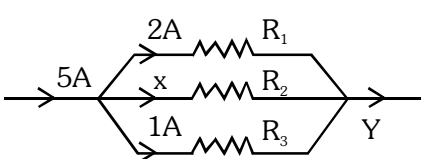
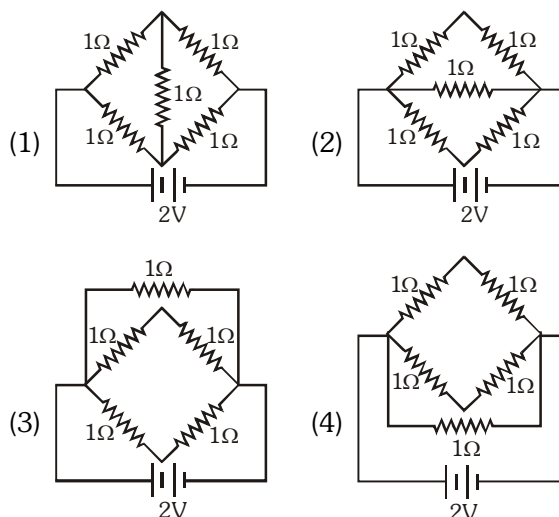


SAMPLE PAPER-01

SCHOLASTIC APTITUDE TEST

- A ray of light is incident on the surface of separation of a medium with the velocity of light at an angle 45° and is refracted in the medium at an angle 30° . What will be the velocity of light in the medium
 (1) 1.96×10^8 m/s (2) 2.12×10^8 m/s
 (3) 3.18×10^8 m/s (4) 3.33×10^8 m/s
- The waxing and waning of sea is due to :
 (1) Gravitational force (2) Rotation of the earth
 (3) Rotation of the moon (4) Planetary motion
- $r = 36,000$ km, $V_e = 11.2$ km/sec and $T = 24$ hrs. These are related to :
 (1) Rocket
 (2) Geo Stationary Satellite
 (3) Artificial Satellites
 (4) Moon Mission [Chandra Yaan]
- Which one of the following material has more refractive index ?
 (1) Air (2) Water
 (3) Diamond (4) Clay
- Analyse the given statements and choose the correct option.
Statement-I : When current is represented by a straight line, the magnetic field will be circular.
Statement-II : According to Fleming's left hand rule, the direction of the force is parallel to the magnetic field.
 (1) Both statement-I and statement-II are correct and statement-II is the correct explanation of statement-I.
 (2) Both statement-I and statement-II are true but statement-II is not the correct explanation of statement-I.
 (3) Statement-I is true but statement-II is false.
 (4) Statement-I is false but statement-II is true.
- In the given electrical circuit the current at X and Y is :

 (1) 5A and 8A (2) 2A and 5A
 (3) 5A and 2A (4) 1A and 2A
- 10 par sec [P.C] is equivalent to :
 (1) 36.2 light year (2) 62.3 light year
 (3) 23.6 light year (4) 32.6 light year

- Orange, blue and yellow are three of the colours formed by a prism. Their order according to increasing deviation is
 (1) blue, orange, yellow (2) yellow, blue, orange
 (3) blue, yellow, orange (4) orange, yellow, blue
- Which of the following network yields minimum current ?



- The power of the concave lens is 0.05 cm^{-1} . At what distance should the object from the lens be placed so that it forms an image at 10 cm from the lens ?
 (1) - 20 cm (2) $-\frac{1}{20}$ cm
 (3) - 10 cm (4) - 30 cm
- The acceleration due to gravity of the earth is 9.82 m/s^2 and the radius of the earth is $6400 \times 10^3 \text{ m}$. What is the mass of the earth ?
 $G = 6.67 \times 10^{-11} \text{ Nm}^2/\text{Kg}^2$
 (1) $6.021 \times 10^{24} \text{ Kg}$ (2) $16.24 \times 10^{20} \text{ Kg}$
 (3) $100.02 \times 10^{24} \text{ Kg}$ (4) $47.02 \times 10^{24} \text{ Kg}$
- Bio-gas is an excellent fuel, because :
 (1) Burns without smoke
 (2) Leaves no residue on burning
 (3) Heating capacity is high
 (4) All the above
- Biogas is produced from biomass by
 (1) anaerobic fermentation
 (2) destructing distillation
 (3) fractional distillation
 (4) mixing petrol in biomass

