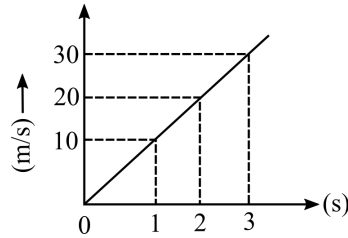


Physics

1. The inertia of a body depends upon
 (A) gravitational acceleration (B) centre of gravity of body
 (C) shape of body (D) mass of body
2. Velocity - time graph of a body moving with uniform acceleration is shown in the diagram. The distance travelled by the body in 3 seconds is



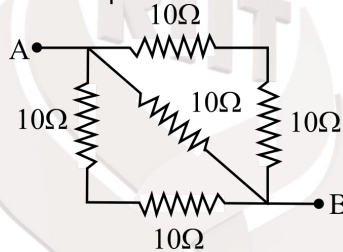
- (A) $90m$ (B) $45m$ (C) 0 (D) $10m$
3. The distance between two masses is to be halved. The gravitational force between them will be
 (A) double (B) one-fourth (C) quadruple (D) half
4. Which statement is correct among the following for gravitational acceleration (g) due to earth ?
 (A) The value of g is equal at poles and equatorial circle
 (B) The value of g is more at poles than at equatorial circle
 (C) the value of g is more at equatorial circle than at poles
 (D) None of these
5. Which waves are used in the device "SONAR" ?
 (A) Audible waves (B) Ultrasound waves
 (C) Infrasound waves (D) Light waves
6. The speed of a wave is 350 m/s and wavelength is 70 cm . The frequency of wave is
 (A) 500 Hz (B) 700 Hz (C) 50 Hz (D) 200 Hz
7. Which defect in human eye arises due to the irregularities in spherical shape of cornea ?
 (A) Cataract
 (B) Hypermetropia or long sightedness
 (C) Myopia or short sightedness
 (D) Astigmatism
8. Focal length of a convex lens is $+40 \text{ cm}$. The power of this lens will be
 (A) $+4$ diopetre (B) $+2.5$ diopetre
 (C) $+40$ diopetre (D) $+25$ diopetre

Space for rough use

9. Match the electric devices given in Column A with their symbols shown in Column B

	Column - A		Column - B
(a)	Voltmeter	(i)	
(b)	Rheostat	(ii)	
(c)	Electric cell	(iii)	
(d)	Plug key	(iv)	

- (A) (a)-(iii), (b)-(i), (c)- (iv), (d)-(ii)
 (B) (a)-(iii), (b)-(iv), (c)- (ii), (d)-(i)
 (C) (a)-(iii), (b)-(ii), (c)- (i), (d)-(iv)
 (D) (a)-(iii), (b)-(iv), (c)- (i), (d)-(ii)
10. Which one of the following is not a part of Direct current generator ?
 (A) Commutator (B) Sliprings
 (C) Armature (D) Carbon brushes
11. The equivalent reistance of the given circuit between points A and B is



- (A) 40Ω (B) 4Ω (C) 5Ω (D) 0.2Ω
12. If 4 joule work is to be done in stretching a spring by 4 cm then spring constant of the spring is
 (A) $5 \times 10^3 N/m$ (B) $5 \times 10^4 N/m$
 (C) $2 \times 10^3 N/m$ (D) $2 \times 10^4 N/m$
13. The electric device which is having more use time and less electricity consumption is
 (A) Incandescent Bulb (B) CFL
 (C) LED (D) Tubelight

