



**SAMPLE PAPER**

**Class 10**

**(Based on Class 10 Syllabus)**

**Time Allowed : 3 hrs**

**Maximum Marks : 100**

**MATHEMATICS**

**Q1. If two positive integers 'a' and 'b' are written as  $a=pq^2$  and  $b=p^3q^2$ , where 'p' and 'q' are prime numbers, then LCM(a, b) =**

- a)  $pq$                       b)  $p^2q^3$   
c)  $p^3q^2$                     d)  $p^2q^2$

Ans-c

We know that LCM = product of the highest powers of all the prime factors of the numbers  $pq^2$ ,  $p^3q^2$  is  $p^3q^2$

**Q2. Which is the least positive integer that is divisible by 20 and 24.**

- a)120                      b)360                      c)140                      d)240

Ans-a

Least positive integer divisible by 20 and 24 is

LCM of (20, 24).

$$20=2^2 \times 5$$

$$24=2^3 \times 3$$

$$\therefore \text{LCM}(20, 24) = 2^3 \times 3 \times 5 = 120$$

Thus 120 is divisible by 20 and 24

**Q3. The HCF of two consecutive numbers is ?**

- a)2    b)1    c)3    d)0

Ans-b

The HCF of two consecutive numbers is always 1.

( e.g. HCF of 24 , 25 is 1)

**Q4. The LCM of two consecutive numbers is \_\_\_\_\_.**

- a) Their sum    b) 0    c) Their difference    d) Their product

Ans-d

The LCM of two consecutive numbers is always their product..

( e.g the LCM of 24 , 25 is equal to  $24 \times 25 = 600$  )

**Q5. If the sum of the zeroes of the cubic polynomial  $4x^3 - kx^2 - 8x - 12$  is  $\frac{-3}{4}$ , then the value of 'k' is ?**

- a) 2                      b) -3                      c)  $\frac{-1}{3}$                       d) 3

Ans-b

Let  $\alpha, \beta, \gamma$  are the zeroes of the given polynomial.

Given:  $\alpha + \beta + \gamma = \frac{-3}{4} \Rightarrow \frac{-b}{a} = \frac{-3}{4} \Rightarrow \frac{k}{4} = \frac{-3}{4} \Rightarrow k = -3$

**Q6. If a pair of linear equation is consistent, then the lines will be \_\_\_\_\_.**

- a) always intersecting                      b) parallel  
c) intersecting or coincident              d) always coincident

Ans-c- intersecting or coincident

**Q7. The area of the triangle formed by  $x + 3y = 6$ ,  $2x - 3y = 12$  and the y – axis is**

- a) 16 sq.units                      b) 18 sq.units                      c) 20 sq.units                      d) 14 sq.units

Ans-b

Please see the two solutions of each of the given equations :  $x+3y=6$  ;  $2x-3y=12$

x	0	3	6
y	2	1	0

x	0	3	6
y	-4	-2	0

$\therefore$  Area of triangle =  $\frac{1}{2} \times \text{Base} \times \text{Height} = \frac{1}{2} \times 6 \times 6 = 18$  sq. units

**Q8. A quadratic equation whose one root is 3 is**

- a)  $x^2 - 5x - 6 = 0$
- b)  $x^2 + 5x - 6 = 0$
- c)  $x^2 - 5x + 6 = 0$
- d) None of these

Ans-c

$x=3$  satisfies only the equation  $x^2 - 5x + 6 = 0$

$$\text{As } (3)^2 - 5 \times 3 + 6 = 0$$

$$\Rightarrow 9 - 15 + 6 = 0$$

$$\Rightarrow 15 - 15 = 0$$

$$\Rightarrow 0$$

$$\Rightarrow \text{L.H.S.} = \text{R.H.S.}$$

**Q9. What type of equation is the following:**

$$5x^2 + 8x + 4 = 2x^2 + 4x + 6$$

- a) Linear equation
- b) Cubic equation
- c) Constant equation
- d) Quadratic Equation

Ans-d

$$\text{Given: } 5x^2 + 8x + 4 = 2x^2 + 4x + 6$$

$$\Rightarrow 5x^2 - 2x^2 + 8x - 4x + 4 - 6 = 0$$

$$\Rightarrow 3x^2 + 4x - 2 = 0$$

Here, the degree is 2, therefore it is a quadratic equation.

**Q10. The product of two successive integral multiples of 5 is 1050. Then the numbers are**

- a) 35 and 45
- b) 25 and 30
- c) 30 and 35
- d) 28 and 36

Ans-c

Let one multiple of 5 be  $x$ , then the next consecutive multiple of will be  $(x+5)$ . According to the question,

$$x(x+5) = 1050$$

$$\Rightarrow x^2 + 5x - 1050 = 0$$

$$\Rightarrow x^2 + 35x - 30x - 1050 = 0$$

$$\Rightarrow x(x+35) - 30(x+35) = 0$$

$$\Rightarrow (x-30)(x+35) = 0$$

$$\Rightarrow x-30=0 \text{ and } x+35=0$$

$$\Rightarrow x=30 \text{ and } x=-35$$

$x=-35$  is not possible therefore  $x=30$

Then the other multiple of 5 is  $x+5=30+5=35$

Then the numbers are 30 and 35.

