

Duration: 120 Mins

Total Marks: 63

ID: ITISKILL2352WJ

Student Name: _____ Roll No: _____

1. What is the diameter of the semicircle, if the circumference of the semicircle is 21.98 cm?

A) 7 cm	B) 7.55 cm
C) 8.55 cm	D) 8 cm

2. What is the area of a circular surface if the radius is 14 cm?

A) 612.44 cm ²	B) 614.5 cm ²
C) 612.25 cm ²	D) 615.44 cm ²

3. What is the value of 625^0 ?

A) 1	B) 25
C) 525	D) 0

4. What is the value of any number raised to the power of 0?

A) 1	B) 0
C) Alpha (?)	D) (-1)

5. Which is very good conductor?

A) Cast iron	B) Copper
C) Wrought iron	D) Steel

6. What is the subtracted value of $3x - 4x^2 + 2y^2$ from $4y^2 - 2x + 8x^2$?

A) $2y^2 - 5x + 12x^2$	B) $2y^2 - 5x - 12x^2$
C) $2y^2 + 5x - 12x^2$	D) $(-2y^2 - 5x + 12x^2)$

7. What is the area of the circle if the radius is 10 cm?

A) 30.4 cm ²	B) 314 cm ²
C) 31.4 cm ²	D) 3.14 cm ²

8. What is the radius of the semicircle, if the circumference of the semicircle is 28.26 cm?

A) 6.49 cm	B) 5.49 cm
C) 8.5 cm	D) 8.75 cm

9. What is the value of $x^3 + 3y^2x^2$ if $x=3, y=2$?

A) 54	B) 81
C) 135	D) 63

10. What is the area of the circle, if the circumference of the circle is 44cm?

A) 129 cm ²	B) 130 cm ²
C) 154 cm ²	D) 128 cm ²

11. What is the area of the sector, if the diameter is 12 cm and the angle is 60 Degree?

A) 17.75 cm ²	B) 18.84 cm ²
C) 18.0 cm ²	D) 19.00 cm ²

12. What is the value of $x^2 - y^2$ if $(x+y) = 9, (x - y) = 4$?

A) 46	B) 36
C) 13	D) 65

13. What is the flow of electrons in any conductor?

A) Power	B) Current
C) Resistance	D) Voltage

14. Which is the formula for a^m / a^n ?

A) $a^{m \times n}$	B) a^{m-n}
C) $(a^m)^n$	D) a^{m+n}

15. Which is equal to $(a+b)^2 - (a-b)^2$?

A) 5ab	B) 3ab
C) 2ab	D) 4ab

16. What is the area of the sector, whose diameter is 40 mm and angle is 120 Degree?

A) 400.50 mm ²	B) 418.66 mm ²
C) 415.5 mm ²	D) 416.6 mm ²

17. What is the value of $14x+3y+25x+2y$?

- A) $16x + 28y$ B) $44xy$
C) $17x + 27y$ D) $39x + 5y$

18. What is the radius of the circle if the angle of sector is 90 Degree and the area of the circle is 196 cm^2 ?

- A) 14.95 cm B) 15.77 cm
C) 14.85 cm D) 15 cm

19. What is the value of 'X' if $x - y = 6$ and $x + y = 8$?

- A) 7 B) 6
C) 14 D) 5

20. What are the three consecutive numbers if their sum is 42?

- A) 12,13,14 B) 14,15,16
C) 13,14,15 D) 11,12,13

21. What is the length of arc of a sector, whose perimeter is 64.8cm and radius is 12.4 cm?

- A) 40 cm B) 40.8 cm
C) 42 cm D) 45 cm

22. Which is equal to $(a^m)^n$?

- A) a^{m+n} B) a^{m-n}
C) a^{mn} D) $a^{m/n}$

23. What is the diameter of the circle, if the circumference is 31.4 cm?

- A) 5 cm B) 8.5 cm
C) 10 cm D) 8 cm

24. What is the value of $a^5 \cdot a^7$?

- A) a^{35} B) a^{12}
C) a^{22} D) $a^2 \cdot a^1$

25. What is the formula for $a^m \cdot a^n$?

- A) a^{m+n} B) $n \cdot a^m$
C) a^{m-n} D) a^{mn}

26. What is the radius of the circle, whose circumference is 440 cm?

- A) 72.2 cm B) 70.5 cm
C) 71.5 cm D) 70 cm

27. What is the circumference of a circle whose diameter is 7 cm?

- A) 25 cm B) 22 cm

- C) 21 cm D) 44 cm

28. What is the value of $5x^4 / 5x^3$?

- A) x B) $5x^4 / 5x^3$
C) $5x$ D) $5x^2$

29. What is the length of arc of the sector whose radius is 15 cm and the intended angle is 30 Degree?

- A) 7.25 cm B) 6.85 cm
C) 7.85 cm D) 6.75 cm

30. What is the value of $(6^3) / ((-3)^3)$?

- A) (-8) B) 8
C) 27 D) (-27)

