NATIONAL TALENT SEARCH EXAMINATION-2019-20, CHHATTISGARH

SCHOLASTIC APTITUDE TEST (SAT) PAPER & HINTS & SOLUTION

PHYSICS

1. Newton second is equivalent to unit of which physical quantity :
(A) Velocity (B) Angular momentum
(C) Linear momentum (D) Energy

Sol. (C)

Linear Momentum = $kg.\frac{m}{s} = kg.\frac{m}{s^2} \times 5$

2. The number of electrons in one coulomb charge are :
(A) 5.46×10^{-29} (B) 9×10^{13} (C) 6.25×10^{18} (D) 1.6×10^{-19}

Sol. (C)

1C charge = 6.25×10^{18} electrons.

q = ne

$I = n \times 1.6 \times 10^{-19}$

$n = 6.25 \times 10^{18}$

3. A radioactive nucleus can emit :
(A) α, β or γ in sequence (B) α, β or γ any one particle at a time
(C) α, β or γ all the there together (D) Only α and β together

Sol. (C)

4. The quantity remains unchanged in the transformer is :
(A) Current (B) Voltage (C) Frequency (D) None of these

Sol. (C)

Frequency never change in transformer.

5. The radius of curvature of concave mirror is 10 cm. If the object is placed at 20 cm in front of it, then what will be the position of image and magnification :

(A) $\frac{20}{3}$cm,3 (B) $-\frac{20}{3}$cm,$\frac{1}{3}$ (C) – 20 cm, 3 (D) $-\frac{20}{3}$cm,6

Sol. (B)

given R = -10 cm

f = $\frac{R}{2} = -5$ cm

u= -20 cm

from mirror formula. $\frac{1}{v} + \frac{1}{u} = \frac{1}{f}$

$$\frac{1}{V} = \frac{1}{f} - \frac{1}{4} = \frac{1}{-5} - (-\frac{1}{20})$$

$$\frac{1}{V} = \frac{-4+1}{20} = \frac{-3}{20}$$

$$V = \frac{-20}{3} \text{ cm}$$

$$m = \frac{-v}{u} = -\frac{(\frac{-20}{3})}{-20} = -\frac{1}{3}$$

6. If n identical resistance of equal values are firstly connected in series and then connected in parallel, then the value of their resultant resistance $\frac{R_S}{R_P}$ will be :

(A) $\frac{1}{n}$ (B) $\frac{1}{n^2}$ (C) n^2 (D) n

Sol. (C)

$R_s = nR$

$R_P = \frac{R}{n}$

Then $\frac{Rs}{Rp} = \frac{nR}{R/n} = n^2$

7. In a house, if two bulbs each of 60W glow daily for 5 hour upto 1 month (30 days), then what will be the cost of electricity consumed if the rate of electricity per unit is Rs. 2.00 :

(A) 24 (B) 36 (C) 12 (D) 30

Sol. (B)

Total Energy = (power x time (n) x no. of device)/ 1000

$$= \frac{60 \times (5 \times 30) \times 2}{1000}$$

= 18 kWh

Cost $\longrightarrow$ 18 x 2 = 36 rs

8. When the momentum of a body increased by 100% then, its kinetic energy is :

(A) Increases by 30% (B) Increases by 200%

(C) Increases by 100% (D) Decreases by 300%

Sol. (A)

$K_1 = \frac{P_1^2}{2m}$

if $P_2 = 2P_1$

$K_2 = \frac{P^2{}_2}{2m} = \frac{(2P_1^2)}{2m} = \frac{4p_1{}^2}{2m}$

$K_2 = 4\ K_1$

So increase by 300%

9. If two different bodies A and B have their masses in ratio 1 : 4 and their volumes are equal, then their densities (of A and B) will be in ratio :
(A) 1 : 4 (B) 4 : 1 (C) 2 : 1 (D) 1 : 2

Sol. (A)
mass = density x volume

$$\frac{m_1}{m_2} = \frac{p_1}{P_2} x \frac{V_1}{V_2}$$

$$\{V_1 = V_2\}$$

$$\frac{P_1}{P_2} = \frac{1}{4}$$

10. A wave completes 24 cycles in 0.8 seconds, then the frequency of the wave is :
(A) 30 Hz (B) 8 Hz (C) 24 Hz (D) 12 Hz

Sol. (A)
Frequency is no. of revolution or wave completes in one second.

$$f = \frac{24}{0.8} = 30Hz$$

11. Angular velocity of hands of second in a watch will be :
(A) π Radian/sec. (B) 2π Radian/sec. (C) $\frac{\pi}{60}$ Radian/sec. (D) $\frac{\pi}{30}$ Radian/sec.