**Q11. Progressions with equal common difference are known as \_\_\_\_\_.**

- a) Geometric progression
- b) Harmonic progression

c)Constant progression                      d)Arithmetic progression

Ans-d- Arithmetic progression

**Q12. If a, b and c are in A.P., then the relation between them is given by which of the following .**

- a)  $2a = b + c$                       b)  $a = b + c$   
c)  $2c = a + c$                       d)  $2b = a + c$

Ans- d

If a, b and c are in A.P., then  $b = \frac{a+c}{2} \Rightarrow 2b = a+c$

**Q13. The list of numbers – 10, – 6, – 2, 2, ..... is**

- a)an AP with  $d = 4$   
b)not an AP  
c)an AP with  $d = 8$   
d)an AP with  $d=-4$

Ans-a

Given: list of numbers – 10, – 6, – 2, 2, .....

Here,  $-6 - (-10) = -6 + 10 = 4$

$-2 - (-6) = -2 + 6 = 4$

$2 - (-2) = 2 + 2 = 4$

Therefore, the list of given numbers is an A.P with common difference 4.

**Q14. If  $\Delta ABC \sim \Delta EDF$  and  $\Delta ABC$  is not similar to  $\Delta DEF$ , then which of the following is not true?**

- a)  $BC \cdot DE = AB \cdot FD$ .  
b)  $BC \cdot DE = AB \cdot EF$ .  
c)  $BC \cdot DE = AB \cdot EF$   
d)  $BC \cdot EC = AC \cdot FC$

Ans-c

If  $\Delta ABC \sim \Delta EDF$  and  $\Delta ABC$  is not similar to  $\Delta DEF$ , then  $BC \cdot DE = AB \cdot EF \Rightarrow \frac{BC}{EF} = \frac{AB}{DE}$

Here according to the given condition,  $BC \cdot DE \neq AB \cdot EF$

**Q15. The values of 'y' for which the distance between the points (2, – 3) and (10, y) is 10 units is**

- a) – 3, – 9  
b) 3, 9  
c) 3, -9  
d) None of these

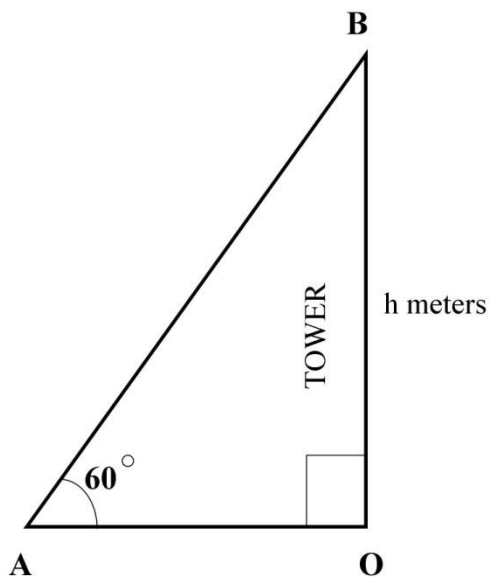
Ans-c

Let one point be A (2,-3) and 2nd point is B (10,y) and the distance between point A and point B =  
 $AB = 10$  units  
 $\therefore AB^2 = (x_2 - x_1)^2 + (y_2 - y_1)^2$   
 $\Rightarrow (10)^2 = (10 - 2)^2 + (y + 3)^2$   
 $\Rightarrow 100 = 64 + y^2 + 9 + 6y$   
 $\Rightarrow y^2 + 6y - 27 = 0$   
 $\Rightarrow y^2 + 9y - 3y - 27 = 0$   
 $\Rightarrow (y + 9)(y - 3) = 0$   
 $\Rightarrow y = 3$  and  $y = -9$

**Q16.** From a point on the ground which is 15m away from the foot of a tower, the angle of elevation is found to be  $60^\circ$ . What will be the height of the tower ?

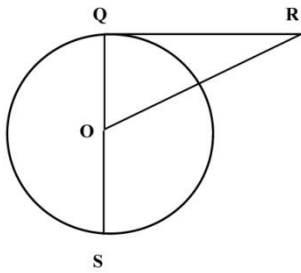
- a)  $203\text{m}$
- b)  $103\text{m}$
- c)  $15\sqrt{3}$
- d) None of these

Ans-c



Let the height of the tower be h metres.  
 In triangle AOB,  $\tan 60^\circ = \frac{OB}{OA}$   
 $\Rightarrow \tan 60^\circ = \frac{h}{15}$   
 $\Rightarrow \sqrt{3} = \frac{h}{15}$   
 $\Rightarrow h = 15\sqrt{3}$   
 Therefore, the height of the tower is  $15\sqrt{3}$  metres.

