 out of 1.00

Evaluate $\int_0^1 x^3 dx$ by trapezoidal rule considering five subintervals

Select one:

- 0.46
- 0.36
- 0.26
- 0.16 ✖

The correct answer is: 0.26

Question **11**

Correct

Mark 1.00 out of 1.00

Given formula is called as $\int_{x_0}^{x_0+nh} f(x)\,dx = \frac{h}{2}[(y_0 + y_n) + 2(y_1 + y_2 + \ldots\ldots + y_{n-1})]$

Select one:

- Trapezoidal rule ✔
- Simpson's 1/3 rule
- Simpson's 3/8 rule
- None of these

The correct answer is: Trapezoidal rule

Question **12**

Correct

Mark 1.00 out of 1.00

Given differentiation formula is known as $\left(\frac{dy}{dx}\right)_{x=a} = \frac{1}{h}\left[\Delta y_0 - \frac{1}{2}\Delta^2 y_0 + \frac{1}{3}\Delta^3 y_0 - \frac{1}{4}\Delta^4 y_0 + \frac{1}{5}\Delta^5 y_0 - \ldots\right]$

Select one:

- Newton forward difference formula ✔
- Newton backward difference formula
- Lagrange's formula
- Gauss's formula

The correct answer is: Newton forward difference formula

Question **13**

Correct

Mark 1.00 out of 1.00

Trapezoidal rule is applicable when n is a

Select one:

- Natural number ✔
- Integer
- Rational number
- Real Number

The correct answer is: Natural number

Question **14**

Correct

Mark 1.00 out of 1.00

Simpson's 1/3 rule is applicable when n is

Select one:

- even natural number ✔
- odd natural number
- any natural number
- none of these

The correct answer is: even natural number

Question **15**

Correct

Mark 1.00 out of 1.00

If number of subintervals (n) is 12 then we can apply

Select one:

- Trapezoidal rule
- Boole's rule
- Weddle's rule
- All of above rules ✔

The correct answer is: All of above rules

Question **16**

Correct

Mark 1.00 out of 1.00

Given formula is known as $\int_{x_0}^{x_0+nh} f(x)\,dx = \frac{2h}{45}\left[7(y_0+y_n)+32(y_1+y_3+y_5+\ldots)+12(y_2+y_6+y_{10}+\ldots)+14(y_4+y_8+y_{12}+\ldots)\right]$

Select one:

- Boole's rule ✔
- Weddle's rule
- Euler Maclaurin's rule
- None of these

The correct answer is: Boole's rule

Question **17**

Correct

Mark 1.00 out of 1.00

Which of the following methods is for integration

Select one:

- Gauss-Siedel Method
- Newton-Raphson Method
- Euler-Maclaurin Method ✔
- None of these

The correct answer is: Euler-Maclaurin Method

Question **18**

Correct

Mark 1.00 out of 1.00

The process of evaluating a definite integral from a set of tabulated values of the integrand f(x) is called

Select one:

- Numerical value
- Numerical differentiation
- Numerical integration ✔
- None of these

The correct answer is: Numerical integration

Question **19**

Incorrect

Mark 0.00 out of 1.00

To evaluate $\int_0^1 f(x)dx$ approximately which of the following method is used when the value of f(x) is given only at x = 0, 1/3, 2/3, 1

Select one:

- Trapezoidal rule
- Simpson's 3/8 rule
- Both of the above
- None of the above ✖

The correct answer is: Both of the above

Question **20**

Correct

Mark 1.00 out of 1.00

To evaluate $\int_0^1 f(x)dx$ approximately which of the following method is used when the value of f(x) is given only at x = 0, 1/3, 2/3, 1

Select one:

- Simpson's 1/3 rule
- Weddle's rule
- Both of the above
- None of the above ✔

The correct answer is: None of the above

Question **21**

Incorrect

Mark 0.00 out of 1.00

In numerical integration when the number of subintervals (n) is 7 then we use

Select one:

- Trapezoidal rule
- Weddle's rule ✖
- Boole's rule
- None of the above

The correct answer is: Trapezoidal rule

Question **22**

Correct

Mark 1.00 out of 1.00

To use the given formula the number of subintervals (n) should be multiple of

$$\int_{x_0}^{x_0+nh} f(x)\,dx = \frac{2h}{45}\left[7(y_0+y_n)+32(y_1+y_3+y_5+\ldots)+12(y_2+y_6+y_{10}+\ldots)+14(y_4+y_8+y_{12}+\ldots)\right]$$