Sol. (D)

$$w = \frac{2\pi}{T}$$

For second hand time period is 60 sec.

$$w = \frac{2\pi}{60} = \frac{\pi}{30} \text{ rad/sec.}$$

12. Which of the following have greatest thermal conductivity :
(A) Brass (B) Iron (C) Aluminum (D) Silver

Sol. (D)
Silver is the best conductor.

13. The power of the convex lense is 4.0 D, then its focal length will be :
(A) 25 m (B) – 25 m (C) – 25 cm (D) 25 cm

Sol. (D)

$$P = \frac{1}{f}$$

$$+4 = \frac{1}{f}$$

$$f = +\frac{1}{4}m = +25cm$$

For convex lens power is positive.

CHEMISTRY

14. Which one of the following is complex salt ?
(A) Ca(OCl)Cl (B) $Pb(OH)NO_3$ (C) $K_2[HgI_4]$ (D) $Ca[H_2PO_2]_3$

Sol. (C)

$$K_2[HgI_4] \rightarrow K^+[HgI_4]^{2-}$$

15. At 277 K, the volume of single drop of water is 0.018 ml, number of water molecules per drop of water will be :
(A) 6.023×10^{23} (B) 6.023×10^{24} (C) 6.023×10^{20} (D) 6.023×10^{21}

Sol. (C)

Density of water = 1g/ml

- mass of 0.018 ml of water = 0.018 grams
- no. of moles = $\frac{0.018g}{18g} = 10^{-3}$ moles
- No. of molecules = $10^{-3} \times 6.023 \times 10^{23}$

  $= 6.022 \times 10^{20}$

16. Which one of the following is not an acidic salt ?
(A) $NaHSO_4$ (B) NaH_2PO_4 (C) Na_3PO_4 (D) Na_2HPO_4

Sol. (C)

Na_3PO_4 has no replacable hydrogen.

17. The pH of caustic soda solution containing 2 gm/litre caustic soda will be : [log 2 = 0.30]
(A) 11.9 (B) 9.7 (C) 10.8 (D) 12.7

Sol. (D)

molarity (M) of caustic soda = $\frac{2}{40}\ \frac{mol}{L}$

$$= \frac{1}{20} \text{ mol/L}$$

$$= \frac{1}{2}x10^{-1} \text{ mol/L}$$

$NaOH \longrightarrow Na^+ + OH^-$

- $[OH^-] = \frac{1}{2} \times 10^{-1}$ mol/L

$pOH = -\log_{10}[OH^-]$

$$= -[\log_{10}(\frac{1}{2} \times 10^{-1})]$$

$$= -[-\log_{10} 2 - 1]$$

$$= 0.30 + 1$$

$$= 1.30$$

pH = 14 –pOH = 14 -1.3 = 12.7

18. Which of the following is not a sulphide ore of the metal ?
(A) Zinc Blende (B) Argentite (C) Dolomite (D) Galena

Sol. (C)
Dolomite $\rightarrow$ $CaCO_3 . MgCO_3$

19. Chemical formula of product formed by heating gypsum at 373 K is ?
(A) $CaSO_4.H_2O$ (B) $CaSO_4 . \frac{1}{2} H_2O$ (C) $CaSO_4 . \frac{3}{2} H_2O$ (D) $CaSO_4.2H_2O$

Sol. (B)

$CaSO_4.2H_2O \xrightarrow{\Delta} CaSO_4 . \frac{1}{2} H_2O + \frac{3}{2} H_2O$

20. Which of the following reaction is a displacement reaction ?
(A) $2KClO_3 \rightarrow 2KCl + 3O_2$ (B) $2H_2 + O_2 \rightarrow 2H_2O$
(C) $Zn + 2HCl \rightarrow ZnCl_2 + H_2$ (D) $N_2 + 3H_2 \rightarrow 2NH_3$

Sol.. (C)
Zn is more reactive than Hydrogen.

21. Which of the following elements would lose an electron easily ?
(A) K (B) Mg (C) Na (D) Ca

Sol. (A)
Atomic size of k is greater. So it will lose electron easily.