**Q17.**In the given figure, RQ is a tangent to the circle with centre O. If SQ = 6 cm and QR = 4 cm, then what is OR is equal to ?



- a)3cm      b)7 cm      c)5cm      d)10 cm

Ans-c

Here SQ = 6 cm, then OQ= OS =6/2 = 3 cm [Radii] and  $\angle Q = 90^\circ$

Now, in triangle OQR,  $OR^2 = QR^2 + OQ^2$

$$\Rightarrow OR^2 = (4)^2 + (3)^2 = 16 + 9 = 25$$

$$\Rightarrow OR = 5 \text{ cm}$$

**Q18.Fill in the blanks:**

The value of sin A or cos A \_\_\_\_\_, whereas the value of sec A or cosec A is \_\_\_\_\_.

- a)is always greater than 1 ; equal to one  
 b)never exceeds 0 ; is less than 1  
 c) never exceeds 1 ; always greater than or equal to 1  
 d)None of these

Ans-c

**Q19. Fill in the blanks:**

The tangent to a circle is \_\_\_\_\_ to the line joining the center and the point of contact.

- a)parallel  
 b)perpendicular  
 c)diagonal  
 d)None of these

Ans-b

**Q20. Fill in the blanks:**

A solid obtained by revolving a right angled triangular lamina about any side (other than the hypotenuse) is called a \_\_\_\_\_.

- a)spherical sphere  
 b)cylinder  
 c) right circular cone

d)None of the above

Ans-c

**Q21. When the medians of a triangle are concurrent. What is their point of concurrence called?**

a)Center

b)Centroid

c)Collinear

d)None of these

Ans-b

**Q22. What is a polynomial of degree zero called ?**

a)Linear polynomial

b)Quadratic polynomial

c)Bi-quadratic polynomial

d)Constant polynomial

Ans-d

**Q23. What is the mean of the first 10 prime numbers ?**

a)1.40

b)130

c)12.90

d)16.80

Ans-c

The first 10 prime numbers are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29

∴ Mean = Sum of first 10 prime numbers/10

= (2+3+5+7+11+13+17+19+23+29) / 10

= 129 / 10

= 12.9

**Q24. The probability that a leap year will have 53 Sundays or 53 Mondays is ?**

a)  $\frac{4}{7}$

b)  $\frac{8}{12}$

c)  $\frac{3}{7}$

d)  $\frac{4}{53}$

Ans-c

Leap year contains 366 days = 52 weeks + 2 days

52 weeks contain 52 Sundays and 52 weeks contain 52 Mondays

We will get 53 Sundays or 53 Mondays if one of the remaining two days is a Sunday or Monday

Total possibilities for two days are:

(Sunday, Monday), (Monday, Tuesday), (Tuesday, Wednesday), (Wednesday, Thursday),

(Thursday, Friday), (Friday, Saturday), (Saturday, Sunday)

Number of Total possible outcomes = 7

Number of possible outcomes either Sunday or Monday or Both = 3

Required Probability =  $\frac{3}{7}$

**Q25. A card is drawn from a pack of 52 cards at random. The probability of getting neither an ace nor a king card is ?**

a)  $\frac{4}{13}$

b)  $\frac{11}{13}$

c)  $\frac{2}{52}$

d)  $\frac{1}{52}$

Ans- b

a) Number of Total outcomes = 52

Number of aces and Number of kings = 4 + 4 = 8

Number of cards except ace and king = 52 – 8 = 44

Required Probability =  $\frac{44}{52} = \frac{11}{13}$

## SCIENCE

**Q26. Suppose you dissolve some crystals of copper sulphate in water. Then what will be the colour of the solution so obtained?**

- a) Red                      b) Brown                      c) Blue                      d) Pink

Ans-c-Blue

**Q27. What is the colour of zinc metal ?**

- a) Brown                      b) Silver                      c) White                      d) Grey

Ans-d-Grey

**Q28. Which one of the following will be required to identify the gas evolved when diluted HCl reacts with zinc metal?**



- a) Litmus Solution      b) Water      c) Lime Water      d) A burning splinter

Ans-d- A burning splinter

**Q29. The basic nature of Sodium Hydroxide (NaOH) is due to the presence of which one of the following ions in the solution ?**

- a) Chloride Ions      b) Hydroxide ions      c) Sodium Ions      d) None of these

Ans-b- Hydroxide ions

**Q30. Why does a bud of petunias become reddish purple after the first shower of rain ?**

- a) The first shower causes the buds to bloom.  
b) The first shower has acid .  
c) The first shower has proteins  
d) All of these

Ans-b- The first shower has acid .

