



SAMPLE PAPER

Based on Class 9 Syllabus

Time Allowed : 3 hrs

Maximum Marks : 100

Mathematics

Q1. Probability of an event can be

- (a) -0.7 B) 11 (c) 1.001 (d) 0.6

Answer – (d)

Q2. If the perpendicular distance of a point P from x -axis is 5 units, then the point P has

- (a) x -coordinate = -5 or 5 (b) y -coordinate = 5
(c) y -coordinate = -5 (d) y -coordinate = 5 or -5

Answer – (d)

Q3. A cube of side 6 cm is painted on all its 6 faces with red colour. It is then broken up into 216 smaller identical cubes. What is the ratio of $N_0 : N_1 : N_2$. Where, N_0 = number of smaller cubes with no coloured surface. N_1 = number of smaller cubes with 1 red face. N_2 = number of smaller cubes with 2 red faces.

- (a) 3 : 4 : 6 (b) 3 : 4 : 5 (c) 4 : 6 : 3 (d) 6 : 4 : 3

Answer – (c)

Q4. A person's present age is two-fifth of the age of his mother. After 8 years, he will be half of the age of his mother. How old is the mother at present ?

- (a) 32 years (b) 36 years (c) 40 years (d) 48 years

Answer – (c)

Q5. The perimeter of a circle is equal to the perimeter of a square. Then, the ratio of their

areas respectively, is _____.

- (a) 4 : 1 (b) 11 : 7 (c) 14 : 11 (d) 22 : 7

Answer – (c)

Q6. The given below question is followed by three statements. You have to study the question and the statements and decide which of the statement(s) is/are necessary to answer the question.

What is the capacity of the cylindrical tank ?

- I. The area of the base is 61,600 sq. cm.
- II. The height of the tank is 1.5 times the radius.
- III. The circumference of base is 880 cm.

- (a) I and II (b) II and III
(c) Any two of the three (d) II and either I or III

Answer – (d)

Q7. The mean of 40 items is 35 and if each item is multiplied by 'a' then the new mean will be

- (a) $35a$ (b) $35 + a$ (c) 40 (d) $40 + a$

Answer – (a)

Q8. Find the remainder when $9x^3 - 3x^2 + x - 5$ is divided by $x - 2$.

- (a) 3 (b) -3 (c) 2 (d) -2

Answer – (b)

Q9. Which of the following numbers is the additive inverse of $7/29$

- (a) $29/7$ (b) $-29/7$ (c) $-7/29$ (d) $7/29$

Answer – (c)

Q10. If $4^{44} + 4^{44} + 4^{44} + 4^{44} = 4^x$, then x is _____.

- (a) 45 (b) 44 (c) 176 (d) 11

Answer –(a)

Q11. A hollow garden roller of height 63 cm, with a girth of 440 cm is made of iron 4 cm thick. The volume of the iron used is

- (a) 54982 cm^3 (b) 56372 cm^3 (c) 57636 cm^3 (d) 107712 cm^3

Answer –(d)

Q12. An article is sold at a certain price. By selling it at $\frac{2}{3}$ of that price one loses 10%. Find the gain percent at original price.

- (a) 35% (b) 40% (c) 45% (d) 50%

Answer –(a)

Q13. 1100 boys and 700 girls are examined in a test; 42% of the boys and 30% of the girls pass. The percentage of the total students who failed is ____.

- (a) 58% (b) 62% (c) 64% (d) 78%

Answer –(b)

Q14. A group of students decided to collect as many paise from each member of the group as the number of members. If the total collection amounts to ` 59.29, the number of members in the group is ____.

- (a) 57 (b) 67 (c) 77 (d) 87

Answer –(c)

Q15. A library has an average of 510 visitors on Sundays and 240 on other days. The best estimate average number of visitors per day in a month of 30 days beginning with a Sunday is ____.

- (a) 250 (b) 276 (c) 280 (d) 285

Answer –(d)

Q16. If the radius of a circle is decreased by 50%, find the percentage decrease in its area.