- 14.** A 100W, 200V bulb is connected to a 160V power supply. The power consumption would be
 (1) 64 W (2) 80 W
 (3) 100 W (4) 125 W
- 15.** The half-life of radio active ^{14}C is 5760 years. In how many years 200 mg sample will reduce to 25 mg ?
 (1) 23,040 years (2) 17,280 years
 (3) 11,520 years (4) 5,760 years
- 16.** Which of the following statement is correct ?
 (1) All isotopes are radio active
 (2) Alpha rays are negatively charged
 (3) Beta rays are not reflected by an electric field
 (4) Gamma rays are not reflected by magnetic field
- 17.** The composition of nicrom alloy is
 (1) Cu, Ni, Cr (2) Fe, Ni, Cr
 (3) Al, Ni, Cr (4) Mn, Ni, Cr
- 18.** Which of the following series represent only unsaturated hydro carbons ?
 (1) C_2H_6 , C_3H_8 , C_4H_{10}
 (2) C_2H_6 , C_3H_6 , C_4H_{10}
 (3) C_2H_4 , C_3H_6 , C_4H_6
 (4) C_2H_4 , C_3H_8 , C_4H_6
- 19.** In the following equation 'x' stands for
 $2\text{Al} + x \text{H}_2\text{SO}_4 \rightarrow \text{Al}_2(\text{SO}_4)_3 + 3\text{H}_2$
 (1) 2 (2) 3 (3) 1 (4) 5
- 20.** The substance which are put into the blast furnace in the manufacture of iron
 (1) Iron ore, CaO, $\text{Ca}(\text{OH})_2$ and CaSiO_3
 (2) Iron ore, Coke, Lime Stone and CaSiO_3
 (3) Iron ore, Coke, Lime Stone and Hot air
 (4) Iron ore, CaO, Lime Stone and Hot air
- 21.** Match the following :
 A. Bleaching Powder i. $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
 B. Washing Powder ii. NaHCO_3
 C. Plaster of Paris iii. $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
 D. Gypsum iv. CaOCl_2
 v. $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$
 (1) A = iv B = iii C = v D = i
 (2) A = i B = iii C = v D = iv
 (3) A = iv B = v C = iii D = i
 (4) A = iv B = iii C = ii D = v
- 22.** The metals which liberate hydrogen gas with dilute hydrochloric acid as well as caustic soda solution are
 (1) Na and K (2) Zn and Al
 (3) Fe and Mn (4) Cu and Ag
- 23.** When a metal is alloyed with mercury the resulting alloy [Amalgum] will have
 (1) Less electrical conductivity than pure metal
 (2) Lower melting point than pure metal
 (3) Both 1 and 2 are correct
 (4) Both 1 and 2 are wrong
- 24.** 'Proton' is
 (1) Nucleus of Deuterium
 (2) Ionised hydrogen molecule
 (3) Ionised hydrogen atom
 (4) An alpha particle
- 25.** The Brownian motion in colloidal solution is due to
 (1) Temperature fluctuation
 (2) Attraction or repulsion between charged colloidal particles
 (3) Bombardment of molecules of dispersion medium on the colloidal particles
 (4) None of the above
- 26.** The atoms having the bigger size among each of the following pair are
 (i) Mg (At. No. 12) or Cl (At. No. 17)
 (ii) Na (At. No. 11) or K (At. No. 19)
 (1) Mg and K (2) Mg and Na
 (3) Cl and Na (4) Cl and K
- 27.** The solution to be mixed with lead nitrate to obtain yellow precipitate is
 (1) Potassium iodide (2) Potassium sulphide
 (3) Potassium nitride (4) Potassium chloride
- 28.** Hormone produced by a heterocrine gland is
 (1) Parathormone (2) Thyroxin
 (3) Glucagon (4) Adrenalin
- 29.** Which of the following activity is controlled by Medulla oblongata ?
 (1) Maintain balance of the body
 (2) Peristaltic movement in alimentary canal
 (3) Controlling body temperature
 (4) Facial expression
- 30.** The tissue which is helpful for the movement of ovum in the Fallopian tube is
 (1) Columnar Epithelial Tissue
 (2) Ciliated Columnar Epithelial Tissue
 (3) Cuboidal Epithelial Tissue
 (4) Squamous Epithelial Tissue

31. Assertion : Immunisation is achieved by the successful delivery of vaccines.

Reason : Vaccine is a preparation of one or more microbial agents used to induce protective immunity.