**Q31. What will happen when magnesium is treated with water?**

- a) It does not react with water  
b) It reacts violently with water  
c) It reacts less violently with water  
d) Bubbles of hydrogen gas formed stick to the surface of calcium

- a) C & D      b) C & B      c) All of these      d) Only A

Ans-a

**Q32. Which of the following factors does not affect photosynthesis ?**

- a) Temperature      b) Wind velocity  
c) Carbon dioxide concentration in the air      d) Intensity of Light

Ans-b- Wind Velocity

**Q33. Which of the following contains less nitrogenous waste ?**

- a) Renal Artery      b) Pulmonary Artery      c) Renal Vein      d) None of these

Ans-c- Renal Vein

**Q34. What does Enzyme thromboplastin convert ?**

- a) Thrombin to fibrinogen  
b) Thrombin to prothrombin  
c) Prothrombin to Thrombin  
d) All of these

Ans-c- Prothrombin to Thrombin

**Q35. Name the body part where anaerobic respiration takes place ?**

- a) Cytoplasm      b) Protoplasm      c) Chloroplast      d) None of these

Ans-a- Cytoplasm

**Q36. Which hormone brings about contraction of the uterine wall leading to labour pain?**

- a) Ultracin      b) Estrogen      c) Progesterone      d) None of these

Ans-c - Progesterone

**Q37. Which part of the brain is concerned with memory, will and power?**

- a) Fore Brain      b) Hind Brain      c) Mid Brain      d) None of these

Ans- a-Fore Brain

**Q38. Which of the following plant is unisexual?**

- a) Mustard      b) Water Melon      c) Hibiscus      d) All of these

Ans-b-Water Melon

**Q39. Which of the following is not a hermaphrodite?**

- a) Leech      b) Earthworm      c) Starfish      d) Bee

Ans-d-Bee

**Q40. What type of mirrors are generally used to demonstrate reflection of light in Laboratories?**

- a) Concave Mirror      b) Convex Mirror      c) Plane Mirror      d) All of these

Ans-c-Plane Mirror

**Q41. Find the incorrect statement**

- a) Concave mirrors are used for the purpose of shaving.  
b) Concave mirrors are used by doctors to focus light inside the ear or inside the mouth for medical examination  
c) Convex Mirrors are used by dentists to see large images of teeth of patients.  
d) Convex mirrors are used as rear view mirrors in cars, motorcycles, scooters etc

- a) A      b) A & D      c) C      d) All are correct

Ans-c

**Q42. Which of the following materials cannot be used to make a lens?**

- a) Plastic      b) Clay      c) Glass      d) Water

Ans-b-Clay

**Q43. Which of the following is good conductor of electricity?**

- a) Metal      b) Rubber      c) Mica      d) All of these

Ans-a-Metal

**Q44. Which of the following fuse should be used for an electric iron of 1kw when operated at 220v?**

- a)1A                      b)2A                      c)5A                      d)7A

Ans-c-5A

**Q45. In an electric circuit the direction of electric current moves**

\_\_\_\_\_.

- a) from negative to negative  
b) from positive to positive  
c) from positive to negative  
d) any direction

Ans-c- from positive to negative

**Q46. Which of the following is not an example of a biomass energy source?**

- a)Wood                      b)Coal                      c)Gobar gas                      d)Atomic Energy

Ans-d-Atomic Energy

**Q47. Artificial satellites and space probes mainly depend upon which source of energy?**

- a)Geothermal Energy                      b)Wind Energy                      c)Solar Energy d)None of these

Ans-c-Solar energy

**Q48. Which has a lowest ignition temperature ?**

- a)LPG                      b)Petrol                      c)Kerosene                      d)Diesel

Ans-a-LPG

**Q49. What is UASB?**

- a) United anaerobic sledge Blanket  
b) Up flow aerobic sledge Blanket  
c) United Assistance Surveillance Board  
d) Upflow Anaerobic Sledge Blanket

Ans-d

**Q50. Which disease is caused by inhalation of cotton fibres?**

- a) pneumoconiosis  
b) Silicosis  
c) Byssinosis  
d) Cancer

Ans-c- Byssinosis

**GENERAL KNOWLEDGE**

**Q51. In which state is Hazaribagh National park is located?**

- a) Bihar                      b) Uttar Pradesh              c) Rajasthan                      d) Jharkhand

Answer : d

**Q52. Where is the Prince of Wales Museum located?**

- a) New Delhi                      b) Mumbai                      c) Kolkata                      d) Chennai

Answer : b

**Q53. M.S. Gopla Krishnan is a famous exponent of which musical instrument?**

- a) Violin                      b) Sitar                      c) Veena                      d) Tabla

Answer : a

**Q54. Nirad C. Chaudhuri is a famous \_\_\_\_\_?**

- a) Film Director                      b) Writer                      c) Classical singer                      d) None of these