Chemistry

14. Homogeneous mixture among the following is:
 (A) milk (B) cloud (C) smoke (D) air

Space for rough use

15. The substance showing sublimation property among the following is:
(A) common salt (B) copper sulphate (C) potassium nitrate (D) camphor
16. Number of molecules present in 32g of O_2 is
(A) 6.022×10^{23} (B) 3.011×10^{23}
(C) 1.51×10^{23} (D) 6.022×10^{22}
17. Number of neutrons in isotope of hydrogen, tritium is
(A) 0 (B) 1 (C) 2 (D) 3
18. The formula of chloride of an element X is XCl_3 . The formula of its oxide will be
(A) XO_2 (B) XO_3 (C) X_2O_3 (D) X_3O_2
19. Molecule containing coordinative covalent bond among the following is:
(A) H_2O (B) HNO_3 (C) $BaCl_2$ (D) CaO .
20. Concentration of hydrogen and hydroxyl ions in mole/litre for pure water is
(A) 1×10^{-7} (B) 2×10^{-7} (C) 1×10^{-14} (D) 1×10^{-6}
21. The compound used for removal of acidity in stomach is
(A) $NaCl$ (B) $MgCl_2$ (C) $Mg(OH)_2$ (D) $CaCl_2$
22. The chemical formula of dead burnt plaster is:
(A) $CaSO_4 \cdot \frac{1}{4}H_2O$ (B) $CaSO_4 \cdot 2H_2O$
(C) $CaSO_4 \cdot H_2O$ (D) $CaSO_4$
23. Which type of catalyst is glycerol in the following reaction?
 $2H_2O_2 \xrightarrow{\text{glycerol}} 2H_2O + O_2$
(A) Positive catalyst (B) Negative catalyst
(C) Biocatalyst (D) Autocatalyst
24. Element having largest atomic radius among the following is:
(A) Li (B) Be (C) B (D) C
25. IUPAC name of isopentane is
(A) 2-ethyl propane (B) pentane
(C) 2-methyl butane (D) 2,2-dimethyl propane

Space for rough use

26. The polymer of acrylonitrile is
(A) Polythene (B) Polyvinyl chloride
(C) polyvinyl cyanide (D) Polystyrene

Botany

27. The cell organelle discovered by de Duve is
(A) Plastid (B) Ribosome (C) Lysosome (D) Centrosome
28. The examples of hydrophytes are
(A) Hydrilla, Calotropis (B) Lotus, Salsola (C) Moss, Lichen (D) Segetaria, Trapa.
29. Number of male gametes in the growing pollen tube is
(A) One (B) Two (C) Three (D) Seven.
30. The main method of reproduction in Yeast is
(A) Budding (B) Sporogenesis (C) Cutting (D) Grafting
31. The number of biosphere reserves established in India is
(A) 18 (B) 118 (C) 142 (D) 669
32. The bark of which plant is used as medicine?
(A) *Aloe vera* (B) *Terminalia arjuna*
(C) *Curcuma longa* (D) *Papaver somniferum*
33. In which year was Indian Space Research Committee changed into Indian Space Research Organisation ?
(A) 1965 (B) 1969 (C) 1975 (D) 1981

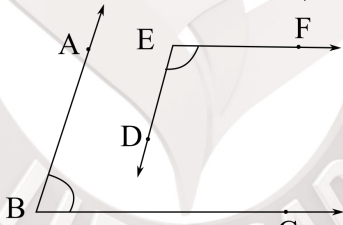
Zoology

34. Bacterial disease is
(A) Dengue (B) Polio myelitis (C) Tuberculosis (D) Chicken pox.
35. Honeybee culture is known as
(A) Silviculture (B) Apiculture (C) Sericulture (D) Pisciculture.
36. Disease caused by deficiency of Vitamin-D is
(A) Night blindness (B) Beri-beri (C) Scurvy (D) Rickets
37. Universal donor blood group is
(A) A (B) O (C) AB (D) B

Space for rough use

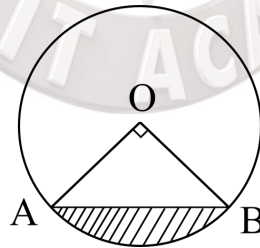
38. Skeletal muscles are
 (A) striated and voluntary (B) unstriated and voluntary
 (C) striated and involuntary (D) unstriated and involuntary.
39. Water vascular system is found in
 (A) Cnidaria (B) Echinodermata
 (C) Mollusca (D) Annelida.
40. Which of the following is not a secondary reproductive organ ?
 (A) Fallopian tube (B) Uterus (C) Ovary (D) Vagina

