



SAT

Q.1 One liter of water at 35°C is mixed with one litre of water at 60°C . The temperature of the mixture will be -
(1) 35°C (2) between 35°C and 60°C (3) Less than 35°C (4) 60°

Ans. [2]

Sol. A temperature in between the maximum & minimum is achieved.

Q.2 A Red Rose will be seen in green light as -
(1) Red (2) Yellow (3) Black (4) Blue

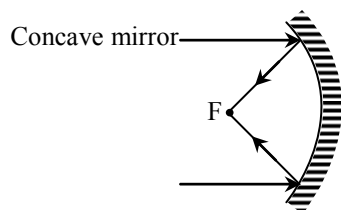
Ans. [3]

Sol. Black

Q.3 Which of the following mirror is used to concentrate light on the particular point -
(1) Convex mirror (2) Concave mirror (3) Plane mirror (4) None of them

Ans. [2]

Sol.



Q.4 Main source of energy is -
(1) Sun (2) Water (3) Air (4) Wood

Ans. [1]

Sol. Sun

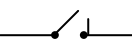
Q.5 What arises due to interaction between two objects -
(1) Pressure (2) Force (3) Volume (4) Density

Ans. [2]

Sol. Force always in interaction pair.

Q.6 Symbol of key present in electric circuit is -
(1)  (2)  (3)  (4) 

Ans. [3]

Sol. In electric circuit, key is represented by symbol 

Q.7 Eye lens is -
(1) Biconcave (2) Concave (3) Convex (4) Biconvex

Ans. [4]

Sol.



Q.8 The unit of frequency is –
(1) Hertz (2) m/sec (3) Decibel (4) km/h
Ans. [1]

Sol. Frequency = $\frac{1}{\text{Time}}$ = Hz.

Q.9 If a bar magnet is cut lengthwise into three parts, the total number of Poles will be -
(1) 3 (2) 2 (3) 6 (4) 0

Ans. [3]

Sol.

N	S	N	S	N	S
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Total 6 poles

Q.10 Speed of sound is maximum in –
(1) Water (2) Air (3) Iron (4) Vacuum

Ans. [3]

Sol. Speed of sound is maximum in solid than liquid & least in air.

Q.11 An example of Physical change in –
(1) Burning of wood (2) Rusting
(3) Dissolution of sugar in water (4) Milk converts into curd

Ans. [3]

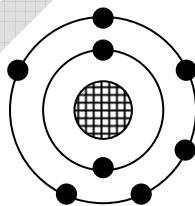
Sol. Dissolution of sugar in water does not give any change in chemical composition.

Q.12 An atom having 7 number of protons. Its atomic number will be –
(1) 8 (2) 14 (3) 7 (4) 34

Ans. [3]

Sol. Number of proton equals to atomic number.

Q.13 The diagram given below represents an atom of –



(1) Chlorine (2) Oxygen (3) Sodium (4) Carbon

Ans. [2]

Sol. Total number of electrons are 8. So atom is oxygen.

Q.14 Which of the following metal is found in liquid form –
(1) Iron (2) Sodium (3) Mercury (4) Lead

Ans. [3]

Sol. Mercury is present in liquid state at room temperature.

Q.15 Water which contains soluble salt of calcium and magnesium is known as -
(1) Soft water (2) Heavy water (3) Hard water (4) Mineral water

Ans. [3]

Sol. Hard water contains soluble Ca^{2+} & Mg^{2+}

- Q.16** Which among the following matter has the highest electrical conductivity –
(1) Diamond (2) Silver (3) Wood (4) Graphite
- Ans.** [2]
- Sol.** Electrical conductivity of silver is maximum.
- Q.17** The formula of Sulphuric acid is -
(1) H_2SO_3 (2) HNO_3 (3) H_2SO_4 (4) H_2S
- Ans.** [3]
- Sol.** Sulphuric acid is H_2SO_4 .
- Q.18** Blue litmus paper is dipped in a solution, it turns into red. What will be the nature of solution ?
(1) Acidic (2) Basic (3) Neutral (4) None of them
- Sol.[1]** Acid turns blue litmus to red.
- Q.19** Yeast is used in the production of –
(1) Sugar (2) Tetracycline (3) Alcohol (4) Ammonia
- Ans.** [3]
- Sol.** Yeast is used in production of Alcohol.
- Q.20** Least polluting fuel for vehicle is –
(1) Petrol (2) Diesel (3) CNG (4) LPG
- Ans.** [3]
- Sol.** CNG is least polluting fuel.
- Q.21** In plant, water is transported through -
(1) Xylem (2) Phloem (3) Stometa (4) Root hair
- Ans.** [1]
- Sol.** Xylem supply raw materials like water & minerals for photosynthesis from root to leaves.
- Q.22** Reproductive part of a plant is –
(1) Leaf (2) Stem (3) Root (4) Flower
- Ans.** [4]
- Sol.** In flower, carpel or pistil is female reproductive organ & stamen is male reproductive organ.
- Q.23** Excessive intake of alcohol causes –
(1) Jaundice (2) Liver Cirrhosis (3) Malaria (4) Tuberculosis
- Ans.** [2]
- Sol.** By excessive intake of alcohol cells of liver become damaged.
- Q.24** The normal pulse rate/minute in a healthy adult human is –
(1) 70–80 (2) 90–100 (3) 40–60 (4) 110–120
- Ans.** [1]
- Sol.** Normal pulse rate/minute in human is 72 per minute.