Answer : b

**Q55. Who is the author of Ghasiram Kotwal?**

- a) Munshi Premchand                      b) Amrita Preetam  
c) Vijay Thendulkar                      d) R K Narayan

Answer : b

**Q56. In which year did Nadir Shah invade India?**

- a) 1688                      b) 1739                      c) 1811                      d) 1487

Answer : b

**Q57. Where did Aurobindo Ghosh set up the Aurobindo Ashram?**

- a) Kolkata                      b) Puducherry                      c) Cuttak                      d) Berhampur

Answer : b

**Q58. In which year did Gandhiji start the Champaran Campaign against the British Rule?**

- a) 1901                      b) 1932                      c) 1917                      d) 1911

Answer : c

**Q59. Typhoid affects which organ?**

- a) Liver                      b) Nervous system                      c) Intestine                      d) Stomach

Answer : c

**Q60. Who developed the vaccine of Chickenpox?**

- a) Edward Jenner      b) Robert Kock      c) James Watson      d) Ronald Ross

Answer : a

**Q61. What is the study of cells called?**

- a) Cryobiology      b) Cytology      c) Bryology      d) Ethology

Answer : b

**Q62. How many times was Gulzari Lal Nanda the Prime Minister of India?**

- a) One      b) Two      c) Three      d) None

Answer : b

**Q63. Who is the current Chief Election Commissioner of India?**

- a) B.B. Tandon      b) Nasim Zaidi      c) V.S. Sampath      d) S.Y. Quraishi

Answer : b

**Q64. What is the full form of W.P.I?**

- a) World Population Institute      b) Western Pulmonary Institute  
c) Wholesale Price Index      d) None of these

Answer : c

**Q65. Jnanpith award is awarded for \_\_\_\_\_?**

- a) Outstanding Social work      b) Outstanding Literary Work  
c) Excellence in Education      d) Sporting achievement

Answer : b

**Q66. A Tale of Two Cities, the famous book by Charles Dickens is based on which two cities ?**

- a) Washington & New York      b) London and Paris  
c) New York and Paris      d) London and Geneva

Answer : b

**Q67. Who was the last Governor General of India?**

- a) Lord Mount Batten      b) Rajendra Prasad  
c) C. Rajagopalachari      d) Lord Irvin

Answer : c

**Q68. Who invented Dynamite?**

- a) Albert Einstein      b) Alfred Noble      c) Ruther Ford      d) Thomas Edison

Answer : b

**Q69. Where were the 2014 Commonwealth games held ?**

- a) Glasgow                      b) Buson                      c) London                      d) New Delhi

Answer : a

**Q70. Which Indian hockey player has a road named after him in Germany ?**

- a) Dhyan Chand                      b) Dhanraj Pillai                      c) Roop Singh                      d) Zafar Iqbal

Answer: c

**Q71. Kaziranga National Park is situated in which state ?**

- a) Himachal Pradesh                      b) Assam                      c) Meghalaya                      d) Madhya Pradesh

Answer : b

**Q72. Who was the first Indian woman to conquer Mount Everest?**

- a) Santosh Yadav                      b) Jyothi Randhawa                      c) M. Poorna                      d) Bachendri Pal

Answer : d

**Q73. Who was the first Indian President to sail in a Submarine?**

- a) Pranab Mukherjee                      b) V V Giri                      c) Dr Abdul Kalam                      d) K R Narayan

Ans-c

**Q74. Who was the first woman from India to be conferred Sainthood by the Vatican ?**

- a) Sister Nirmala                      b) Mother Teresa                      c) Sister Alphonsa                      d) None of these

Answer : c

**Q75. The first battle of Panipat took place in which year ?**

- a) 1526                      b) 1761                      c) 1621                      d) 1521

Answer : a

#### **MENTAL ABILITY**

**Q76. Let us assume that the first and second letters of the word "DEPRESSION" are interchanged. Then the third and fourth letters, the fifth and sixth and so on. Now which of the following letter will be the seventh letter from the right.**

- a) R                      b) S                      c) P                      d) E

Answer : c

The new sequence of letters in the word is :

EDRPSEISNO

Therefore the seventh letter from the right is P.

**Q77. Which of the following does not belong to the group?**

- a) Bread                      b) Chocolate                      c) Cake                      d) Biscuit

Answer-b

Chocolate is not baked, whereas all the other items are.

**Q78. If in a certain code IMAGE is written as 913175, then how will SMALL be written in the same code?**

- a) 913714                      b) 19131212                      c) 2121391                      d) 39421563

Answer-b

Answer- The code here is based on the alphabet nos. For example, A is 1, B is 2 and so on. Therefore, if this is the case IMAGE is 913175.

Therefore, SMALL will be 191311212.