- (1) Both assertion and reason are true and the reason is the correct explanation of the assertion.
- (2) Both assertion and reason are true and the reason is not the correct explanation of the assertion.
- (3) Assertion is true but reason is false
- (4) Both assertion and reason are false

32. In photosynthesis, the function of stomata is to let

- (1) CO₂ into the leaf from atmosphere
- (2) O₂ into the leaf from atmosphere
- (3) CO₂ out of the leaf to atmosphere
- (4) None of these

33. The function of Nitrosomonas bacteria in Nitrogen cycle is to

- (1) Oxidise ammonium salts into nitrites
- (2) Oxidise nitrites into nitrates
- (3) Oxidise nitrites into ammonium salts
- (4) Oxidise nitrates into nitrites

34. Which of the following statement is correct that is related to phloem of plants ?

- (1) Phloem in Pinus contains phloem fibres
- (2) Phloem in sunflower does not contain parenchyma
- (3) Phloem in Cycas contains companion cells
- (4) Phloem in Maize does not contain parenchyma

35. Match each item in Column A with suitable one in Column B :

Column A

- A. CO₂
- B. Hypothalamus
- C. Corpus luteum

Column B

- i. Regulation of body temperature
- ii. Green House effect
- iii. Balancing the body
- iv. Secretion of Dopamin
- v. Required by plants for respiration
- vi. Secretion of progesterone

- (1) A = v B = iii C = vi
- (2) A = ii B = i C = iv
- (3) A = ii B = i C = vi
- (4) A = v B = ii C = vi

36. A mother who gave birth to a child in hospital complains that her child is interchanged with other child. The technique used to find her child is

- (1) Germplasm Hybridisation Technology
- (2) Finger print technology
- (3) Recombinant DNA technology
- (4) Genetic engineering

37. In water purification plants, water is made to come out in the form of fountain. This helps in

- (A) Bacterial decomposition of organic compounds
- (B) Killing the microbes of water
- (C) Removal of odour of water
- (D) Removal of nitrates and phosphates of water

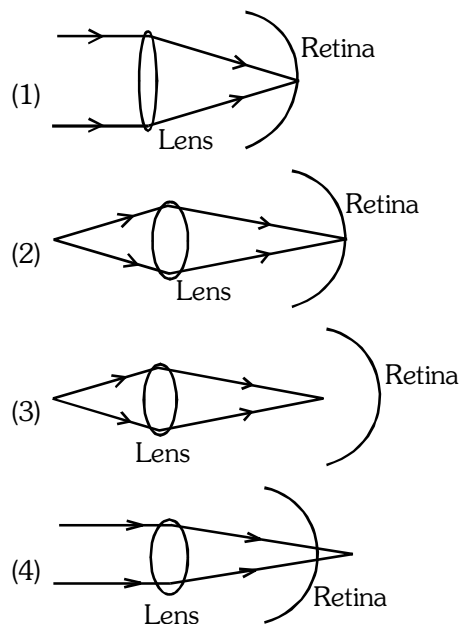
- (1) A and B
- (2) A and C
- (3) B and D
- (4) B and C

38. Which of the following is not an intention of producing plants using a portion of a plant tissue or cells in a suitable nutrient medium based on the principle 'plant cells have the capacity to produce plants of their own kind' ?