22. The compounds which contains both ionic and covalent bonds is :
(A) CH_4 (B) Cl_2 (C) NaCN (D) KCl

Sol. (C)
NaCN Na^+ CN^-

$C \Leftrightarrow N^-$

23. In modern periodic table, the number of verticle columns are :
(A) 07 (B) 16 (C) 08 (D) 18

Sol. (D)

24. When steam is passed over red hot coke, which gas is formed ?
(A) CO_2 (B) $CO + H_2$ (C) NH_3 (D) $CO_+ N_2$

Sol. (B)

$C + H_2O \longrightarrow CO + H_2$
(red hot) (steam) (Water gas)

25. Brass is an alloy of :
(A) Copper and Tin (B) Zinc and Lead (C) Lead and Tin (D) Copper and Zinc

Sol. (D)

26. A hydrocarbon contains 75% carbon, its empirical formula will be :
(A) C_2H_2 (B) CH_4 (C) C_2H_6 (D) C_2H_4

Sol. (B)
%C = mass of carbon/molecular mass x 100%

$= \frac{12}{16} \times 100\% = 75\%$

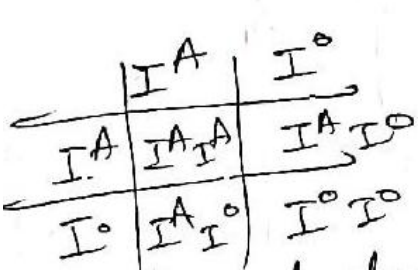
BIOLOGY

27. In which kingdom yeast is include according R.H. Whittaker :
(A) Protista (B) Fungi (C) Plantae (D) Monera
Sol. (B) Whittaker placed fungi in Mycota group as its heterotrophic nutrition.

28. The main function of plasma membrane is to :
(A) Prevent water from entering or leaving
(B) Act as a sieve, allowing only lipids to pass
(C) It take control of what will come in and go in the cell
(D) Move the cell from place to place
Sol. (C) Plasma membrane is semipermeable in Nature.
It Allows selected substances to move in and out of the cell.

29. One of the folliwng an incorrect statement about insuline. This is :
(A) It is produced in Pancreas
(B) It regulates growth and development of the body
(C)It regulates blood glucose level in body
(D) Its defficiency in the body will casue diabetes.
Sol. (B) Insulin controls the amount a blood glucose level. It converts glucose to glycogen.

30. A child is of blood group 'O', his parents with blood group 'A'. What will be the blood group of parents :
(A) I^AI^A (B) I^AI^O (C) I^AI^B (D) I^BI^B
Sol. (B)



31. The oxygen liberated during photosynthesis by green plans comes from :
(A) Glucose (B) Water (C) Carbondioxide (D) Chlorophyll
Sol. (B) The oxygen released during photosynthesis comes from photolysis of water (Light reaction)

32. Sex determining chromosome is :
(A) X (B) Y (C) Z (D) O
Ans. (B)

33. Biotic components of the ecosystem among the following : -
(A) Producer (B) Consumer (C) Decomposer (D) Above all
Sol. (D) Biotic means living components. Producer, Consumer and Decomposer All are living.

34. Lysosome is called as :
(A*) Suicide bag (B) Kitchen of cell
(C) Power house of cell (D) Protective covering of cell
Sol. (A) Lysosome is called as suicidal bags. It stores Hydrolytic enzymes. The enzymes from lysosome release out and digest the whole cell.

35. The function of chlorophyll in photosynthesis :
(A) Absorbing light (B) Breaking down water molecule
(C) No function (D) Reduction of CO_2
Sol. (A) Chlorophyll forms by chloroplast traps sunlight.

36. Which test is done for jaundice :
(A) Vidal (B) ELISA (C) Billirubin (D) None of these

Sol. (C) Bilirubin Test High Level of Bilirubin
Leads to Jaundica

37. Which of the following gas present in maximum amount in atmosphere :
(A) Oxygen (B) Carbondioxide (C) Hydrogen (D) Nitrogen

Sol. (D) Nitrogen present in 78%

38. Total number of bones present in human body are :
(A) 205 (B) 206 (C) 207 (D) 208

Sol. (B) In infant more bones are present than adult

39. Vinita suddenly sees a tiger. Her heartbeat goes up and blood pressure increase. Which hormone is released at this time in her body :
(A) Adrenaline (B) Thyroxine (C) Corticoid (D) Insuline

Sol. (A) Adrenaline is called 3F or emergency hormone.

40. Bending of growing shoot towards sunlight is called :
(A) Phototropism (B) Hydrotropism (C) Geotropism (D) Chemotropism

Sol. (A) Phototropism is bending of stem towards sunlight, controlled by Auxin Hormone.