**Q79. Suppose the value of PAPER in a certain code is 56 and that of SHEET is 57, then what will be the value of PARROT in the same code.**

- a) 80                      b) 58                      c) 65                      d) 88

Answer-d

Assuming the code here is based on the alphabet nos. For example, A is 1, B is 2 and so on. Then, the value of PAPER will be the sum of all the nos.

$$P(16) + A(1) + P(16) + E(5) + R(18) = 56$$

$$SHEET : S(19) + H(8) + E(5) + E(5) + T(20) = 57$$

$$PARROT: P(16) + A(1) + R(18) + R(18) + O(15) + T(20) = 88$$

**In the following questions, there is some relationship between the two terms to the left of :: and the same relationship is applicable to the two terms on the right. One of these two terms on the right is missing. Find out this term.**

**Q80. ACE : FHJ :: OQS : \_\_\_\_\_**

- a) TVX                      b) VTX                      c) UWZ                      d) TUR

Answer-a

Each letter of the first group has been moved five steps forward in order to obtain the corresponding letter of the second group.

$$A+5=F ; C+5=H ; E+5=J$$

Hence if the same relationship applies to OQS, the correct term will be TVX

**Q81. Dda : aDD :: Rrb : \_\_\_\_\_.**

- a) aDR                      b) bRR                      c) BRR                      d) BBr

Answer -b

The order of the letters of the first group is reversed first (Hence Dda is reversed to adD).Then the middle letter is replaced by its capital letter.Therefore it will become aDD.Similarly Rrb will become bRR.

**Answer the following two questions based on the English Alphabets series (A - Z)**

**Q82. Which letter is exactly midway between N and S?**

- a) No letter                      b) L                                      c) M                                      d) O

Answer :a

N O P Q R S

There is no one middle letter.

**Q83.Which letter will be the 9<sup>th</sup> letter to the left of the ninth letter from the right, if the first half of the alphabet series is reversed?**

- a) D                                      b) E                                      c) F                                      d) I

Answer :b

The first half means A to M.This is reversed.The rest remains the same.The new series will be:

M L K J I H G F E D C B A N O P Q R S T U V W X Y Z

The ninth letter to the left of the ninth letter from the right will therefore be E.

**Q84.From the word 'LAPROSCOPY', how many independent words can be made without changing the order of the letters and using each letter only once?**

- a) One                                      b) Two                                      c) Three                                      d) Four

Answer :b

Two words-LAP & COPY

**Q85.In the following series ,one term is wrong.Which is it?**

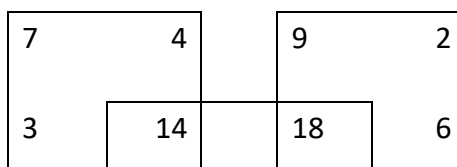
1 ,2, 4, 8, 16 , 32 , 64 , 96

- a)8                                      b)16                                      c)96                                      d)All are correct

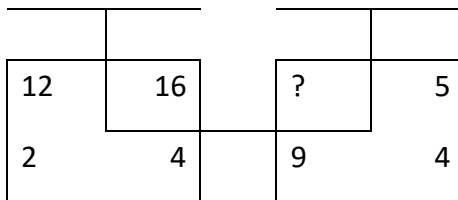
Answer: c

Each term is double of the preceeding term.Hence after 64,it should be 128 and not 96.

**Q86. Find out the missing number in the diagram below.**







a) 45

b) 30

c) 52

d) 18

Answer : b

The logic is as under:

$$(7 \times 4 \times 3) / 6 = 14$$

$$(9 \times 2 \times 6) / 6 = 18$$

$$(12 \times 2 \times 4) / 6 = 16$$

$$\text{Therefore } (5 \times 4 \times 9) / 6 = 30$$

**Q87.** The following question is followed by 3 statements. Please determine which statement /statements is / are sufficient to answer the question, out of the options given.

**Question :** What is Varun's share of profit in a Joint Venture?

**Statement I :** Aniket started a business by investing Rs.80,000/-.

**Statement II :** Varun joined him after 3 months.

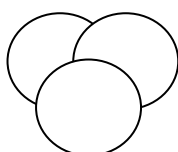
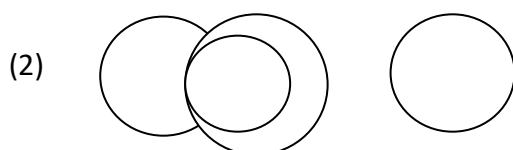
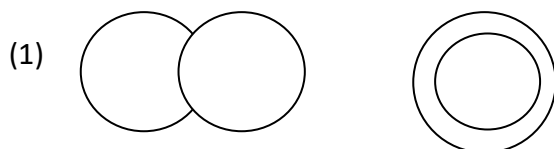
**Statement III :** Anil joined after 4 months with a capital of Rs.1,20,000/- and received Rs.6,000/- as his share of profit.