- (1) To obtain disease resistant and high yielding variety of plants
- (2) To reduce the period of life span of plants
- (3) To develop large number of plants in a limited space and time
- (4) To obtain plants which produce more fertile seeds

39. Which of the following diagram shows adaptation of eye to see nearest object ?

Light ray from the object



40. Which of the options given below would not work in the following sentence?
In order for the body to absorb and use _____ these must be broken down by hydrolysis into _____.
- (1) polysaccharides, monosaccharides
 - (2) amino acids, proteins
 - (3) fats, glycerol and fatty acids
 - (4) disaccharides, monosaccharides
41. Jammu and Kashmir acceded to the Indian Union on :
- (1) 26th October 1947
 - (2) 26th January 1948
 - (3) 26th January 1947
 - (4) 26th October 1948
42. After the Second World War, the I.N.A. Soldiers were arrested and tried by :
- (1) Japanese
 - (2) English
 - (3) League of Nations
 - (4) U.N.O.
43. Match List I with List II by using the code given below :
- | List - I | List - II |
|---|-----------|
| A. Dyarchy was abolished in the provinces | 1. 1953 |
| B. State Reorganization Commission | 2. 1955 |
| C. Macaulay's Minutes | 3. 1961 |
| D. Liberation of Goa | 4. 1935 |
| | 5. 1835 |
- Code :**
- (1) A - 5 B - 3 C - 2 D - 1
 - (2) A - 4 B - 1 C - 3 D - 2
 - (3) A - 4 B - 1 C - 5 D - 3
 - (4) A - 1 B - 2 C - 4 D - 5
44. After the dissolution of U.S.S.R, the Commonwealth of Independent States came into existence in :
- (1) 1990
 - (2) 1991
 - (3) 1994
 - (4) 1995
45. Diwani was granted to the British in Bengal in :
- (1) 1757
 - (2) 1761
 - (3) 1765
 - (4) 1774
46. Which King accepted the Subsidiary Alliance in Punjab?
- (1) Ranjit Singh
 - (2) Kharak Singh
 - (3) Nau Nihal Singh
 - (4) Duleep Singh
47. Who among the Socio-Religious reformers of Renaissance in India was influenced by the thinker Thomas Paine ?
- (1) Ishwara Chandra Vidya Sagar
 - (2) Jyotiba Phule
 - (3) Pandita Ramabai
 - (4) Kesav Chandrasen
48. The 'Marshall Plan' for the reconstruction of Nations destroyed during the Second World War was proposed by :
- (1) Theodore Roosevelt
 - (2) Franklin De Roosevelt
 - (3) Truman
 - (4) Woodsrow Wilson
49. The private army of Benedito Mussolini was called as :
- (1) Red Shirts
 - (2) Black Shirts
 - (3) Brown Shirts
 - (4) None of the above
50. Match List I with List II by using the code given below
- | List I | List II |
|--------------------|--------------|
| A. Bedas | 1. Surpur |
| B. Bhaskar Rao | 2. Mundaragi |
| C. Bheema Rao | 3. Halagali |
| D. Venkatappa Naik | 4. Kittur |
| | 5. Nargund |
- Code :**
- (1) A - 2 B - 1 C - 4 D - 5
 - (2) A - 4 B - 5 C - 2 D - 3
 - (3) A - 3 B - 5 C - 2 D - 1
 - (4) A - 1 B - 2 C - 3 D - 4
51. Which one of the following is the correct sequence of the tributaries of Ganga from East to West ?
- | | |
|------------|-----------|
| A. Ghaghra | B. Kosi |
| C. Gandak | D. Gomati |
- (1) B, C, D, A
 - (2) B, C, A, D
 - (3) C, B, D, A
 - (4) D, B, C, A
52. Which part of India does not receive rainfall during Rainy Season ?
- | | |
|-----------------|--------------------|
| (1) Thar Desert | (2) Northern Plain |
| (3) Tamil Nadu | (4) Punjab |
53. Some statements are given below :
- A. Heavy rainfall, high temperature and high humidity are responsible for growth of dense forests
 - B. Babul, Kasavi and Kikar trees are important in tropical thorn forests
 - C. Teak, Sal and Sandal wood are the important trees in tropical evergreen vegetation
 - D. Silver fir, Oak, Spruce, Chestnut, Pine are trees in coniferous vegetation
- Which of the above statements are true ?
- | | |
|----------------|----------------|
| (1) A, B and D | (2) A, C and D |
| (3) B, C and D | (4) A, B and C |

54. Column – A is the list of Hydro Electric Power Projects and Column – B is the list of states where located.

Column – A	Column – B
A. Sileru	i. Gujarat
B. Dhuvaran	ii. Karnataka
C. Shabarigiri	iii. Andhra Pradesh
D. Chakra	iv. Kerala

Which one of the following correctly matched set ?