- (a) 60% (b) 75% (c) 70% (d) 80%

Answer –(b)

Q17. Arun and Sajal are friends. Each has some money. If Arun gives ` 30 to Sajal, then Sajal will have twice the money left with Arun. But, if Sajal gives ` 10 to Arun, then Arun will have

thrice as much as is left with Sajal. How much money does Arun and Sajal have ?

- (a) ` 62, ` 34 (b) ` 60, ` 34 (c) ` 60, ` 30 (d) ` 62, ` 30

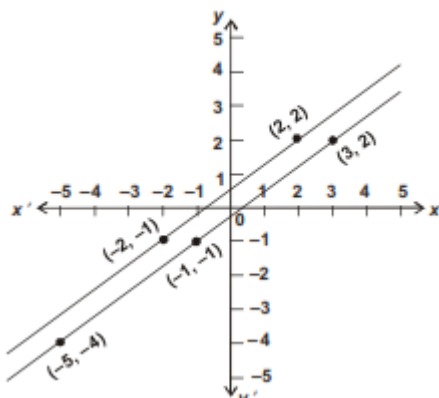
Answer –(a)

Q18. The perimeter of a circle is equal to the perimeter of a square. Then, the ratio of their areas respectively, is _____.

- (a) 4 : 1 (b) 11 : 7 (c) 14 : 11 (d) 22 : 7

Answer –(c)

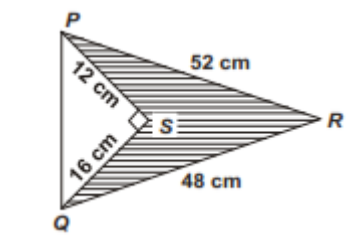
Q19. The equation representing the given graph is



- (a) $7x + 2y = 11$; $y - 2x = 3$ (b) $2x + 7y = 11$; $4x + (35y/2) = 25$
 (c) $3x - 7y = 10$; $8y - 6x = 4$ (d) $3x - 4y = 1$; $8y - 6x = 4$

Answer –(d)

Q20.. In the adjoining figure, the area of shaded portion is ____.

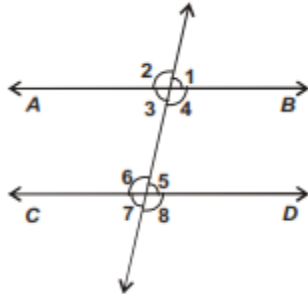


- (a) 98 cm² (b) 480 cm² (c) 384 cm² (d) 380 cm²

Answer –(c)

Q21. In the given figure, $AB \parallel CD$ If $-1 = (2x + y)^\circ$ and $-6 = (3x - y)^\circ$,

then the measure of $\angle 2$ in terms of y is ____.



- (a) $(108 - y)^\circ$ (b) $(2 - y)^\circ$ (c) $(1 - y)^\circ$ (d) $(100 + y)^\circ$

Answer –(a)

Q22. Choose the odd numeral pair/group.

- (a) $13 - 21$ (b) $19 - 27$ (c) $15 - 23$ (d) $16 - 24$

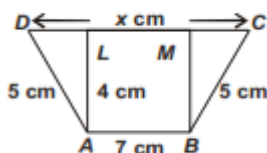
Answer –(d)

Q23..A group of students decided to collect as many paise from each member of the group as the number of members. If the total collection amounts to ` 59.29, the number of members in the group is ____.

- (a) 57 (b) 67 (c) 77 (d) 87

Answer –(c)

Q24. In the given figure (not drawn to scale), $ABCD$ is a trapezium in which $AB = 7$ cm, $AD = BC = 5$ cm, $DC = x$ cm and the distance between AB and DC is 4 cm. Then the value of x is ____.



- (a) 13 cm (b) 16 cm (c) 19 cm (d) 15 cm

Answer –(a)

Q25. In a row of forty children, P is thirteenth from the left end and Q is ninth from the right end. How many children are there between P and R if R is fourth to the left of Q ?