MATHEMATICS

41. If any polynomial f(x) is divided by $x^2 - 9$, then remainder is 3x + 2. If it is divided by (x – 3) the remainder will be :
(A) – 7 (B) 7 (C) 11 (D) – 11

Sol. (C)

f(x) = $(x^2 - 9)$ Q (n) + (3x+2)

If divided by (x-3)

$$\frac{f(x)}{(x-3)} = \frac{(x^2-9)Q(n)}{(x-3)} + \left(\frac{3x+2}{x-3}\right)$$

remainder $\rightarrow$

x-3)3x+2(3
3x-9
———
11
———

42. In a triangle ABC $\angle A = x°$, $\angle B = 3x°$ and $\angle C = y°$. If 3y – 5x = 30, then the triangle type will be :
(A) Right angled triangle (B) Acute angled triangle
(C) Obtuse angled triangle (D) Right angled isosceles triangle

Sol. (A)

$$\angle A + \angle B + \angle C = 180°$$
$$x° + 3x° + y° = 180°$$

$(4x° + y° = 180°) \times 3$

$12x + 3y^6 = 540°$

$3y° - 5x° = 30°$

$- \quad + \quad -$

$17x° = 510°$

$\angle A = x° = 30°$

$\angle B = 3 \times 30° = 90°$

$\angle C = y° = 60°$

So, right angled triangle

43. If system of equation has infinitely many solutions of (k – 4) x + 4y = k and kx + ky = 16, then the value of k will be :

(A) ± 8 (B) – 8 (C) 8 (D) 6

Sol. (C)

For infinitely many solution,

$$\frac{k-4}{k} = \frac{4}{k} = \frac{k}{16}$$

K=+8 $K = \pm 8$

So K = 8

44. Roots of the equation $2x^2 + 5x + 5 = 0$ will be :

(A) Real and equal (B) Real and not equal (C) non-real and equal (D) non-real and not equal

Sol. (D)

$D = (5)^2 - 4 \times 2 \times 5$

$D = 25 - 40$

$D = -15$

$D < 0$

Non real and not equal

45. If y = 1 is a common root of the equation $ay^2 + ay + 3 = 0$ and $y^2 + y + b = 0$, then the value of ab wil be :

(A) 3 (B) $\frac{3}{2}$ (C) 6 (D) – 3

Sol. (A)

Put y = 1 m ay2 + ay + 3 = 0

a + a + 3 =0

a = $\frac{-3}{2}$

put y = 1 m $y^2 + y + b = 0$

b=-2

$$ab = \frac{-3}{2} x(-2) = 3$$

46. If a sum of the n terms of a arithmetic progression is $n^2 + 4n$, then the 15^{th} term will be :

(A) 285 (B) 252 (C) 537 (D) 33

Sol. (D)

$S_n = n^2 + 4n$ of A.P.

$S_1 = (1)^2 + 4(1) = 5 = a_1$

$S_2 = (2)^2 + 4 \times 2 = 12 = a_1 + a_2$

So $S_2 - S_1 = a_2 = 12 - 5$

$a_2 = 7$

First term = 5

Second term = 7

Then common difference = 7-5 =2

$a_{15} = a_1 + 14d$

= 5 + 14 +2

15th term **= 33**

47. Pay ratio of three employee A, B and C is 2 : 3 : 5. If their pay increases 15% , 10% and 5% respectively, then ratio of their pay will be :

(A) 3 : 2 : 1 (B) 15 : 10 : 5 (C) 23 : 33 : 60 (D) 46 : 66 : 105

Sol. (D)

A : B : C

2 : 3 : 5

After increasing the pay, the ratio will be-

2 x 115% : 3 x 110% : 5 x 105%

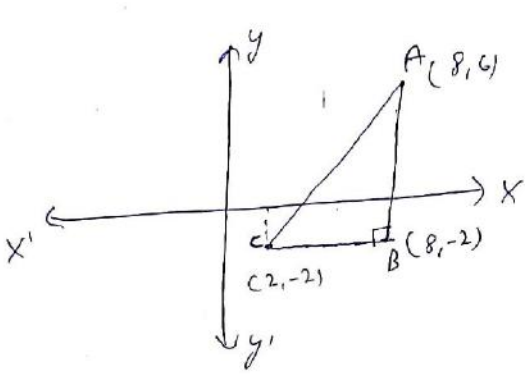
230 : 330 : 525

46 : 66 : 105

48. For a triangle whose vertices are (8 ,6) , (8 , – 2) and (2 , – 2), the co-ordinate of the circumventer will be :

(A) (5 , 2) (B) (2 , 5) (C) (– 5 , 2) (D) (2 , 5)

Sol. (A)



ABC is a right angled triangle. Circum radius of right angled triangle = $\frac{AC}{2}$

So, circum center will be mid point of AC.