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

55. Which one of the following Iron and Steel Plant was established during Third Five Year Plan ?

- (1) Bhilai
- (2) Bokaro
- (3) Rurkela
- (4) Durgapur

56. Jharia, Bokaro, Giridh and Karanpur are important coal fields of which one of the following States ?

- (1) Jharkhand
- (2) Bihar
- (3) Odisha
- (4) Chattisgarh

57. William Pitt was

- (1) Governor General of India
- (2) Trade Capitalist
- (3) Prime minister of Britain
- (4) Military General

58. Which of the following is largest fresh water lake in India?

- (1) Kolleru
- (2) Nal
- (3) Pulicat
- (4) None of these

59. Which one of the following is correctly matched of Column – I and Column – II ?

Use the code given below :

Column – I	Column – II
A. Kolkatta	i. Biggest Port of India
B. Nhava Sheva	ii. Oldest Port of India
C. Mumbai	iii. Terminal Port of India
D. Chennai	iv. Jawaharlal Nehru Port

Code :

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

60. India's highest television tower is located at :

- (1) Arvi
- (2) Doon
- (3) Pune
- (4) Pitampura

61. First Anglo-Maratha war was concluded with

- (1) Treaty of Bassein
- (2) Treaty of Pune
- (3) Treaty of Seringapatnam
- (4) Treaty of Salbai

62. The farmers carry their produce to the cities and problems faced by them are :

- A. High trade commission
- B. Advance to farmers from the money lenders
- C. Cheating in weights and measures
- D. Not immediate settling amount after the sale

Which of the above statements are true ?

- (1) A, B and D
- (2) A, C and D
- (3) B, C and D
- (4) A, B and C

63. To facilitate proper storage of agricultural produce, which one of the following institution was started in India in 1965 ?

- (1) TAPMCS
- (2) CFTRI
- (3) FCI
- (4) IGSC

64. Which one of the following bank has been directed to provide loans to cottage and small scale industries ?

- (1) IDBI
- (2) NABARD
- (3) CO-OPERATIVE BANK
- (4) KSSIDC

65. Favourable balance of trade means :

- (1) The value of visible exports is less than the value of visible imports
- (2) The value of both is equal
- (3) The value of visible exports and value of visible imports is different
- (4) The value of visible exports is more than the value of visible imports

66. Which one of the following is a set of countries having both democracy and republic ?

- (1) India and Great Britain
- (2) India and Japan
- (3) The U.S.A. and China
- (4) India and the U.S.A

67. Which one of the following regions has been given a 'Special Status' ?

Identify it :

- (1) Karnataka
- (2) Andhra Pradesh
- (3) Assam
- (4) Coorg and Bellary regions

68. Several independent states coming together to form a nation involves all the constituent states

- (1) having equal powers
- (2) having unequal powers
- (3) are subordinate to the central government in all matters of administration
- (4) are absolutely free in administration

69. It is feared that a steep rise in import duty on gold leads to

- (1) Corruption (2) Black marketing
- (3) Smuggling (4) Profiteering

70. Examine the following statements and select the correct option :

A : Some nations of the world argued that India should not be made a permanent member of the Security Council

B : As the leader of the NAM, India has played a significant role in peace keeping activities of the U.N.O.

- (1) Both 'A' and 'B' are true
- (2) Both 'A' and 'B' are false
- (3) 'A' is true and 'B' is false
- (4) 'A' is false and 'B' is true

71. Which one of the following is not a challenge to political parties in a democratic set up ?

- (1) Money and muscle power
- (2) Decline in ideological differences among parties
- (3) Equal opportunities to all the members in each party
- (4) Dynastic succession

72. Match the agencies of the U.N.O with their head quarters :

- | | |
|-------------|--------------------|
| I | II |
| i. F.A.O. | a. Geneva |
| ii. UNICEF | b. Paris |
| iii. I.M.F. | c. Rome |
| iv. I.L.O. | d. Washington D.C. |
| | e. Newyork |

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

73. Anna Hazare conducted campaign against corruption across in the country.

Which of the following statements are the features of the above said event ?