- Q.25** Through which part air enters in the body of Cockroach ?
(1) Lungs (2) Gills (3) Spiracles (4) Skin
- Ans.** [3]
- Sol.** In cockroach air enters by spiracle or stigmata.
- Q.26** 'White Revolution' is related to the increase in production of -
(1) Egg (2) Milk (3) Meat (4) Wool
- Ans.** [2]
- Sol.** White revolution is for the enhancement of production of milk.
- Q.27** Which gas does not produces green house effect
(1) Carbondioxide (2) Methane (3) Hydrogen (4) Chloro-Fluro-Carbon
- Ans.** [3]
- Sol.** Carbondioxide, Methane & Chloro-Fluro-Carbon are Green house gases.
- Q.28** 'The Ganga Action Plan' was started in the -
(1) 1980 (2) 1985 (3) 1960 (4) 1970
- Ans.** [2]
- Q.29** Deficiency of Vitamine 'C' causes -
(1) Beriberi (2) Night blindness (3) Blue eyes (4) Scurvy
- Ans.** [4]
- Sol.** Vitamin C deficiency cause Scurvy
- Q.30** Fat is completely digested in the -
(1) Stomach (2) Mouth (3) Small Intestine (4) Large Intestine
- Ans.** [3]
- Sol.** In small intestine duodenum recives bile juice & pancreatic juice which help in fat digestion.
- Q.31** Which of the following does not yield wool -
(1) Dog (2) Yalk (3) Camel (4) Goat
- Ans.** [1]
- Q.32** Which part of the plant takes in carbon di oxide from the air in photosynthesis ?
(1) Root hair (2) Stometa (3) Leaf Veins (4) Sepals
- Ans.** [2]
- Sol.** Stomatal aperture help in gas exchange during respiration & photosynthesis.
- Q.33** The largest gland in human body is -
(1) Liver (2) Pancreas (3) Pitutary (4) Thyroid
- Ans.** [1]
- Sol.** Liver is a digestive gland which secrete bile juice

Q.34 Bone of arm is -

- (1) Femur (2) Humerus (3) Tibia (4) Tarsals

Ans. [2]

Sol. Humerus is a limb bone.

Q.35 CO₂ and O₂ Balance in atmosphere is due to -

- (1) Respiration (2) Vapourisation (3) Photosynthesis (4) None of these

Ans. [3]

Sol. In photosynthesis CO₂ is used which is released by animals by respiration

Q.36 From which state of India the East India Company started its business -

- (1) Bengal (2) Andhra Pradesh (3) Kerala (4) Tamilnadu

Ans. [1]

Q.37 Out of the following 'Musket' is the type of a -

- (1) Cannon (2) Gun (3) Machine Gun (4) Tank

Ans. [2]

Q.38 To oppose the miserable condition of Neel Producing farmers, Mahatma Gandhi started -

- (1) Non Cooperation Movement (2) Namak Andolan
(3) Civil Disobedience Movement (4) Champaran Movement

Ans. [4]

Q.39 The Santhals of Jharkhand were linked with

- (1) Neel Production (2) Goomantu Agriculture
(3) Sericulture (4) Mining Industry

Ans. [3]

Q.40 The building situated at the 'Raisina Hill' is -

- (1) Havamahal (2) President House (3) Tajmahal (4) Victoria Memorial

Ans. [2]

Q.41 Match the following books and their writers and select the correct option -

- | | |
|-------------------|-----------------|
| (A) Harikeli | (i) Magh |
| (B) Geet Govind | (ii) Bharvi |
| (C) Sishupal Vadh | (iii) Jay Dev |
| (D) Kiratarjuniam | (iv) Veeral Dev |

