1. When a ray of light passes from an optically denser medium to a rarer medium, it
   (a) Remains undeviated
   (b) Bends towards normal
   (c) Bends away from normal
   (d) None of these
2. Who is the author of “Anandmath”?
   (a) Rabindranath Tagore
   (b) Bankim Chandra Chattopadhyaya
   (c) Sarojini Nayudu
   (d) Jyotiba Phule
3. Thimpu is the capital of -
   (a) Nepal       (b) Bhutan
   (c) Thailand    (d) Myanmar
4. The time period of a seconds pendulum is
   (a) 1 second    (b) 4 seconds
   (c) 3 seconds   (d) 2 seconds
5. The nuclear fuel in the sun is
   (a) Helium      (b) Uranium
   (c) Hydrogen    (d) Oxygen
6. The second’s hand of a watch is 2 cm long. The velocity of its tip is
   (a) 0.21 cm/sec.   (b) 2.1 cm/sec.
   (c) 21 cm/sec.    (d) None of these
7. In diesel engine, ignition is caused by
   (a) Spark       (b) Automatic starter
   (c) Compression  (d) Friction
8. The mass-energy equivalence, relationship \( E = mc^2 \) was propounded by
   (a) Max Plank   (b) Einstein
   (c) Newton      (d) Hertz
9. The filament of bulb is made of
   (a) Tungsten    (b) Iron
   (c) Nichrome    (d) Carbon
10. Anti-knocking can be lessened by
    (a) Iso Octane  (b) N Heptane
     (c) TEL        (d) Benzene
11. In which of the following oxidation shows a positive oxidation state.
    (a) CO          (b) N\textsubscript{2}O
     (c) NO         (d) F\textsubscript{2}O
12. Which of the following is used in photography?
    (a) Silver Bromide
    (b) Sodium Bromide
    (c) Potassium Chloride
    (d) Sodium Sulphate
13. Which of the following is used in accumulator cell?
    (a) Copper      (b) Iron
    (c) Lead        (d) Zinc
14. Choose the wrong statement:
    (a) Single magnetic poles can exist
    (b) Magnetic poles are always of equal strength
    (c) Like poles repel each other
    (d) None of these
15. Laws of electrolysis are given by:
    (a) Faraday      (b) Maxwell
    (c) Lenz         (d) Bohr
16. Flemings left hand rule is used to fine out:
    (a) Direction of magnetic field due to flow of current
    (b) Direction of induced current due to effect of magnetic field
    (c) Direction of motion of a current carrying conductor in magnetic field
    (d) None of these
17. The pH of a neutral solution at 250C is:
    (a) 0           (b) 1.0
    (c) 7.0         (d) 1.4
18. The raw material used for the manufacture of Portland cement is:
    (a) Limestone and clay
    (b) Alumina, clay and gypsum
    (c) Gypsum and limestone
    (d) Gypsum and clay
19. CaOCl\textsubscript{2} is the chemical formula for a compound commonly known as:
    (a) Soda Ash       (b) Lime
    (c) Bleaching Powder (d) Plaster of Paris
20. The glass used for making laboratory apparatus is:
    (a) Pyrex glass   (b) Hard glass
    (c) Soft glass    (d) Safety glass
21. The iron produced in blast furnace is:
    (a) Pig iron      (b) Wrought iron
    (c) Stainless steel (d) Steel
22. Formation is a 40% solution of :
   (a) Methanol   (b) Methenal
   (c) Methanoic acid   (d) None of these
23. Which of the following is not an ore of aluminium :
   (a) Cryolite   (b) Feldspar
   (c) Bauxite   (d) Azurite
24. Rhombic monoclinic and plastic sulphur are:
   (a) Isomers   (b) Isotopes
   (c) Allotropes   (d) Hydrides of sulphur
25. The alkaline hydrolysis of oils or fats gives soap and :
   (a) Glycerol   (b) Ethenol
   (c) Glycol   (d) Ethanoic acid
26. The sight of a delicious food usually makes mouth watery. It is a :
   (a) Hormonal response   (b) Neural response
   (c) Optic response   (d) Olfactory response
27. Nitrogen fixing bacteria are normally found in :
   (a) Parasitic plants   (b) Epiphytic plants
   (c) Leguminous plants   (d) Aquatic plants
28. Powdery mildew of wheat is caused by :
   (a) Bacteria   (b) Virus
   (c) Fungi   (d) Protozoans
29. Septic sore throat is caused by :
   (a) Bacteria   (b) Virus
   (c) Fungi   (d) Protozoans
30. A person of blood group AB can give blood to :
   (a) 'A' and 'B'   (b) Only 'AB'
   (c) 'A', 'B' and 'O'   (d) All of these
31. Cell activities are controlled by :
   (a) Chloroplast   (b) Nitochondria
   (c) Cytoplasm   (d) Nucleus
32. Which of the following helps eye to adjust the focal length of the eye lens :
   (a) Cornea   (b) Conjunctiva
   (c) Ciliary body   (d) Iris
33. When pollen of a flower is transferred to the stigma of the same plant, pollination type is referred to as :
   (a) Autogamy   (b) Allogamy
   (c) Xenogamy   (d) Geitonogamy
34. Respiration is a :
   (a) Catabolic process   (b) Anabatic process
   (c) Both of these   (d) None of these
35. The structural and functional unit of kidneys are :
   (a) Neurons   (b) Nephrons
   (c) Medula   (d) None of these
36. Which of the following enzymes is generally nor present in adult human :
   (a) Renin   (b) Pepsin
   (c) Trypsin   (d) Amyloptsin
37. The part of the plant which is responsible for carrying water and solutes from roots to various parts of plants is :
   (a) Phloem   (b) Xylem
   (c) Duodenum   (d) Sclercids
38. ‘Widal test’ is used for susceptibility of :
   (a) Malaria   (b) Typhoid
   (c) Cholera   (d) Yellow fever
39. Exchange of gases in plants takes place through :
   (a) Stomata   (b) Lenticels
   (c) Cuticle   (d) All of these
40. ‘Lieutenant’ in army is equivalent to following rank in navy :
   (a) Lieutenant   (b) Sub Lieutenant
   (c) Lieutenant Commander   (d) None of these
41. Pankaj Advani is associated with :
   (a) Snooker   (b) Golf
   (c) Shooting   (d) Archery
42. Which city in the world is known as the forbidden city :
   (a) Aberdeen   (b) Jerusalem
   (c) Mecca   (d) Lhasa
43. Rajeev Gandhi Khel Ratna Award carries a sum of :
   (a) Rs. 3 lakhs   (b) Rs. 5 lakhs
   (c) Rs. 1 lakh   (d) Rs. 7 lakhs
44. Who is known as ‘Nightingale of India’ :
   (a) Asha Bhonsle   (b) Begum Akhter
   (c) Sarojini Naidu   (d) Vijaylaxmi Pandit
45. Which one of the following is not included in the UNESCO’s list of world heritage site :
   (a) Kaziranga National Park
   (b) Qutab Minar
   (c) Champaner Pavagadh
   (d) None of these
46. Which of the following is not an electric resistant?
   (a) Lead   (b) Ebonite
   (c) Charcoal   (d) Lac
47. Which of the following is a complementary colour?
   (a) Blue   (b) Yellow
   (c) Magenta   (d) Yellow and Magenta
48. The velocity of sound increases in air by ........ for every degree Celsius increase of temperature.
(a) 60 m/sec.  (b) 0.61 m/sec.
(c) 60 ft/sec.  (d) 0.61 km/sec.