- (a) 12 (b) 13 (c) 14 (d) 15

Answer –(c)

Science:

Q26. A man travels a distance of 20 km from his home to office, and 10 km towards his house back. Then the displacement covered by the man in the whole trip is

- (a) 30 km (b) zero km (c) 10 km (d) 50 km

Answer –(c)

Q27. An object travels 20m in 5 sec and then another 40m in 5 sec. What is the average speed of the object?

- (a) 12m/s (b) 6m/s (c) 2m/s (d) 0 m/s

Answer –(a)

Q28. An object of mass 2 kg is sliding with a constant velocity of 4 m/s on a frictionless horizontal table. The force required to keep the object moving with the same velocity is

- (a) 32N (b) 0 N (c) 8N (d) 2N

Answer –(b)

Q29. Rocket works on the principle of conservation of

- (a) Mass (b) Energy (c) momentum (d) velocity

Answer –(c)

Q30. In the following example, try to identify the number of times the velocity of ball changes:

“A football player kicks a football to another player of his team who kicks the football towards the goal. The goalkeeper of the opposite team collects the football and kicks it towards a player of his own team.”

- (a) Five times (b) Three times (c) Four times (d) Six times

Answer –(b)

Q31. A hammer of mass 500 g, moving at 50m/s, strikes a nail. The nail stops the hammer in a very short time of 0.01 s. The force of the nail on the hammer is

- (a) 3500N (b)2500N (c)500N (d) 1000N

Answer –(b)

Q32.The value of acceleration due to gravity at the highest point of the motion of the body when a body is projected upwards

- (a)0 m/s² (b)9.8 m/s²upwards (c)9.8 m/s² downwards (d)6 m/s²

Answer –(c)

Q34.Weight of an object on the surface of the moon is

- (a) 1/5 that on the surface of the earth (c)1/3 that on the surface of the earth
(b) ½ that on the surface of the earth (d)1/6 that on the surface of the earth

Answer –(d)

Q35.If the distance between objects increases, then the gravitational force between the objects will:

- (a)Increase (b) decrease (c)remain same (d)none of these

Answer –(b)

Q36.When a spring is compressed work is done on it.Its elastic potential energy

- (a)Decreases (b)Disappears (c)Increases (d)Does not change

Answer –(c)

Q37.The value of 1KWH is

- (a)3.6X 10⁵J (b)3.6X 10⁷ J (c)3.6 X 10⁶ J (d)3.6 X 10⁹ J

Answer –(d)

Q38.Sound waves are

- (a) Transverse in nature (b) Longitudinal in nature
(c) Electromagnetic in nature (d) Magnetic in nature

Answer –(d)

Q39.The distance between any two compressions or rarefactions in a longitudinal wave is

- (a) Half wavelength (b) One wavelength
(c) Twice the wavelength (d) One fourth wavelength

Answer –(b)

Q40. Which of the following has highest intermolecular forces of attraction?

- a. Water at room temperature (c) Ethyl alcohol
(b) CO₂ gas (d) Iron metal

Answer –(d)

Q41. The process of evaporation causes:

- (a) Cooling (b) Heating (c) Dryness (d) None of the above

Answer –(a)

Q42. Dry ice on heating produces:

- (a) Liquid CO₂ (b) Gas CO₂ (c) Liquid water (d) Water vapour

Answer –(b)

Q43. Which of the following represents a chemical change?