The correct option is -

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

Ans. [2]

Q.42 The supporter of 'Gurilla war' Strategy was -
(1) Shivaji (2) Prithvi Raj (3) Durga Das (4) Sangram Singh

Ans. [1]

Q.43 At which age Akbar was declared the Emperor of Delhi -
(1) 21 Years (2) 13 Years (3) 18 Years (4) 25 Years

Ans. [2]

Q.44 The winner of the I Battle of Panipat was -
(1) Ibrahim Lodi (2) Babar (3) Tamoor Lang (4) Bahalol Lodi

Ans. [2]

Q.45 The brave lady expert in gladiatorship and horseriding was -
(1) Tara Bai (2) Padmini (3) Karmavati (4) Jeeja Bai

Ans. [1]

Q.46 Out of the following the renewable resource is -
(1) Coal (2) Petroleum (3) Solar Energy (4) Natural Gas

Ans. [3]

Sol. Solar energy is considered as renewable energy source

Q.47 Out of the following, which is not the method of soil conservation -
(1) Terrace Farming (2) Use of Insecticides (3) Shelter Belts (4) Making Mulch

Ans. [2]

Q.48 The largest producer and exporter country of mica in the world is -
(1) China (2) Japan (3) Pakistan (4) India

Ans. [4]

Q.49 The industries known as the 'Sun Rise Industries' are -
(1) Wellness – Information Technology (2) Iron Steel – Marble
(3) Cotton Clothe – Paper (4) Agriculture – Jute

Ans. [1]

Q.50 The Human Resource Development Ministry in India was started in the year -
(1) 1950 (2) 1985 (3) 1990 (4) 2000

Ans. [2]

Q.51 The States of western part of India are -
(1) Punjab, Haryana (2) Bihar, West Bengal
(3) Chattis Garh, Maharashtra (4) Gujarat, Rajasthan

Ans. [4]

- Q.52** The origin of the Himalaya is considered as such from the -
(1) Indian Ocean (2) Arab Sagar (3) Tethis Sagar (4) Ganga Sagar
Ans. [3]
- Q.53** Out of the following the special feature of Thar Desert is -
(1) Excess Air Pressure (2) Military Importance
(3) Dense Population (4) Industrialization
Ans. [2]
- Q.54** The best stores of Natural gas are available in the states -
(1) Rajasthan - Gujarat (2) Maharashtra – Uttar Pradesh
(3) Punjab – Uttaranchal (4) Haryana – Chattis Garh
Ans. [1]
- Q.55** The ‘Swarnim Chaturbhuj’ Project is related with
(1) Railways (2) Roads (3) Dams (4) Rivers
Ans. [2]
- Q.56** ‘Federalism’ mean more than one level of Govts. in a country; How many levels of Govt. are there in our country
(1) Two (2) Three (3) Four (4) Five
Ans. [1]
- Q.57** Out of the following which one is the task of state govt.
(1) Foreign Policy (2) To Start New Railway line
(3) To issue 1000 Rs. Note (4) Public Health
Ans. [4]
- Q.58** Your tenant is not vacating your house. In this condition in which court you will enter your case
(1) Criminal (2) Civil (3) Revenue (4) Familial
Ans. [2]
- Q.59** Who decides the minimum wages of Labours -
(1) Labour organisation (2) Private Companies (3) Govt. (4) Contractors
Ans. [3]
- Q.60** From which year the Lok-Sabha Election started in India -
(1) 1948-49 (2) 1949-50 (3) 1950-51 (4) 1951-52
Ans. [4]
- Q.61** The state flower of Rajasthan is -
(1) Rohida (2) Lotus (3) Rose (4) Sunflower
Ans. [1]

Q.62 Who has the power to pass an ordinance out of the following -

- (1) Supreme Court (2) Prime Minister
(3) President (4) Chief Election Commissioner

Ans. [3]

Q.63 To whom the Council of Ministers is collectively responsible -

- (1) Lok Sabha (2) Judiciary (3) Prime Minister (4) Governor

Ans. [1]

Q.64 The Protector of our constitution is -

- (1) President (2) Parliament (3) Supreme Court (4) Prime Minister

Ans. [3]

Q.65 Who controls the contingency fund of state

- (1) Chief Minister (2) Governor (3) Finance Minister (4) Auditor General

Ans. [2]

Sol. Governor

Q.66 The Registration of birth and death is not related with

- (1) Municipality (2) Municipal Council
(3) Municipal Corporation (4) Urban Improvement Trust

Ans. [4]