Co-ordinates $(\frac{8+2}{2}, \frac{6-2}{2})$

(5,2)

49. $2(\sin^6\theta + \cos^6\theta) - 3(\sin^4\theta + \cos^4\theta)$ is equal to :

(A) 0 (B) 1 (C) – 1 (D) 2

Sol. (C)

$2(\sin^6\theta + \cos^6\theta) - 3(\sin^4\theta + \cos^4\theta)$

$2((\sin^2\theta)^3+(\cos^2\theta)^3)-3((\sin^2\theta)^2+(\cos^2\theta)^2)$

$2((\sin^2\theta+\cos^2\theta)(\sin^4\theta+\cos^4\theta-\sin^2\theta\cos^2\theta))$

$-3\sin^4\theta-3\cos^4\theta$

$[\sin^2\theta+\cos^2\theta=1]$

$2\sin^4\theta+2\cos^4\theta-2\sin^2\theta\cos^2\theta-3\sin^4\theta-3\cos^4\theta$

$-\sin^4\theta-\cos^4\theta-2\sin^2\theta\cos^2\theta$

$-((\sin^2\theta)^2+(\cos^2\theta)^2+2\sin^2\theta\cos^2\theta)$

$((\sin^2\theta+\cos^2\theta)^2)$

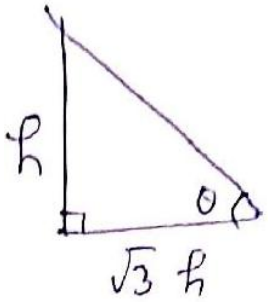
(1)

-1

50. The length of shadow of a tower on the plane ground is $\sqrt{3}$ times the height of the tower. The angle of elevation of sun is :

(A) 45° (B) 30° (C) 60° (D) 90°

Sol. (B)



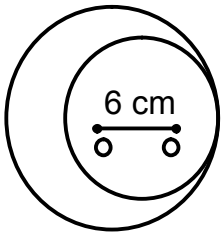
Let height of tower = h

$\tan\theta=\frac{h}{\sqrt{3}h}$

$\tan\theta=\frac{1}{\sqrt{3}}$

$\theta=30°$ angle of elevation of sum.

51. In the given figure, two circles touch internally. The sum of their areas is $116\pi cm^2$ and difference between their radii is 6 cm. The radius of the big circle will be :



(A) 14 cm (B) 4 cm (C) 10 cm (D) 18 cm

Sol. (C)

Let radius of smaller circle be r cm.

Then radius of bigger circle be (r+6) cm.

Sum of area = 116π cm^2

$\pi r^2 + \pi (r+6)^2 = 116\pi$

$r^2 + (r+6)^2 = 116$

$r^2 + r^2 + 36 + 12r = 116$

$2r^2 + 12r = 80$

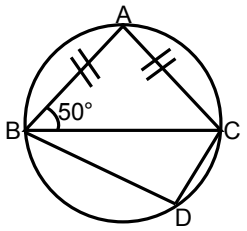
r2 + 6r -40 = 0

r2 +10r-4r-40 = 0

r = -10, 4

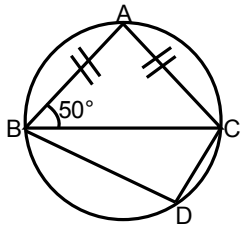
r = 4 accepted. bigger circle radii = 10cm

52. In the given figure ΔABC is an isosceles triangle with AB = AC and $\angle ABC = 50°$. Then the $\angle BDC$ will be :



(A) 80° (B) 100° (C) 90° (D) 50°

Sol. (B)



AB = AC

so, $\angle ABC = \angle ACB = 50°$

$\angle A = 180° \quad (50° + 50°) \quad (\Delta ABC)$

$\angle A = 80°$

ABDC is a cyclic quadrilateral so, sum of opposite angles will be $180°$

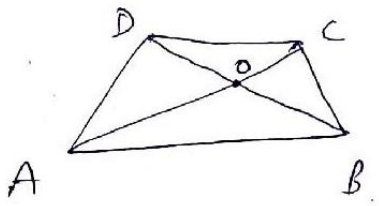
$\angle A + \angle D = 180°$

$\angle D = 100°$

53. A trapezium ABCD is such that AB || DC. Their diagonals intersect each other at a point O. If AB = 2CD, then the ratio of the areas of ΔAOB and ΔCOD will be :