- (a) Extraction of copper from copper pyrites (b) Distillation of water
(c) Melting of wax (d) Dissolution of salt in water

Answer –(a)

Q44. Different components can be separated from petroleum by:

- (a) Filtration (b) Simple distillation (c) Chromatography (d) Fractional distillation

Answer –(d)

Q45. The electronic configuration of Cl(17) is:

- (a) 2,8,7 (b) 2,8,2,5 (c) 2,2, 8,5 (d) 2,2,5,8

Answer –(a)

Q46. Which of the following does not have 8 valence electrons:

- (a) He (b) Ne (c) Ar (d) Cl⁻

Answer –(a)

Q47. Identify the correct symbol of gold:

- (a) Go (b) Gd (c) Ge (d) Au

Answer –(d)

Q48.18g of water is electrolyse(d) The weight of oxygen obtained is:

- (a)16g (b) 8g (c)4g (d) 1g

Answer –(a)

Q49.The formula of Calcium phosphate is:

- (a) CaPO_4 (c) $\text{Ca}_3(\text{PO}_4)_2$
(b) $\text{Ca}(\text{PO}_4)_2$ (d) $\text{Ca}_2(\text{PO}_4)_3$

Answer –(a)

Q50.Which of the following elements would accept an electron readily:

- (a) F (b) Cl (c) Br (d) I

Answer –(b)

General Knowledge

Q.51.The Alps range of mountains are situated on which continent ?

- (a) Asia (b) Europe (c) North America (d) Africa

Answer – (b)

Q.52. Where are the Headquarters of the International Labour Organization situated ?

- (a) New Delhi (b) New York (c) Geneva (d) Cairo

Answer – c

Q.53.Who is the author of the book-The Alchemist ?

- (a) Paul Scott (b) Graham Greene (c) Thomas Hardy (d) Paulo Coelho

Answer – d

Q.54.In which year was the third battle of Panipat fought ?

- (a) 1857 (b) 1797 (c) 1804 (d) 1761

Answer – (d)

Q.55.Who succeeded Steve Jobs in Apple Inc ?

- (a)John Houston (b) Satya Nadella (c) Tim Cook (d) Jan Koum

Answer – (c)

Q.56. In which year did World War 1 commence ?

- (a) 1910 (b) 1914 (c) 1934 (d) 1929

Answer – (b)

Q.57. When was the Noble Prize first awarded ?

- (a) 1945 (b) 1965 (c) 1901 (d) 1910

Answer – (c)

Q.58. Who invented the Safety Pin ?

- (a) James Hargreaves (b) William Hurst (c) sir Issac Pitam (d) James Watt

Answer – (b)

Q.59. Who succeeded Dr Rajendra Prasad as the President of India ?

- (a) Shri V V Giri (b) Dr Zakir Hussain (c) Dr S. Radhakrishnan (d) Shri R. Venkataraman

Answer – (c)

Q.60. Who is the current Chief Election Commissioner of India ?

- (a) Naveen Chawla (b) H.S. Brahma (c) T.N. Seshan (d) V.S. Sampath

Answer – (b)

Q.61. Who is the current Chairman of the Tata Group ?

- (a) Noel Tata (b) Ratan Tata (c) Vikram Pandit (d) Cyrus Mistry

Answer – (d)

Q.62. Which team won the cricket IPL tournament in 2015 ?

- (a) Chennai Superkings (b) Kolkatta KnightRiders (c) Rajasthan Royals (d) Mumbai Indians

Answer – (d)

Q.63. The Durand line is situated between which 2 countries ?

- (a) India and Pakistan (b) USA and Canada
(c) Pakistan and Afghanistan (d) North Korea and South Korea

Answer – (c)

Q.64. Which country's airline is named Garuda ?

- (a) India (b) Sri Lanka (c) Singapore (d) Indonesia

Answer – (d)

Q.65 .Who won the Men’s singles title at Wimbledon in 2015 ?

- (a) Novak Djokovic (b) Andy Murray (c) Roger Federer (d) Richard Gasquet

Answer – (a)

Q.66 .Greece has been in the news recently due to the country’s financial crisis. Who is its current Prime Minister.

- (a) Andreas Papandreou (b) Alexis Tsipras (c) Antonis Samaras (d) Yanis Varoufakis

Answer – (b)

Q.67. Who is the author of The Republic written in 360 BC?

- (a) Aristotle (b) Machiavelli (c) Plato (d) Leonardo da Vinci

Answer – (c)

Q.68. Which was the largest diamond ever mined ?

