

39. The length and breadth of a hall is 15 metres and 12 metres respectively. If the sum total of the areas of the floor and ceiling is same as the sum total of the areas of the four walls, what is the volume of the hall ?
- (1) 720 m^3
 - (2) 900 m^3
 - (3) 1200 m^3
 - (4) 1440 m^3
40. A fixed deposit of Rs. 50,000 in a bank earns an interest of Rs. 7,245 @ 7% compounded annually. What is the time period of the deposit ?
- (1) 2 years
 - (2) $2\frac{1}{2}$ years
 - (3) 3 years
 - (4) $3\frac{1}{2}$ years
41. The atomicity of which of the following elements is different from the other three ?
- (1) Chlorine
 - (2) Nitrogen
 - (3) Oxygen
 - (4) Ozone
42. Which among the following is a compound ?
- (1) Air
 - (2) Cement
 - (3) Salt
 - (4) Paint
43. The specific gravity of which among the following metals is the highest ?
- (1) Gold
 - (2) Lead
 - (3) Mercury
 - (4) Silver
44. Which of the following quantum numbers distinguishes the orbitals available within a subshell of an atom ?
- (1) Azimuthal quantum number
 - (2) Magnetic quantum number
 - (3) Principal quantum number
 - (4) Spin quantum number
45. In the Modern Periodic Table which of the following blocks of elements are strong reducing agents ?
- (1) d-block elements
 - (2) f-block elements
 - (3) p-block elements
 - (4) s-block elements
46. Which of the following compounds has dative bonding ?
- (1) Ammonia
 - (2) Lithium Fluoride
 - (3) Magnesium Sulfide
 - (4) Sodium Chloride

47. Which law states that 'the pressure of a given mass of gas varies directly with the absolute temperature of the gas, when the volume is kept constant' ?
- (1) Boyle's law
 - (2) Charles' law
 - (3) Dalton's law
 - (4) Gay Lussac's law
48. Which among the following alloys of nickel is used for making permanent magnets ?
- (1) Alnico
 - (2) Ferronickel
 - (3) German silver
 - (4) Nichrome
49. Which electrical device senses the temperature of a physical system and performs actions so that the system's temperature is maintained near a desired setpoint ?
- (1) Compressor
 - (2) Relay
 - (3) Thermograph
 - (4) Thermostat
50. Which of the following statements as regards gravitational force is not correct ?
- (1) It is a short range force
 - (2) It is conservative in nature
 - (3) It is the force of attraction between two masses
 - (4) It is the weakest force
51. Which of the following is a scalar quantity ?
- (1) Force
 - (2) Energy
 - (3) Momentum
 - (4) Torque
52. In a rainy day the raindrops are falling vertically at a terminal velocity of 10 metres per second. At what angle approximately should a person hold the umbrella if he is walking horizontally at a velocity of 3 metres per second to prevent himself from being wet ?
- (1) 7°
 - (2) 12°
 - (3) 17°
 - (4) 22°
53. Match each of the following electromagnetic waves in Column – A with their wavelength range in Column – B and select the correct answer set from the table given below :
- | Column – A | Column – B |
|---------------------|--|
| (a) X-ray | (i) $< 10^{-3}$ nanometre |
| (b) Ultraviolet ray | (ii) 1 nanometre – 10^{-3} nanometre |
| (c) Infrared ray | (iii) 400 nanometres – 1 nanometre |
| (d) Gamma ray | (iv) 750 nanometres – 400 nanometres |
| | (v) 25 micrometres – 2.5 micrometres |

Answers

1	(a) – ii	(b) – iv	(c) – v	(d) – i
2	(a) – ii	(b) – iii	(c) – v	(d) – i
3	(a) – v	(b) – iii	(c) – iv	(d) – i
4	(a) – ii	(b) – iii	(c) – v	(d) – iv

54. Which among the following has a higher Albedo potential than the other three ?
- (1) Dense forests
 - (2) Ice caps
 - (3) Ocean surfaces
 - (4) Sandy deserts
55. What happens when a 100 watt bulb and 60 watt bulb are connected in a series ?
- (1) Both the bulbs will glow equally
 - (2) Only the 60 watt bulb will glow but not the 100 watt bulb
 - (3) The 100 watt bulb will glow more than the 60 watt bulb
 - (4) The 60 watt bulb will glow more than the 100 watt bulb
56. Water can be super-cooled to a temperature of :
- (1) 0°C
 - (2) -4°C
 - (3) -12°C
 - (4) -40°C
57. "The phenomenon in which electrically charged particles are released from or within a material when it absorbs electromagnetic radiation" is known as :
- (1) Doppler effect
 - (2) Modulation effect
 - (3) Photoelectric effect
 - (4) Tyndall effect
58. Which enzyme digests fats in most of the living organisms ?
- (1) Lyase
 - (2) Lipase
 - (3) Ligase
 - (4) Isomerase
59. Which among the following mineral elements necessary for the human body is a micro-element ?
- (1) Chlorine
 - (2) Fluorine
 - (3) Iodine
 - (4) Sodium
60. Which of the following pairs of organic acids and the substances in which they are present is incorrectly matched ?
- (1) Acetic acid – Vinegar
 - (2) Butyric acid – Wine
 - (3) Citric acid – Lemon
 - (4) Lactic acid – Milk

61. Which of the following types of plants grows better in the arid climates ?

- (1) Heliophytes
- (2) Hydrophytes
- (3) Sciophytes
- (4) Xerophytes

62. Which among the following cell organelles is semi-permeable ?

- (1) Cell membrane
- (2) Cell wall
- (3) Nucleus
- (4) Plasma membrane

63. Which component of the plants receives stimulus for flowering ?

- (1) Branches
- (2) Leaves
- (3) Roots
- (4) Stems

64. Accumulation of uric acid crystals in the joints leading to painful movements, swelling and inflammation is known as :

- (1) Bursitis
- (2) Gout
- (3) Osteitis
- (4) Osteoporosis

65. Who has been recently sworn in as the new President of Indonesia ?

- (1) Joko Widodo
- (2) Jusuf Kalla

(3) Maruf Amin

(4) Susilo Yudhoyono

66. K. B. Siddaiah, who passed away recently in a car crash, was the veteran personality in which field ?

- (1) Arts
- (2) Journalism
- (3) Poetry
- (4) Politics

67. Match the names of the Padma Vibhushan awardees of 2019 in Column – A with their field of excellence in Column – B and select the correct set of answers from the table given below :

Column – A Column – B

- (a) Sri Anilkumar Manibhai Naik
- (b) Sri Balwant Moreswar Purandare
- (c) Sri Ismail Omar Guelleh
- (d) Ms. Teejan Bai

(i) Art-acting-theatre

(ii) Art-vocals-folk

(iii) Public affairs

(iv) Social work

(v) Trade and Industry

Answers

	(a)	(b)	(c)	(d)
1	(v)	(iv)	(iii)	(ii)
2	(v)	(i)	(iii)	(ii)
3	(iii)	(i)	(iv)	(ii)
4	(v)	(i)	(iii)	(iv)