Mathematics

41. Which of the following is not an irrational number ?
 (A) $2 + \sqrt{5}$ (B) $\sqrt{2}$
 (C) $\frac{7}{\sqrt{5}}$ (D) $\frac{2\sqrt{11}}{7\sqrt{11}}$
42. If a polynomial $x^4 - 4x^2 + x^3 + 2x + 1$ is divided by $x - 1$, then remainder will be
 (A) 0 (B) 1 (C) 9 (D) -1
43. The sum of the digits of a two-digits number is 14. If 18 is subtracted from the number, digits are reversed. Find the number.
 (A) 86 (B) 77 (C) 68 (D) 76
44. In the given figure, $AB \parallel ED$ and $BC \parallel EF$, then the value of $\angle ABC + \angle DEF$ is
- 
- (A) 90° (B) 180°
 (C) 120° (D) 360°
45. How many cubic centimetres make 100 kilolitre?
 (A) 10^{10} (B) 10^5 (C) 10^8 (D) 10^6
46. 5^{th} term of an A.P. is 10 more than its 3^{rd} term. what is the difference of its 9^{th} and 6^{th} terms?
 (A) 15 (B) 3 (C) 6 (D) 10

Space for rough use

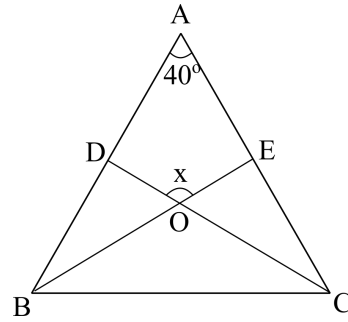
47. If $\tan A = \sqrt{2} - 1$ where A is an acute angle then the value of $\sin A \cdot \cos A$ will be
 (A) $2\sqrt{2}$ (B) $\sqrt{2}$ (C) $\frac{1}{2\sqrt{2}}$ (D) $\frac{3}{\sqrt{2}}$
48. The Multiplication of all prime numbers between 1 and 10 is
 (A) 105 (B) 945
 (C) 210 (D) 1890
49. If the roots of $(b - c)x^2 + (c - a)x + (a - b) = 0$ are real and equal, then which of the following is true ?
 (A) $2b = a + c$ (B) $2a = b + c$
 (C) $2c = a + b$ (D) $2b = a - c$
50. For which value of k , a pair of equations $x + y - 4 = 0, 2x + ky - 3 = 0$ has no solution ?
 (A) 0 (B) 2
 (C) 6 (D) 8
51. The length of the side of a rhombus is 4cm . If one of the diagonals is equal to the side of rhombus, then the length of other diagonal in cm will be
 (A) $\frac{\sqrt{3}}{2}$ (B) $\sqrt{3}$
 (C) $2\sqrt{3}$ (D) $4\sqrt{3}$
52. The mean of the first seventeen whole number is
 (A) 8 (B) 7.5 (C) 8.5 (D) 18
53. A cube of edge 1cm is cut from a corner of a solid cube of edge 5cm . what is the total surface area of the solid remained?
 (A) 150cm^2 (B) 149cm^2
 (C) 151cm^2 (D) 147cm^2
54. In the given figure, chord AB subtends an angle 90° at centre O of the circle having radius 4cm . Area of the shaded region will be



- (A) $(4\pi - 2) \text{ cm}^2$ (B) $4(\pi - 2) \text{ cm}^2$
 (C) $(\pi - 8) \text{ cm}^2$ (D) $(\pi - 2) \text{ cm}^2$

Space for rough use

55. In the given figure, $AB = AC$, $\angle BAC = 40^\circ$, BE and CD are angle bisectors of $\angle B$ and $\angle C$ respectively. If $\angle DOE = x$, the value of x is



- (A) 140° (B) 70° (C) 110° (D) 40°
56. The shadow of a tower, when the angle of elevation of the sun is 30° is found to be 10 metre longer than when it was 60° . The height of the tower will be:
- (A) $5\sqrt{3} m$ (B) $5(\sqrt{3} - 1)m$
 (C) $5(\sqrt{3} + 1)m$ (D) $3\sqrt{5} m$
57. A die is thrown once. If the probability of getting a number less than 4 is x and the probability of getting a number greater than 4 is y , then $x - y$ is
- (A) $\frac{5}{6}$ (B) $\frac{1}{6}$ (C) $\frac{2}{3}$ (D) $\frac{1}{3}$
58. The sum of distances from x -axis and y -axis measured from the point $(3, 5)$ will be
- (A) -1 (B) 0 (C) 2 (D) 8
59. If $x^2 + 4y^2 + 9z^2 - 4xy - 12yz + 6xz = 0$, then
- (A) $x = 2y - 3z$ (B) $x = y - 3z$
 (C) $2x = y - 3z$ (D) $x = 3y - 2z$
60. Which of the following statements is false for the quadrilateral $ABCD$?
- (A) $AB + BC + CD + DA > AC$
 (B) $AB + BC + CD + DA > AB + AC$
 (C) $AB + BC + CD + DA > AC + BD$
 (D) $AB + BC + CD + DA < 2AC$