49. Henry is a unit of
(a) Capacity  (b) Magnetic field
(c) Inductance (d) Frequency

50. The velocity of rotation of Earth is
(a) 28 km/min  (b) 30 km/min
(c) 25 km/min  (d) 39.5 km/min

51. What is Hubble?
(a) Warship  (b) Star
(c) Telescope  (d) Missile

52. Which acid is normally found in lemon and grape fruits?
(a) Citric acid  (b) Tartaric acid
(c) Ascorbic acid (d) Lactic acid

53. At which temperature Fahrenheit and Celsius show same reading?
(a) -40°  (b) 0°
(c) -57.25°  (d) 273°

54. Limestone is metamorphosed to form
(a) Graphite  (b) Quartz
(c) Granite  (d) Marble

55. Rift valley is formed by
(a) Earthquake  (b) Folding
(c) Faulting  (d) All of these

56. If a piece of ice at 0°C is mixed with water at 0°C, then
(a) Whole ice melts  (b) Some ice melts
(c) No ice melts  (d) Temperature decreases

57. Mettur Dam is built on the river
(a) Krishna  (b) Cauvery
(c) Narmada  (d) Mahanadi

58. Mahendra Giri peak is situated in the
(a) Eastern Ghats  (b) Western Ghats
(c) Shiwaliks  (d) Vindhya Vachal

59. In what time a sum will double itself at 20% per annum rate of interest?
(a) 2 years  (b) 3 years
(c) 4 years  (d) 5 years

60. The famous Dilwara Temple is situated in
(a) Madhya Pradesh  (b) Maharashtra
(c) Gujarat  (d) Rajasthan

61. Pneumonia affects
(a) Lungs  (b) Tongue
(c) Liver  (d) Kidney

62. The chemical name of Vitamin A is
(a) Retinol  (b) Jhiamin
(c) Biotic  (d) Riboflavin

63. A 130m long train crosses a bridge in 30 seconds at 45 kmph. The length of the bridge is
(a) 200m  (b) 225m
(c) 245m  (d) 250m

64. By selling an article at some price a person gains 10%. If the article is sold at twice the price, the gain percent will be
(a) 20%  (b) 60%
(c) 100%  (d) 120%

65. Atoms are electrically charged as
(a) Positive  (b) Negative
(c) Bi-positive  (d) Neutral

66. Ionic bond exists in
(a) KCl  (b) H2O
(c) NH3  (d) CI3

67. Which force is required to increase the momentum of an object to 40 kg m/s in 5 seconds?
(a) 2N  (b) 4N
(c) 8N  (d) 10N