31. What is the length of arc of a sector whose radius is 3.6 cm and angle is 36 Degree?

- A) 2.10 cm B) 21.0 cm
C) 22.6 cm D) 2.26 cm

32. What is the multiplication value of $5a^2 \cdot 8a^5 \cdot b^3$?

- A) $40a^2 \cdot b^3$ B) $40a^7 \cdot b^4$
C) $40a^4 \cdot b^7$ D) $40a^3 \cdot b^2$

33. What is the value of $1 / a^{-5}$?

- A) a^5 B) 5a
C) a^{-5} D) (-5a)

34. Which is the expansion of $a^3 + b^3$?

- A) $(a+b)(a^2 + b^2 - ab)$ B) $a^3 + b^3 + 3ab(a+b)$
C) $a^3 - b^3 + 3ab(a-b)$ D) $(a-b)(a^2 + b^2 - ab)$

35. What is the radius of a circle whose diameter is 44 cm?

- A) 23 cm B) 22 cm
C) 44 cm D) 20 cm

36. Which property of a substance is opposing the flow of electric current?

- A) Resistance B) Voltage
C) Current D) EMF

37. What is the value of $12x^3 \cdot y^2$?

4x²>y?

- A) 8xy
C) 16xy
- B) (-3xy)
D) 3xy

38. What is the formula for (a-b)²?

- A) a² + 2ab + b²
C) (-a² - 2ab - b²)
- B) a² - 2ab + b²
D) a² - 2ab - b²

39. Which is the unit of resistance?

- A) Ampere
C) Ohm
- B) Volt
D) Watt

40. What is the value of x, if 3(2x - 4) = -4x + 28?

- A) 6
C) 4
- B) 12
D) 8

41. What is the value of adding (5x+2y), (4x - 7z) and (15z - 3y)?

- A) x - 9y + 8z
C) x + 9y + 8z
- B) 9x + y - 8z
D) 9x - y + 8z

42. What is the value of a²+b² if a+b=9 and ab = 20?

- A) 41
C) (-121)
- B) (-41)
D) 121

43. Which machine converts mechanical energy into electrical energy?

- A) Heater
C) Battery
- B) Iron box
D) Generator

44. What is the expanded form of (a+b)²?

- A) a² + 2ab + b²
C) a² - 2ab + b²
- B) a² + 2ab - b²
D) (-a² - 2ab + b²)

45. What is the expansion of (a+b+c)²?

- A) a² + b² + c² - 2ab + 2bc + 2ca
C) a² - b² - c² + 2ab + 2bc + 2ca
- B) a² + b² + c² + 2ab - 2bc + 2ca
D) a² + b² + c² + 2(ab + bc + ca)

46. Which is the unit of current?

- A) Volt
B) Ampere

C) Watt
D) Ohm

47. What is the value of a x a² x a³ x a⁴?

- A) a⁷
C) a¹⁰
- B) a⁸
D) a⁹

48. What is the area of the circle, whose diameter is 50 cm?

- A) 1962.5 cm²
C) 1950 cm²
- B) 1900 cm²
D) 1960 cm²

49. What is the diameter of the circle, if the area of the circle is 78.5cm²?

- A) 5.5 cm
C) 15 cm
- B) 5 cm
D) 10 cm

50. What is the total resistance if three resistances of 3 ohms, 9 ohms and 5 ohms are connected in series?

- A) 17 ohms
C) 1/17 ohms
- B) 11 ohms
D) 7 ohm

51. Which is expanded form of a³-b³?

- A) (a-b)(a² - b² + ab)
C) (a-b)(a² + b² + ab)
- B) (a+b)(a² - b² - ab)
D) (a-b)(a² - b² - ab)

52. What is the value of ab if (a+b)²=36 (a-b)²=24?

- A) 4
C) 3
- B) 2
D) 6

53. What is the diameter of the circle, if the area of the circle is 706.5cm²?

- A) 29.5 cm
C) 29 cm
- B) 30 cm
D) 30.5 cm

54. What is the name called biggest chord of the circle?

- A) Radius
C) Arc
- B) Diameter
D) Diagonal

55. Which is mineral insulator

- A) Glass
C) Quartz
- B) Porcelain
D) Mica

56. What is the simplified value of (3x + 15) / 5x + 25)

- A) (-3/5)
C) (-5/3)
- B) (5/3)
D) (3/5)

57. What is the value of x, if $x^2(120) = 960$?

- A) 6 B) 10
C) 8 D) 7
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58. What is the value of x if $13+x = 20$?

- A) 8 B) 13
C) 7 D) 9
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59. What is the area of the semicircle, if the diameter is 14 cm?

- A) 86.93 cm^2 B) 76.93 cm^2
C) 70 cm^2 D) 75.06 cm^2
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60. What is the name of the region of a circle between any two point on the circumference?

- A) Sector B) Chord
C) Arc D) Segment
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61. What is the length of arc of a sector, whose radius is 15 cm and angle is 40 Degree?

- A) 9.75 cm B) 10.4 cm
C) 9.8 cm D) 10.60 cm
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62. What is the value of x if $11x+4=37$?

- A) 5 B) 3
C) 4 D) 2
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63. What is the value of x if $(x + 2) / 2 = 19$?

- A) 38 B) 36
C) 35 D) 33
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