- A. It was a movement
- B. It was a collective action of commoners who participated spontaneously in it
- C. Its decisions were binding on the government
- D. It meant direct participation of people in the government

- (1) A, B and C only (2) A and C only
- (3) B and D only (4) A and B only

74. Subsidiary Alliance was introduced by

- (1) Lord Dalhousie (2) Lord Hastings
- (3) Lord Wellesley (4) Lord Cornwallis

75. Choose the correct sequence to indicate the following statements as True (T) or False (F) :

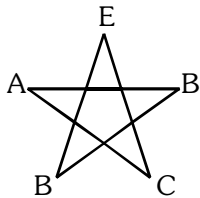
- A. The W.T.O has formulated a policy of free trade among the member nations.
- B. The developing nations are immensely benefited by free trade policy.
- C. The developed countries are interested in helping the weaker countries through this policy.
- D. The developing countries are subjected to economic exploitation in the name of free trade policy.

- (1) T, T, F, F (2) F, F, T, T
- (3) F, T, T, T (4) T, F, F, T

76. The activity in the tertiary sector is

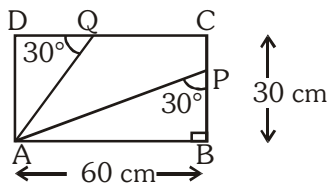
- (1) trade (2) fishing
- (3) mining (4) quarrying

77. Some countries are more developed than India because of
 (1) scientific inventions and discoveries
 (2) investment in education and health
 (3) abundance of raw material
 (4) technology evolved by people
78. Large population can be turned into a productive asset through investment in
 (1) industrialisation
 (2) urbanisation
 (3) education and health for all
 (4) migration of people to urban areas
79. Individual earnings in the market are determined on the basis of
 (1) education and skill
 (2) type of activities
 (3) quality of food intake
 (4) health facilities
80. Market activity is the activity performed for
 (1) salary (2) profit
 (3) production (4) self consumption
81. The number of regions in the given graph is



- (1) 6 (2) 2 (3) 5 (4) 7

82. In the given figure ABCD is a rectangle in which segments AP and AQ are drawn as shown, the length of (AP + AQ) is



- (1) 180 cm (2) 120 cm
 (3) 150 cm (4) 100 cm

83. The value of $\tan 7^\circ \tan 23^\circ \tan 60^\circ \tan 67^\circ \tan 83^\circ$ is

- (1) $\frac{2}{\sqrt{3}}$ (2) $\frac{\sqrt{3}}{2}$ (3) $\frac{1}{\sqrt{3}}$ (4) $\sqrt{3}$

84. X takes 3 hours more than Y to walk 30 km. But if X doubles his pace, he is ahead of Y by $1\frac{1}{2}$ hours. Their speed of walking is

- (1) $\frac{20}{3}$ km/hr., 6km/hr.
 (2) 5 km/hr., 3km/hr.
 (3) $\frac{3}{10}$ km/hr., 4km/hr.
 (4) $\frac{10}{3}$ km/hr., 5km/hr.

85. If the points (a, 0), (0, b) and (1, 1) are collinear, then $\frac{1}{a} + \frac{1}{b} =$

- (1) $(2 - 2)^0$ (2) 2^0 (3) 2^1 (4) 2^{-1}

86. If $x(x - 2) = 1$, then the value of $\left(x^2 + \frac{1}{x^2}\right)$ is
 (1) 0 (2) 2 (3) 4 (4) 6

87. If α and β be the roots of $x^2 + 3ax + 2a^2 = 0$ and $\alpha^2 + \beta^2 = 5$, then the value of 'a' is

- (1) 2 (2) 3 (3) ± 1 (4) $\pm \frac{1}{2}$

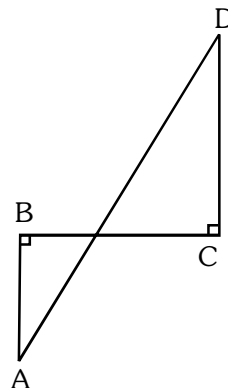
88. The condition that the equation $ax^2 + bx + c = 0$ has both the roots positive is that

- (1) a and c have of the same sign opposite to that of b
 (2) b and c have the same sign opposite to that of a
 (3) a and b are of the same sign
 (4) a, b, c are of the same sign