Space for rough use

History

61. Match List - I with List -II and select the correct answer by choosing from the given code :

	List -I	List -II	
(A)	Magadha	(i)	Mathura
(B)	Kashi	(ii)	Varanasi
(C)	Surasena	(iii)	Taxila
(D)	Gandhara	(iv)	Rajgriha

- (A) A-iv, B-iii, C-ii, D-i
 (B) A-i, B-ii, C-iii, D-iv
 (C) A-iv, B-ii, C-i, D-iii
 (D) A-ii, B-iii, C-iv, D-i

62. In which of the following forts was the coronation of Chhatrapati Shivaji held ?

- (A) Raygarh Fort (B) Kumbhalgarh Fort (C) Pune Fort (D) Surat Fort

63. The founder of Abhinav Bharat was

- (A) Chandrashekhar Azad (B) Vasudev hari chapekar
 (C) Mahatma Gandhi (D) Vinayak Damodar Savarkar

64. Who discovered the water frame ?

- (A) Henry cort (B) Richard Archrite (C) James Bridali (D) Jethrotal

65. When was the quit india movement porposal passed ?

- (A) 8 th August 1942 (B) 8 th August 1941 (C) 8 th August, 1940 (D) 15 th August 1942

66. The state of inida, where the kalibanga is situated, is

- (A) Punjab (B) Rajasthan (C) Gujarat (D) Jammu & Kashmir

67. Triratna is related to

- (A) Buddhist philosophy (B) Vedic philosophy (C) Islamic philosophy (D) Jain philosophy

68. What is the modern name of champa ?

- (A) Malaysia (B) Thailand (C) Vietnam (D) Indonesia

Space for rough use

69. Consider the following points :
(A) Raja Rammohan Roy established Vedanta college in calcutta.
(B) Swami Vivekanand wrote a book named Satyarth prakash.
Choose the correct answer from the codes given below :
- (A) Both (A) and (B) are correct
(B) Only (A) is correct
(C) Only (B) is correct
(D) Both (A) and (B) are wrong.
70. Who was the king of Russia at the time of the Russian revolution of 1917 ?
(A) Czar Nicholas First
(B) Louis 14th
(C) Czar Nicholas Second
(D) Louis 16th
71. Who was the publisher of hindu patriot ?
(A) Bal Gangadhar Tilak
(B) Dayanand Saraswati
(C) Lala Lajpat Rai
(D) Harishchandra Mukherjee

Geography

72. Which of the following rivers does not flow on the eastern coastal plain ?
(A) Krishna
(B) Godavari
(C) Narmada
(D) Kaveri
73. The plateau between Bhainsrorgarh and Bijauliya in Rajasthan is known as
(A) Borat
(B) Uparmaal
(C) Malwa
(D) Royalseema
74. Which one of the following is not a Lagoon lake ?
(A) Chilika
(B) Pulicat
(C) Kolleru
(D) Dal
75. The duration of summer season according to Indian Meterological Department is
(A) Mid -september to mid -december
(B) December to February
(C) March to mid June
(D) Mid June to mid -September.
76. In which district of Rajasthan is Amrita Devi Black Deer Sanctuary developed ?
(A) Jodhpur
(B) Bikaner
(C) Barmer
(D) Ganganagar
77. The joint project of Gujarat, Madhya Pradesh and Rajasthan states is
(A) Bhakhra Nangal Project
(B) Mahi Bajaj Sagar Project
(C) Chambal Valley Project
(D) Sardar Sarovar Project

Space for rough use

78. Match **List-I** with **List-II** and select the correct answer using codes given below:

	List-I (District)		List-II (Lake)
(A)	Ajmer	(i)	Sardar Samand
(B)	Tonk	(ii)	Ana Sagar
(C)	Pali	(iii)	Navalakha
(D)	Bundi	(iv)	Tordi Sagar

(A) A-(iii), B-(ii), C-(iv), D-(i)

(B) A-(ii), B-(iv), C-(i), D-(iii)

(C) A-(i), B-(iii), C-(ii), D-(iv)

(D) A-(iv), B-(i), C-(iii), D-(ii)

79. The percentage of iron content in magnetite iron-ore is

(A) 40 - 50%

(B) 50 - 60%

(C) 60 - 70%

(D) 70 - 80%

80. Which one of the following is cement city of Rajasthan ?

(A) Chittorgarh

(B) Bundi

(C) Nimbahera

(D) Nagaur.