(A) 4 : 1 (B) 2 : 1 (C) 1 : 2 (D) 1 : 4

Sol. (A)



$\frac{AB}{CD} = \frac{2}{1}$ (Given)

$$\frac{ar(\Delta AOB)}{ar(\Delta COD)} = (\frac{AB}{CD})^2 = (\frac{2}{1})^2 = 4:1$$

(similar Δ property)

54. Which term of A.P. 27, 24, 21, …. is zero ?

(A) 8^{th} (B) 5^{th} (C) 10^{th} (D) 11^{th}

Sol. (C)

I^{st} term = 27

d = 24-27 = -3

Let cm = 0

a + (n-1) d = 0

27 + (n-1) (-3) =0

27 = (n-1) 3

9 = n-1

n= 10

55. The volumes of two spheres are in the ratio 64 : 27. The ratio of their surface area will be :

(A) 1 : 2 (B) 2 : 3 (C) 9 : 16 (D) 16 : 9

Sol. (D)

$$\frac{V_1}{V_2} = \frac{64}{27}$$

$$\frac{V_1}{V_2} = \frac{\frac{4}{3}\pi r_1^3}{\frac{4}{3}\pi r_2^3} = (\frac{r_1}{r_2})^3 = \frac{64}{27}$$

$$\frac{r_1}{r_2} = \frac{4}{3}$$

$$\frac{S_1}{S_2} = \frac{4\pi r_1^2}{4\pi r_2^2} = (\frac{r_1}{r_2})^2 = (\frac{4}{3})^2 = 16:9$$

56. From a solid circular cylinder with height 10 cm and radius of the base 6 cm, a right circular cone of the same height and same radius of the base is removed. The volume of the remaining solid will be :

(A) 360π cubic cm (B) 120π cubic cm (C) 240π cubic cm (D) 480π cubic cm

Sol. (C)

Volume of remaining solid = volume of cylinder-volume of cone

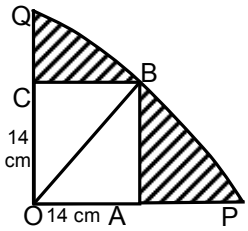
$$= \pi(6)^2 \times 10 - \frac{1}{3}\pi(6)^2 \times 10$$

$$= \pi(6)^2 \times 10(1 - \frac{1}{3})$$

$$= \frac{2}{3}\pi \times 6 \times 6 \times 10$$

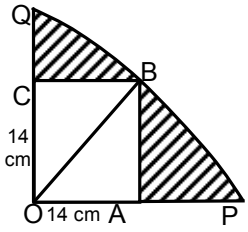
$$= 240\pi \text{ cm}^3$$

57. In the given figure a square OABC is inscribed in a quadrant OPBQ of a circle. If OA = 14 cm, the the area of the shaded region will be :



(A) 308 square cm (B) 196 square cm (C) 112 square cm (D) 504 square cm

Sol. (C)



radius = OB = $14\sqrt{2}$ $(\Delta AOBisb>)$

area of shaded region = $\frac{1}{4}(\pi r^2)-(14)^2$

= $\frac{1}{4}\times\frac{22}{7}\times14\sqrt{2}\times14\sqrt{2}-(14)^2$

= $(14)^2\ (\frac{22\times2}{4\times7}-1)$

= $(14)^2\times(\frac{11}{7}-1)$

= $14\times14\times\frac{4}{7}=112cm^2$

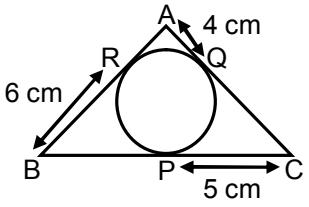
58. Mean of a certain number is x. If each observation divided by m($m \neq 0$) and increased by n, then the mean of new observation will be :

(A) $\frac{\bar{x}}{n}+m$ (B) $\frac{\bar{x}}{m}+n$ (C) $\bar{x}+\frac{n}{m}$ (D) $\bar{x}+\frac{m}{n}$

Sol. (B)

If divided by m to all and increased by n to all, then effect will be to all. Mean of new observation $=\frac{x}{m}+n$

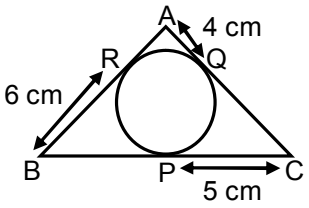
59. In the given figure, the perimeter of ΔABC will be :



(A) 30 cm (B) 60 cm (C) 45 cm (D) 15 cm

Sol.