89. If $a = 0.1039$ then the value of $\sqrt{4a^2 - 4a + 1} + 3a$ is

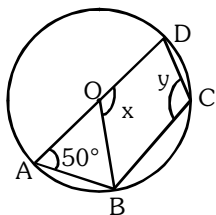
- (1) 0.1039 (2) 0.2078
 (3) 1.1039 (4) 2.1039

90. In figure AB = 4 cm, BC = 5 cm and CD = 8 cm then the length of AD =



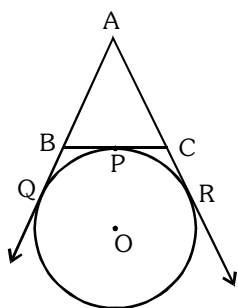
- (1) 10 cm (2) 12 cm (3) 13 cm (4) 15 cm

91. In the given figure O is the centre of circle and $\angle DAB = 50^\circ$, then the measure of x & y are



- (1) $x = 90^\circ, y = 120^\circ$ (2) $x = 60^\circ, y = 120^\circ$
 (3) $x = 70^\circ, y = 130^\circ$ (4) $x = 100^\circ, y = 130^\circ$

92. In the figure, a circle touches the side BC of $\triangle ABC$ at P and touches AB and AC produced at Q and R respectively. If $AQ = 5$ cm then perimeter of $\triangle ABC$ is



- (1) 10 cm (2) 12.8 cm
 (3) 11.8 cm (4) 13 cm

93. The rationalizing factor of $\sqrt[n]{\frac{a}{b}}$ is

- (1) $ab\sqrt[n]{\frac{a}{b}}$ (2) $\sqrt[n]{\frac{a}{b}}$ (3) $\sqrt[n]{\frac{a^{n-1}}{b^{n-1}}}$ (4) $\sqrt[n]{\frac{a^{n+1}}{b^{n+1}}}$

94. The volume and surface area of a sphere are numerically the same. The volume of the smallest cylinder in which the sphere exactly fits is

- (1) 54π (2) 36π (3) 27π (4) 9π

95. In a triangle the side of length 12 cm is perpendicular to the side of length 5 cm. The lateral surface area of the solid got by rotating on the side 12 cm is

- (1) $156\pi \text{ cm}^2$ (2) $65\pi \text{ cm}^2$
 (3) $60\pi \text{ cm}^2$ (4) $35\pi \text{ cm}^2$

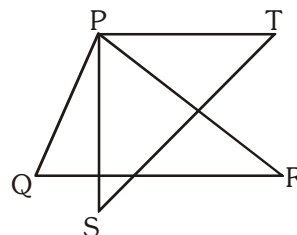
96. If A_1, A_2 and A_3 denotes the areas of three adjacent faces of a cuboid, then its volume is

- (1) $A_1A_2A_3$ (2) $2A_1A_2A_3$
 (3) $\sqrt{A_1A_2A_3}$ (4) $\sqrt[3]{A_1A_2A_3}$

97. A club consists of members whose ages are in A.P. the common difference being 3 months. If the youngest members of the club is just 7 years old and the sum of the ages of all the members is 250 years, then the number of members in the club are

- (1) 15 (2) 20 (3) 25 (4) 30

98. In the figure $\triangle PQR \sim \triangle PST$ and perimeter of $\triangle PQR$: perimeter of $\triangle PST = 3 : 4$ then area of $\triangle PST$: area of $\triangle PQR$ is



- (1) 3 : 4 (2) 16 : 9 (3) 9 : 16 (4) 4 : 3

99. Twelve defective pens are accidentally mixed with 132 good ones. It is not possible to just look at a pen and tell whether or not it is defective. One pen is taken out at random from this lot. The probability of pen taken out is a good one is

- (1) $\frac{11}{12}$ (2) $\frac{1}{12}$ (3) $\frac{1}{2}$ (4) 1

100. The LCM of $(x + y)^2, (x - y)^2$ and $(x^2 - y^2)$ is

- (1) $(x^2 - y^2)$ (2) $(x^2 + y^2)^2$
 (3) $(x^2 - y^2)^3$ (4) $(x^2 - y^2)^2$