Sol. Urban Improvement Trust

Q.67 Ravindra Nath Tagore is known for the

- (1) Promotion of English Education (2) Critical of English Education
(3) Education in Natural Environment (4) Education in Strict discipline

Ans. [3]

Sol. Promotion of English Education

Q.68 The Founder of the Arya Samaj was

- (1) Daya nand Saraswati (2) Raja Ram Mohan Roy
(3) Jyotirav Phule (4) Vivekanand

Ans. [1]

Sol. Daya nand Saraswati

Q.69 Out of the following which one is called 'Black Gold'

- (1) Iron (2) Petroleum (3) Mercury (4) Manganese

Ans. [2]

Sol. Petroleum

Q.70 The most important centers of Jamdani weaving were
 (1) Dhaka - Lukhnow (2) Surat - Ahmedabad (3) Banaras - Orrisa (4) Jaipur – Patna

Ans. [1]

Sol. Dhaka - Lukhnow

Q.71 The value of $\frac{8}{9} - \left(\frac{1}{6} - \frac{1}{3} - \frac{1}{6}\right) \div \frac{1}{3}$ is

- (1) $\frac{7}{9}$ (2) $\frac{8}{3}$ (3) $\frac{2}{3}$ (4) $\frac{1}{9}$

Ans. [2]

Sol. $\frac{8}{9} - \left(\frac{1}{6} - \frac{1}{6}\right) \div \frac{1}{3} = \frac{8}{9} \times \frac{3}{2} = \frac{8}{3}$

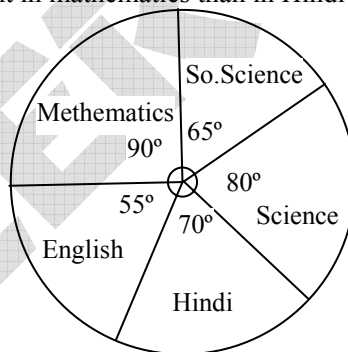
Q.72 Present ages of Anil and Sunil are in the ratio 4 : 5. Eight years from now the ratio of their ages will be 5:6. Find their present ages

- (1) 16 yrs., 20 yrs. (2) 25 yrs., 30 yrs. (3) 20 yrs., 25 yrs. (4) 32 yrs., 40 yrs.

Ans. [4]

Sol. $\frac{4x+8}{5x+8} = \frac{5}{6} \therefore x = 8 \therefore 4 \times 8 = 32 \text{ \& } 5 \times 8 = 40$

Q.73 The adjoining Pie Chart shows the marks scored in an examination by a student in Hindi, English, Mathematics, Social Science and Science. if the total marks obtained by the student were 540. How many marks were obtained by the student in mathematics than in Hindi ?



- (1) 30 Marks (2) 10 Marks (3) 20 Marks (4) 50 Marks

Ans. [1]

Sol. Maths $\frac{90}{360} \times 540 = 135$
 Hindi $\frac{70}{360} \times 540 = 105$

Q.74 There are 540 student in a scholl. For a P.T. drill They have to stand in such a manner that the number of rows is equal to number of Columns. How many minimum students would be left out in this arrangements

- (1) 22 Student (2) 11 Student (3) 40 Student (4) 29 Student

Ans. [2]

Sol. Remainder of $\sqrt{540} = 11$

Q.75 Find the smallest Square number that is divisible by each of the numbers 4, 9 and 10
(1) 600 (2) 3600 (3) 900 (4) 8100

Ans. [3]

Sol. 900

Q.76 A Cow and a Buffalo were bought for Rs. 8000/- each. There was a lost of 4% on the Buffalo and a profit of 8% on the Cow. Find the gain or loss Percent, on the whole transaction

(1) Loss of 4% (2) Gain of 4% (3) Loss of 2% (4) Gain of 2%

Ans. [4]

Sol. Total S.P. = $\frac{8000(108)}{100} + \frac{8000(96)}{100} = 16320/-$

Q.77 The area of a trapezium shaped field is 920 m². the distance between two Parallel sides is 30m. and one of the Parallel side is 20 m. Find the length of other Parallel side

(1) 44 m (2) 22 m (3) 88 m (4) 11 m

Ans. [1]

Sol. $960 = \frac{1}{2}(20 + x) \cdot 30$

Q.78 The floor of a building consists of 1500 rhombus shaped tiles and each of its diagonals are 45 cm. and 30 cm. in length. Find the total cost of Polishing the floor, if the cost per m² is Rs 4/-

(1) Rs.610/- (2) Rs.810/- (3) Rs.405/- (4) Rs.450/-

Ans. [3]