(A)



BP = BR = 6

CP = CQ = 5

Perimeter of $\Delta ABC = 6+5+5+4+4+6$

=30 cm

60. Rajat opened a recurring deposit account in a branch of Central Bank of India. He deposited Rs. 200 per month for three years. If he got an interest of Rs. 444, the rate of interest per annum will be :

(A) 6% (B) 5% (C) 4% (D) 3%

Sol. (C)

SOCIAL SCIENCE

61. Who of the following made the painting 'Monalisa:

(A) Michel Angelo (B) Behzaad (C)Carlyle (D) Leonardo da-Vinchi.

Ans. (D**)**

62. What was the name of the party founded by Hitler:

(A) Geimany National Party (B) Nazi Party

(C) National Force (D) Fasiyo

Ans. (B**)**

63. Who was the first 'Tirthakar' of Jainism:

(A) Pashravnath (B) Rishabhdeo (C) Mahavir (D) Chetak

Ans. (B**)**

64. Which of the following pair is not correct:

(A) End of cold war - 1998

(B) Merger of Vietnam - 1975

(C) India got independence - 1947

(D) Nigeria become independent - 1955.

Ans. (A)

65. What are the factors affecting the construction of residential houses:
(a) Climate (b) Condition of surface (c) Social believes (d) Industrialisation

Choose the correct option:
(A)A,B,C and D (B) A and D (C) A,B and C (D) B and D
Ans. (B)

66. During whose rule the Chinese traveller Fa-Hien came in India :
(A) Maurya Dynasty (B) Shunga Dynasty (C) Gupta Dynasty (D) Kushan Dynasty.
Ans. (C)

67. When did America declare its libertion from England:
(A) 4 July 1776 (B) 15 July 1876 (C) 1 January 1786 (D) 4July 1861.
Ans. (A)

68. Which of the following statement is false about Mahatma Gandhi's 'Dandi March':
(A) It happened in 1930 (B)With this Quit India Movement has started
(C) It started from Sabarmati ashram (D) Gandhi Ji broke the salt resolution.
Ans. (B)

69. Match the following structures with their respective rulers:
(a) Kutub Minar 1. Muhanmied Adil Shah
(b)Gol Gumhad. 2. lltutmish
(c) Buland Darwaja 3. Aurangzeb
(d) Moti Mosque (Delhi) 4. Akbar.

Choose the correct option:

(A) a-4, b-3, c-2, d-1 (B) a-3,b-4,c-1, d-2
(C) a-2, b-1, c-4, d-3 (D) a-1, b-2, c-3, d-4
Ans. (C)

70. When did tribal revolution 'Bhomkaal' occured in Bastar.
(A) 1857 (B)1876 (C)1901 (D)1910
Ans. (D)

71. By what name Chhattisgarh area was known during Ramayan period:
(A) Uttar Kosal (B) Dakshin Kosal (C) Chhattisgarh Desh (D) Vidarbh
Ans. (B)

72. Match the following revolutionary events with its respective revolutionaries:
(a) Raind Murder case (scam) 1. Ramprasad Bismil
(b) Kakori conspiracy case 2. Suryasen
(c) Central assembly bomb case 3. Batukeshwar Dutt
(d) Chatgaon armoury loot 4. Chhafekar Brothers.

Choose the correct option:
(A) a-4, b-1, c-3, d-2 (B) a-2, b-4, c-1, d-3 (C) a-4, b-3, c-2, d-1 (D) a-3, b-1, c-2, d-4
Ans. (A)

73. The source of energy in future:
(A) Coal (B) Sun (C) Water (D) Wind
Ans. (B)

74. In India which of the following crops is sown most:
(A) Kharif (B) Rabi
(C) Zayad (D) Some in all seasons
Ans. (A)

75. In the Himalayan range the change in vegetation is due to height along with the reasons given below:

1. Decrease in temperature
2. Changes in rain-falls
3. Unfertile soil
4. Strong winds

Choose the correct option:

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

Ans. (A)

76. According to forest area in Chhattisgarh state stands at which place in India.

(A)Fourth (B) First (C)Third (D) Second

Ans. (C)

77. Which layer of soil is important for agriculture:

(A) C and R (B) C and B (C) O and A (D) A and B

Ans. (D)

78. According to census 2011 in India, which of the following state has maximum density of population:

(A) Bihar (B) Uttar Pradesh (C) Maharashtra (D) Punjab.