- a) Only I & III are sufficient.
- b) Only II & III are sufficient.
- c) All I, II and III together are necessary
- d) The question cannot be answered with I, II & III

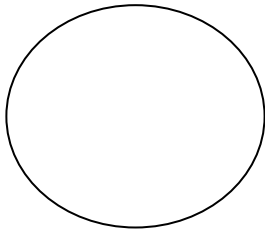
Answer : d

Varun's investment amount is not given. Hence the question cannot be answered.

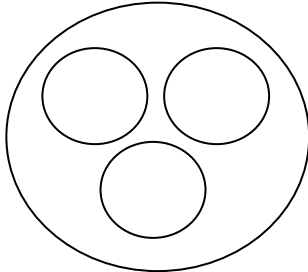
**Q88.** Which of the following diagram correctly represents the relationship between wood, door, window and chair.



(3)



(4)



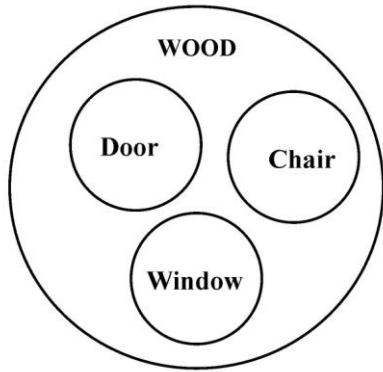
a) (1)

b) (2)

c) (3)

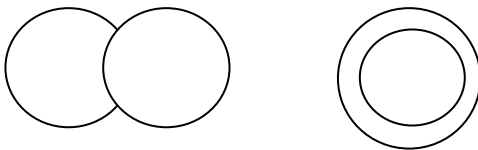
d) (4)

Answer :d

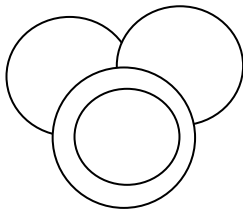


**Q89. Which of the following diagrams represents correctly relation between the following. Roses, Jasmine, fruits and pomegranates.**

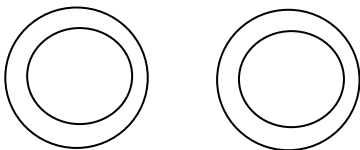
(1)

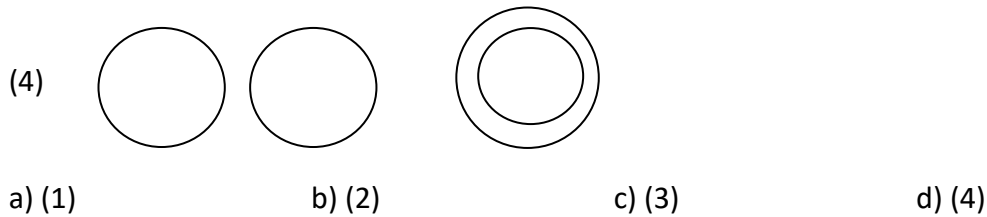


(2)

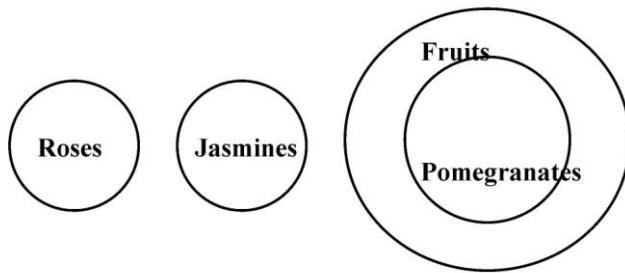


(3)





Answer :d



**Q90. Harish is a bird shooter. He went out in the morning to shoot birds. While returning he had a bag with birds in it. He was asked about how many birds he had in his bag. He replied that there were all sparrows but six; all pigeons but six and all ducks but six. How many birds did he have in all.**

- a) 25                      b) 9                      c) 18                      d) 27

Answer-b

There were all sparrows but six means that six birds were not sparrows, but were pigeons and ducks.

ie Pigeons + Ducks = 6

Similarly;

Sparrows + Ducks = 6 ;and

Sparrows + Pigeons = 6

So we have 2(pigeons + ducks + sparrows) = 18

or pigeons + ducks + sparrows = 18/2 = 9

**Q91. A bus leaves for Mumbai every thirty minutes from Hyderabad. Arjun enquired about the bus from the information desk. He told that a bus had already left 10 minutes ago and the next bus will leave at 9:35 a.m. At what time was this information given to Arjun?**

- a) 9:10 a.m.                      b) 8:55 a.m.                      c) 9:15 a.m.                      d) 9:08 a.m.

Answer-c

Since the next bus is at 9:35 am, this means the previous bus was at 9:05 am. If the bus had already left 10 minutes ago, this means that Arjun got information at 9:15 am.