Sol. Total area = $\frac{1500 \times \frac{1}{2}(45 \times 30)}{100 \times 100} \text{ m}^2$
Total cost = $\frac{1500 \times 675 \times 4}{100 \times 100} = 405/-$

Q.79 Find the volume of a Cube whose surface area is 600 cm²
(1) 900 cm³ (2) 1000 cm³ (3) 1500 cm³ (4) 81000 cm³

Ans. [2]

Sol. Side = $\sqrt{\frac{\text{LSA}}{6}} = 10 \text{ cm}$
Volume = $10^3 = 1000$

Q.80 If each edge of a Cube is doubled. How many times its volume will be
(1) 3 times (2) 6 times (3) 4 times (4) 8 times

Ans. [4]

Sol. $V_0 = (1)^3 = 1$
 $V_N = (2)^3 = 8$

- Q.81** Find the value of m for which $5^m \div 5^{-3} = 5^5$
 (1) $m = 2$ (2) $m = -2$ (3) $m = 3$ (4) $m = 8$

Ans. [1]

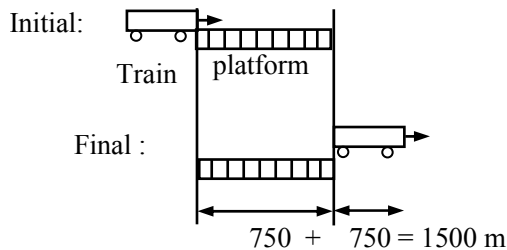
Sol. $\frac{5^m}{5^{-3}} = 5^5$
 $= 5^{m+3} = 5^5 = m = 2$

- Q.82** A train is moving at a uniform speed of 75 km/hour. Find the time required to across platform having 750 meter length. If the length of train is also 750 meter

- (1) 54 sec (2) 36 sec (3) 72 sec (4) 18 sec

Ans. [3]

Sol.



$$s = \frac{d}{t}$$

$$\Rightarrow \frac{75 \times 100}{60 \times 60} = \frac{1500}{t}$$

$$\Rightarrow t = 72 \text{ sec}$$

- Q.83** A farmer has enough food to feed 20 animals for 6 days. How long will the food last if number of animals is increased by 50%

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

Ans. [2]

Sol. $20 : 30 :: x : 6$

- Q.84** If $21'x'5$ is multiple of 9, Where ' x ' is a digit. what is the value f ' x ' ?

- (1) 6 (2) 3 (3) 0 (4) 1

Ans. [4]

Sol. 1

- Q.85** The biggest Circle that can be cut off from a Square of side 7 cm. What is the Circumference of the circle.

- (1) 7 cm (2) 11 cm (3) 22 cm (4) 14 cm

Ans. [3]

Sol. diameter = side of square = 7 cm

$$\therefore c = \pi d$$

$$= \frac{22}{7} \times 7 = 22$$

Q.86 Solid shapes are called
(1) One dimensional (2) Two dimensional (3) Three dimensional (4) All the above

Ans. [3]

Sol. Three dimension

Q.87 Find the value of $\frac{30^n \times 3^{2n} \times 2^n}{6^n \times 2^n \times 3^{3n}}$

- (1) $\left(\frac{3}{10}\right)^n$ (2) $\left(\frac{5}{3}\right)^n$ (3) $\left(\frac{10}{8}\right)^n$ (4) $\left(\frac{10}{3}\right)^n$

Ans. [2]

Sol. $\left(\frac{5}{3}\right)^n$

Q.88 Simple interest of some money for 2 years at 10% rate of interest per annum is Rs.1200. What is the difference in compound interest and simple interest if rate of interest, time and Principle amount remaining the same ?

- (1) Rs.60/- (2) Rs.120/- (3) Rs.160/- (4) Rs.90/-

Ans. [1]

Sol. $P = \frac{1200 \times 100}{100 \times 2} = 6000/-$

$$A = 6000 \left(1 + \frac{1}{10}\right)^2 = 7260$$

$$CI = 1260$$

$$\therefore 60/-$$

Q.89 A quadrilateral ABCD has four angles x^0 , $2x^0$, $\frac{5x^0}{2}$ and $\frac{7x^0}{2}$ respectively. What is the difference between the value of biggest and the smallest angles

- (1) 40° (2) 100° (3) 80° (4) 20°

Ans. [2]

Sol. 100°

Q.90 36 second, is what percentage of one hour ?

- (1) 6 (2) 0.1 (3) 0.01 (4) 1

Ans. [4]

Sol. 1