Ans. (A)

79. Among the following which one is related to 'Blue Revolution' in India:

(A) Indigo produce (B) Tea garden (C) Pisciculture (D) Sericulture

Ans. (C)

80. The following type of soil is found in the desert of Thar:

(A) Sandy soil (B) Black soil (C) Yellow soil (D) Forest soil.

Ans. (A)

81. In which hill Kodai Kenal is situated:

(A) Anamalai (B) Koyambatur (C) Bailadila (D) Palani.

Ans. (D)

82. Which continent is known as 'White continents:

(A) Europe (B) Asia (C) Antarctica (D) Australia.

Ans. (C)

83. Through which degree latitude or longitude the tropic of cancer passes in India:

(A) 23°30' Northern latitude (B) 26°3' Southern longitude
(C) 25°6' latitude (D) 17°8' Southern longitude.

Ans. (A)

84. Math the following mineral- table

(a) Energy mineral	1. Chromite
(b) Metal mineral	2. Granite
(c) Atomic mineral	3. Coal
(d) Secondary mineral	4. Thorium

Choose the correct option:

(A) a-3, b-1, c-4, d-2 (B) a-4, b-2, c-1, d-3
(C) a-3, b-4, c-2, d-1 (D) a-2, b-3, c-1, d-4.

Ans. (A)

85. Which of the following does not take the oath of the office:

(A) President (B) Vice-President (C) Speaker (D) Prime Minister.

Ans. (C)

86. This economy was established through planning commission in India:
(A) Socialist economy (B) Mixed economy
(C) Capitalist economy (D) Marxist economy.
Ans. (B)

87. The Union Council of Ministers in collectively responsible to:
(A) The parliament (B) The President (C) The Rajya Sabha (D) The Lok Sabha.
Ans. (D)

88. What should be the quorum of females in the meetings of 'Grarn-Sabha':
(A) $\frac{1}{10}$ (B) $\frac{1}{6}$ (C) $\frac{1}{3}$ (D) $\frac{1}{5}$
Ans. (C)

89. Who was the speaker of the inaugural session of Constituent Assembly:
(A) Dr. Bhim Rao Ambedkar
(B) Dr. Rajendra Prasad
(C) Pt. Jawahar Lal Nehru
(D) Sachidanand Sinha
Ans. (D)

90. Which of the following are the emergency powers of President of India:
(A) President's rule in the states (B) Amenesty of the criminals
(C) Appointment of ministers (D) Appointments of Prime Minister
Ans. (A)

91. Indian constitution defines India as:
(A) A union of the states (B) A quasi federal
(C) A federation (D) A co-operative federation.
Ans. (A)

92. The name of the speaker of present Lok Sabha is:
(A) Smt. Sumitra Mahajan (B) Smt. Meera Kurnar
(C) Shri Venkaiya Naidu (D) Shri Omprakash Birla
Ans. (D)

93. What does demonetisation mean:
(A) To remove old currency
(B) The decline value of currency
(C) To restrict printing currency due to recession
(D) To fix the international value of currency.
Ans. (A)

94. Which of the following accounts gives maximum rate of interest:
(A) Saving account (B) Current account
(C) Fixed deposit account (D) Monthly deposit account.
Ans. (C)

95. Who issues currency note in India:
(A) Finance ministry (B) State Bank of India
(C) Reserve Bank of India (D) Finance Secretary.
Ans. (C)

96. Assume that there are 5 families in a group whose average per capita income is Rs. 4000/-. If the average per capita income of these families turns to 5000/- in next two year, then we can say that:
(A) Level of the group is decreased
(B) The income of all persons has definitely increased
(C) Group level has improved
(D) Income of all persons has decreased.
Ans. (B)

97. What is the abbreviation of public distribution system of the country:
(A) FCA (B) ICDS (C) PDS (D) MDM.
Ans. (C)

98. 'Saubhagya Web Portal has been launched by the government of India to track:
(A) Gas connection holders (B) Electrical connection holders
(C) Domestic violence in urban areas (D) Clean India Movement.
Ans. (B)

99. The father of the white revolution in India is considered as:
(A) Dr. V. Kuriyan (B) Swaminathan (C) Norman Borlaug (D) Saim Pitroda
Ans. (A)

100. The biggest source to increase the government revenue is :
(A) Loan (B) Tax (C) Profit (D) Budget.
Ans. (B)