81. The district having lowest population growth rate in Rajasthan during 2001-2011 is:

(A) Nagaur

(B) Bikaner

(C) Bhilwara

(D) Ganganagar

82. 'Uni Gauge Project' by Indian Railway was started in

(A) 1982

(B) 1992

(C) 2002

(D) 2012

Political Science

83. In which country is direct democracy found ?

(A) Italy

(B) Japan

(C) Switzerland

(D) India

84. Who has the right to promulgate an ordinance when the parliament is not in session ?

(A) Supreme Court

(B) President

(C) Prime Minister

(D) Lok Sabha Speaker

85. From whose pleasure does the governor hold office ?

(A) Prime Minister

(B) Chief Minister

(C) President

(D) Vice-President

86. What is the maximum age of retirement for judges of Supreme Court ?

(A) 62 years

(B) 65 years

(C) 60 years

(D) 70 years

87. The term of the President of India is

(A) 4 years

(B) 5 years

(C) 2 years

(D) 3 years

Space for rough use

88. On which day was the Constitution of India adopted ?
 (A) 15th August, 1947 (B) 9th December, 1946
 (C) 24th January, 1950 (D) 26th November, 1949
89. Forced labour is prohibited in which Fundamental Right of India ?
 (A) Right to equality (B) Right to freedom
 (C) Right against Exploitation (D) Right to Freedom of Religion
90. By which constitutional amendment Fundamental Duties are added in the Constitution of India ?
 (A) 42 nd (B) 40th (C) 43 rd (D) 45th
91. Where is the only Cantonment Board established in Rajasthan at present ?
 (A) Nasirabad (B) Jaipur
 (C) Chittorgarh (D) Jodhpur
92. panchsheel is based on which philosophy ?
 (A) Buddhist philosophy (B) Jain philosophy
 (C) Islamic philosophy (D) Hindu philosophy
93. Match List - I with List - II and choose the correct code from the given code

	List - I		List - II
(1)	Nagar Nigam	(i)	Zilla Pramukh
(2)	Zilla Parishad	(ii)	Pradhan
(3)	Panchayat Samiti	(iii)	Sarpanch
(4)	Gram Panchayat	(iv)	Mayor (Mahapoura)

- (A) (1)-(i), (2)-(iii), (3)-(iv), (4)-(iv)
 (B) (1)-(iii), (2)-(i), (3)-(ii), (4)-(iv)
 (C) (1)-(iv), (2)-(iii), (3)-(ii), (4)-(i)
 (D) (1)-(iv), (2)-(i), (3)-(ii), (4)-(iii)

Economics

94. The nation of socialist economy is
 (A) Japan (B) China
 (C) France (D) United States of America
95. The Kharif crop is
 (A) Wheat (B) Barley (C) Maize (D) Gram

Space for rough use

96. The function of commercial banks is
- (A) Issue of currency
 - (B) Credit control
 - (C) Lender of last resort
 - (D) Acceptance of people's deposits
97. The formula of measuring per capita income is
- (A) Per capita income = $\frac{\text{National income}}{\text{Population}}$
 - (B) Per capita income = $\frac{\text{Population}}{\text{National income}}$
 - (C) Per capita income = $\frac{\text{Total consumption}}{\text{Population}}$
 - (D) Per capita income = $\frac{\text{Population}}{\text{Total consumption}}$
98. The characteristic of Indian economy is
- (A) Equality of income
 - (B) Lack of poverty
 - (C) Lack of unemployment
 - (D) Low per capita income
99. In India the first effort to measure poverty was done by
- (A) Dadabhai Naoroji
 - (B) D.T. Lakdawala
 - (C) Prof. Robbins
 - (D) Prof. Keynes
100. In India the Consumer Day is celebrated on
- (A) 2nd October
 - (B) 15th August
 - (C) 24th December
 - (D) 26th January

Space for rough use