**Q92. Find the missing number in series: 3, 6, 24, 192, \_\_\_\_\_.**

- a)2782      b)3072      c)292      d)2702

Answer-b

The series goes like this:

$$3 \times 2 = 6 ; 6 \times 4 = 24 ; 24 \times 8 = 192 ; 192 \times 16 = 3072$$

**Q93. Arrange the following words in alphabetical order and find which word comes in the middle ?**

**Select ,Seldom, Selfish, Seller, Send, Second, Section**

- a)Seldom      b)Select      c)Seller      d)Section

Answer-b

The given words can be arranged in the alphabetical order as :

Second, Section, Seldom, Select, Selfish, Seller, Send

Therefore , select comes in the middle.

**Q94.Pointing towards a woman in the photograph, John said “the only daughter of her grandfather (Paternal) is my wife”. How is John related to that woman ?**

- a) Uncle    b) Father    c) Maternal uncle    d) Brother

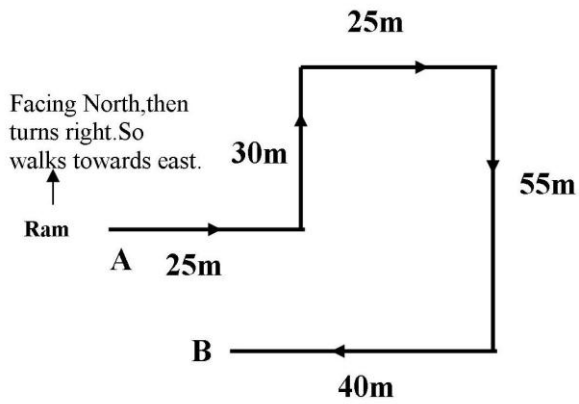
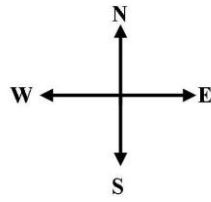
Answer-a

Rajesh is the husband of woman’s father’s sister.

**Q95.Ram faces towards the North. Turning to his right he walks 25 metres. He then turns to his left and walks 30 meters. Next, he moves 25 meters to his right. He then turns to his right again and walks 55 meters. Finally, he turns to the right and moves 40 meters. In which direction is he now from his starting point ?**

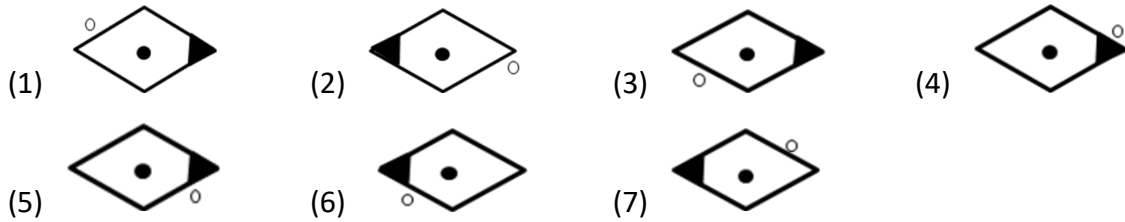
- a) South      b)South West      c)South East      d)North West

Answer-c



Point B is his ending point. He is South East to his starting point.

**Q96. Which is the odd one out?**



- a) 2                      b) 3                      c) 5                      d) 7

Answer : c

No 5 is different.

1 is same as 2 rotated. 3 is same as 7 rotated. 4 is same as 6 rotated.

**Q97. Find the missing number ?**

<b>1</b>	<b>2</b>	<b>3</b>
<b>11</b>	<b>7</b>	<b>5</b>
<b>120</b>	<b>45</b>	<b>?</b>

- a) 18                      b) 16                      c) 15                      d) 20

Answer-b

In each column, the third number is the difference of the squares of the other two numbers.

$$\text{So } 120 = 11^2 - 1^2 = 121 - 1 = 120$$

$$\text{Similarly ; } 5^2 - 3^2 = 25 - 9 = 16$$

**Q98. Find the odd one out from the following four?**

- a)EHKN                                      b)KNRU                                      c)GJMP                                      d)MPSV

Answer-b

In all the others ,the next letter is 3 ahead ie  $E + 3 = H + 3 = K + 3 = N$

In KNRU:

$$K + 3 = N + 4 = R + 3 = U$$

**Q99. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then what is A's relationship to D?**

- a) Grandmother                      b) Grandfather                      c) Daughter                      d) Granddaughter

Answer : c

A is the sister of B and B is the son/daughter of C. So A is the daughter of C.

**Q100. Sunil is now 6 times as old as his son. Four years from now , the sum of their ages will be 43 years. What is Sunil's present age ?**

- a)31 years                                      b)29 years                                      c)30 years                                      d)35 years

Answer-c

Let present age of Sunil's Son = x yrs

Age of Sunil: 6 x yrs

4 yrs from now:

$$(6x + 4) + (x + 4) = 43$$

$$7x = 43 - 8$$

$$7x = 35$$

$$x = 35 / 7 = 5 \text{ yrs}$$

$$\text{Hence Sunil's age} = 6 \times 5 = 30 \text{ yrs}$$