68. The river that does not form delta is
(a) Mahanadi  (b) Tapti
(c) Krishna  (d) Cauvery

69. The ratio of the radius and height of a cone is 5 : 12, respectively. Its volume is 23147 cc. Find its slant height.
(a) 13cm  (b) 14cm
(c) 17cm  (d) 26cm

70. 27 students took part in a debate of a college. What is the probability that at least 3 of them have their birth days in the same month?
(a) 3/27  (b) 3/12
(c) 12  (d) 1

71. Who was the first winner of Dada Saheb Phalke Award?
(a) B.N.Sarkar  (b) Prithvi Raj Kapoor
(c) Devika Rani  (d) Kanan Devi

72. How many members are nominated by the President in the Rajya Sabha?
(a) 12  (b) 15
(c) 10  (d) 20

73. Who was the founder of Brahma Samaj?
(a) Raja Rammohan Roy  (b) Aurobindo Ghosh
(c) Vivekanand  (d) Dyanand Saraswati
74. The Parliamentary System in India has been taken from
   (a) America   (b) Britain
   (c) Australia  (d) Ireland

75. The electric supply in India was first started in
   (a) Kolkata    (b) Chennai
   (c) Mumbai     (d) Darjeeling

76. Bhatnagar Prize is given in the field of
   (a) Peace     (b) Music and dance
   (c) Science & technology (d) Fine arts

77. Who discovered the solar system?
   (a) Copernicus (b) Kepler
   (c) Aryabhata  (d) Newton

78. The Nobel Prize in Economics was started in
   (a) 1901      (b) 1936
   (c) 1957      (d) 1967

79. In India, the second largest in
   (a) Bengali    (b) Urdu
   (c) Telugu     (d) Marathi

80. The first Asian Games were held in
   (a) Manila     (b) Tokyo
   (c) Jakarta    (d) New Delhi

81. The Islam was established in
   (a) 7th A.D.   (b) 5th A.D.
   (c) 3rd B.C.   (d) 5th B.C.

82. The Olympic Games 2012 will be held in
   (a) Moscow     (b) Paris
   (c) New York   (d) London

83. The main factor of air pollution is
   (a) Lead      (b) Copper
   (c) Zinc      (d) Gold

84. The bauxite ore is found in
   (a) Musabani   (b) Kurnapura
   (c) Koderma   (d) Palamu

85. The first fertilizer plant in India was established in
   (a) Trombay    (b) Nangal
   (c) Alwaye     (d) Sindri

86. Which of the following had strong navy?
   (a) Bahmani    (b) Chalukya
   (c) Chola      (d) Rashtrakuta

87. The last king of Maurya Dynasty was
   (a) Brihadharsh (b) Kunal
   (c) Samprati   (d) Saliushuk

88. How will the image formed by a convex lens be affected if the central part of the lens is covered by black paper?
   (a) Remaining part of the lens will form no image
   (b) The central position of the image is absent
   (c) There will be no effect
   (d) The full image will be formed with lessened brightness

89. The force between two parallel wires conducting current is used to define
   (a) Ampere    (b) Coulomb
   (c) Volt      (d) Newton

90. A body is thrown vertically upward and it reaches 10 m high. Find the velocity with which the body was thrown? (g = 9.8 m/s)
   (a) 10 m/sec.  (b) 18 m/sec.
   (c) 14 m/sec.  (d) 7 m/sec.

91. The buoyancy depends on the
   (a) Depth of the fluid
   (b) Density of the fluid
   (c) Volume of the fluid
   (d) Weight of the fluid

ANSWERS

1. (c) 2. (b) 3. (b) 4. (d) 5. (c)
6. (a) 7. (c) 8. (b) 9. (a) 10. (a)
11. (d) 12. (a) 13. (c) 14. (a) 15. (a)
16. (c) 17. (c) 18. (b) 19. (c) 20. (a)
21. (a) 22. (b) 23. (d) 24. (c) 25. (a)
26. (d) 27. (c) 28. (c) 29. (a) 30. (b)
31. (d) 32. (b) 33. (a) 34. (a) 35. (b)
36. (a) 37. (b) 38. (b) 39. (d) 40. (b)
41. (a) 42. (d) 43. (b) 44. (c) 45. (d)
46. (a) 47. (d) 48. (b) 49. (c) 50. (a)
51. (c) 52. (a) 53. (a) 54. (d) 55. (c)
56. (c) 57. (b) 58. (a) 59. (d) 60. (d)
61. (a) 62. (a) 63. (c) 64. (d) 65. (d)
66. (a) 67. (c) 68. (b) 69. (a) 70. (c)
71. (c) 72. (a) 73. (a) 74. (b) 75. (d)
76. (c) 77. (a) 78. (d) 79. (c) 80. (d)
81. (a) 82. (d) 83. (a) 84. (d) 85. (d)
86. (c) 87. (a) 88. (d) 89. (a) 90. (c)
91. (b)