Select one:

- 2
- 3
- 4 ✔
- 6

The correct answer is: 4

Question **23**

Correct

Mark 1.00 out of 1.00

The process of calculating the derivative of a function at some particular value of independent variable by means of a set of given values of that function is

Select one:

- Numerical value
- Numerical differentiation ✔
- Numerical integration
- None of these

The correct answer is: Numerical differentiation

Question **24**

Correct

Mark 1.00 out of 1.00

In Newton's forward difference formula, what is u _____

Select one:

- $\frac{x-x_0}{h}$ ✔
- $\frac{x-x_n}{h}$
- $\frac{(x-x_0)^2}{h}$
- None of these

The correct answer is:
$\frac{x-x_0}{h}$

Question **25**

Correct

Mark 1.00 out of 1.00

In Newton's backward difference formula, what is u _____

Select one:

- $\frac{x-x_0}{h}$
- $\frac{x-x_n}{h}$ ✔
- $\frac{(x-x_n)^2}{h}$
- None of these

The correct answer is:

$\frac{x-x_n}{h}$

Question **26**

Correct

Mark 1.00 out of 1.00

Simpson's 1/3 rule is used only when

Select one:

- Ordinates are even
- Ordinates are odd ✔
- Ordinate is any positive integer
- None of these

The correct answer is: Ordinates are odd

◄ PRACTICE QUIZ UNIT 3

Jump to...

FEEDBACK UNIT 3 ►

Started on Monday, 21 December 2020, 3:39 PM
State Finished
Completed on Monday, 21 December 2020, 4:03 PM
Time taken 24 mins 25 secs
Grade **25.00** out of 25.00 (**100**%)

Information

INTEGRAL UNIVERSITY
LUCKNOW INDIA

Mid-sem Unit Exam, Session (2020-21)

Program : BCA

Course Code and Name: Computer based Numerical and Statistical Techniques (MT202)

Question **1**

Complete

Not graded

Enter your Full Name and Roll number

Roll Number: 1901018176

Course Code and Name: MT202

Program: BCA

Year /Semester: 2nd/3rd

Section/Group: C

Information

Question Paper

Question **2**

Complete

Mark 1.00 out of 1.00

If we say that the hypothesis has been rejected at 5% level of significance which means that we could be wrong with probability

Select one:

- a. 0.95
- b. 0.05
- c. 1
- d. 0.25

Question **3**

Complete

Mark 1.00 out of 1.00

In testing a given hypothesis tha maximum probability with which we would be wiling to take risk is called

Select one:

- a. Total probability
- b. Level of significance
- c. Critical value
- d. Acceptance value

Question **4**

Complete

Mark 1.00 out of 1.00

A region in which null hypothesis is rejected is called

Select one:

- a. Error region
- b. Critical region
- c. Closed region
- d. Both a and b

Question **5**

Complete

Mark 1.00 out of 1.00

The value of test statistic which separates the rejection and acceptance region is called

Select one:

- a. Significant value
- b. Calculated value
- c. Tabulated value
- d. Probability

Question **6**

Complete

Mark 1.00 out of 1.00

The rejection of the null hypothesis while it is true is called

Select one:

- a. Type I error
- b. Type II error
- c. Both a and b
- d. *None of the above*

Question **7**

Complete

Mark 1.00 out of 1.00

In test of significance we use student's t test when

Select one:

- a. Sample size is greater then 30
- b. Sample size is less than 30
- c. For any sample irrespective of sample size.
- d. None of the Above

Question **8**

Complete

Mark 1.00 out of 1.00

In test of significance, the hypothesis which is being tested is known as

Select one:

- a. Alternate hypothesis
- b. Critical region
- c. Null hypothesis
- d. Both null and alternate hypothesis

Question **9**

Complete

Mark 1.00 out of 1.00

The number of individuals in a Sample is known as

Select one:

- a. Sample value
- b. Sample parameter
- c. Sample size
- d. None of the Above

Question **10**

Complete

Mark 1.00 out of 1.00

The statistical constants of the population such as mean, variance etc are known as

Select one:

- a. Sample
- b. Parameters
- c. Critical values
- d. All of the above

Question **11**

Complete

Mark 1.00 out of 1.00

The statistical constants of the sample are known as

Select one:

- a. Parameter
- b. Sample value
- c. Sample size
- d. Statistic

Question **12**

Complete

Mark 1.00 out of 1.00

The standard deviation of the sampling distribution of a statistic is known as

Select one:

- a. Null hypothesis
- b. A Alternate hypothesis
- c. Standard error
- d. Level of significance

Question **13**

Complete

Mark 1.00 out of 1.00

If calculated value is greater or equal to the tabulated value then tha null hypothesis is

Select one:

- a. Accepted
- b. Rejected
- c. No conclusion can be drawn
- d. All of the above

Question **14**

Complete

Mark 1.00 out of 1.00

A random sample of 16 values from a normal population showed a mean of 41.5 inches and the sum of squares of deviations from this mean equal to 135 square inches , find the degree of freedom

Select one:

- a. 18
- b. 17
- c. 16
- d. 15

Question **15**

Complete

Mark 1.00 out of 1.00

Which of the following uses the variance ratio to test the significance of difference between two sampled variance

Select one:

- a. t test
- b. Z test
- c. F test
- d. ANOVA

Question **16**

Complete

Mark 1.00 out of 1.00

..... is the estimation of the value of a variable (or set of variables) at some future point of time.

Select one:

- a. Time series
- b. Regular variation
- c. Forecasting
  Forecasting
- d. Forecasting Models

Question **17**

Complete

Mark 1.00 out of 1.00

An ordered sequence of values of variable at equally spaced time intervals is called

Select one:

- a. Time Series
- b. Regular variation
- c. Forecasting
  Forecasting
- d. None of the Above

Question **18**

Complete

Mark 1.00 out of 1.00

Which of the following is NOT a component of a time series

Select one:

- a. Secular Trend
- b. Seasonal Variation
- c. Cyclic Variation
- d. Critical Variation

Question **19**

Complete

Mark 1.00 out of 1.00

_____ test is used to measure the discrepancy between the observed (actual) frequencies and theoretical (expected) frequencies.

Select one:

- a. t test
- b. f test
- c. Chi square test
- d. ANOVA

Question **20**

Complete

Mark 1.00 out of 1.00

A die is thrown 120 times and the results of these throws are given as

No appeared on the die	1	2	3	4	5	6
Frequency	16	30	22	18	14	20

If we have to test whether the given die is biased or not , Find the expected frequencies for each digit.

Select one:

- a. 120
- b. 6
- c. 20
- d. 30

Question **21**

Complete

Mark 1.00 out of 1.00

In technique of analysis of variance in case of one factor analysis, the total variation is divided into

Select one:

- a. Two parts
- b. Three parts
- c. Four parts
- d. None of tha Above

Question **22**

Complete

Mark 1.00 out of 1.00

The correct formula for mean sum of squares is given by

Select one:

a. $\frac{Grand\ Total}{Total\ Observation}$

b. $\frac{Sum\ of\ squares}{Total\ Observation}$

c. $\frac{Sum\ of\ squares}{Degree\ of\ freedom}$

d. $\frac{Grand\ Total}{Degree\ of\ freedom}$

Question **23**

Complete

Mark 1.00 out of 1.00

The procedure which enable us to decide on the basis of sample result whether a hypothesis is true or not is

Select one:

a. Test of hypothesis

b. Null hypothesis

c. Alternate hypothesis

d. Hypothesis

Question **24**

Complete

Mark 1.00 out of 1.00

Which of the following represents the source of variation between samples

Select one:

a. Total sum of squares (TSS)

b. Sum of squares due to error (SSE)

c. Sum of square due to treatment (SST)

d. Variance Ratio (F)

Question **25**

Complete

Mark 1.00 out of 1.00

A hypothesis which is accepted when null hypothesis is rejected is called tha

Select one:

a. Hypothesis

b. Alternate hypothesis

c. Test of hypothesis

d. None of the Above

Question **26**

Complete

Mark 1.00 out of 1.00

The right tailed alternative hypothesis is given by

Select one:

a. $H_1 : \mu \neq \mu_0$

b. $H_1 : \mu > \mu_0$

c. $H_1 : u < \mu_0$

d. None of the Above

◄ PRACTICE QUIZ UNIT 5 Jump to... FEEDBACK UNIT 5 ►