- (a) Cullinan (b) Kohinoor (c) Vargas (d) Allnat

Answer – (a)

Q.69. The book ,Agony and Ecstasy, by Irving Stone is based on the life of which famous Italian Artist ?

- (a) Michelangelo (b) Picasso (c) Caravaggio (d) Puccini

Answer – (a)

Q.70. When was Coca Cola invented ?

- (a) 1905 (b) 1893 (c) 1935 (d) 1897

Answer – (b)

Q.70. Where did ‘Karoake ‘ originate ?

- (a) China (b) Korea (c) USA (d) Japan

Answer – (d)

Q.71. What makes up most of the atmosphere of the planet Venus ?

- (a) Carbon Dioxide (b) Oxygen (c) Hydrogen Dioxide (d) Helium

Answer – (a)

Q.72. When was the province of Bengal partitioned by the British ?

- (a) 1900 (b) 1906 (c) 1910 (d) 1905

Answer – (d)

Q.73. Which city will be hosting the 2016 Olympic Games. ?

- (a) Tokyo (b) Paris (c) Rio de Janeiro (d) Montreal

Answer – (c)

Q.74. In which city is the Wailing Wall located ?

- (a) Tel Aviv (b) Ankara (c) Florence (d) Jerusalem

Answer – (d)

Q.75. Where is the famous Louvre Museum located ?

- (a) Venice (b) Paris (c) Milan (d) Rome

Answer – (b)

Q76. A is B's Sister.

C is B's Mother.

D is C's Father.

E is D's Mother

Then how is A related to D ?

- (a) Grand Mother (b) Grand Daughter (c) Grand Son (d) Daughter

Answer : (b) – Grand Daughter

A is the Sister of B and B is the daughter of (C) So A is daughter of (C) Also D is the Father of (C) Hence A is the grand daughter of (D)

Q77. How many pairs of letters in the word "CHAIRS" have as many letters between them in the word as in the alphabet ?

- (a) 3 (b) 2 (c) 4 (d) 1

Answer : (b – 2)

Letters in the word

C H A

R S

Letters in the Alphabet

C B A

R S

Q78. Today is Anita's birthday. One year from today, she will be twice as old as she was 12 years ago. How old is Anita today ?

- (a) 18 yrs (b) 21 yrs (c) 22 yrs (d) 25 yrs

Answer : (d – 25 yrs)

Suppose Anita's age today = X yrs
Then Anita's age after 1 year = (X + 1) yrs
Therefore, $X + 1 = 2(X - 12)$

$$X + 1 = 2x - 24$$

$$X - 2X = - 24 - 1$$

$$- X = - 25$$

$$\text{Or } X = 25$$

Q79. All the boys in a class are standing in a straight line. One boy is 19th in order from both the ends. How many boys are there in the class ?

- (a) 38 (b) 39 (c) 37 (d) 40

Answer : (c – 37)

i.e. $18 + 1 + 18 = 37$ boys

Q80. How many independent meaningful words can be made from the word "LAPAROSCOPY". The words must be made without changing the order of letters and using each letter only once ?

- (a) 2 (b) 3 (c) 1 (d) 4

Answer : (a – 2 : LAP and COPY)

Q81. If the following letters in the word DEPRESSION were interchanged, then which letter would be the Seventh letter from the right ?

- First and Second letter.
- Third and Fourth letter.
- Fifth and Sixth letter and so as.

- (a) S (b) P (c) D (d) R

Answer : (b – P)

DEPRESSION will be converted to E D R P S E I S N O

Q82. If in a certain code, CORPORATIONS is written as PROCTAROSNOI, then how will you write JUDICIAL in the same code ?

- (a) IDUJLAIC (b) UJIDLAIC (c) UJIDICLA (d) IDUJICLA

Answer : (a – IDUJLAIC)

→ C O R P is P R O C
 → O R A T is T A R O
 → I O N S is S N O I

C O R P O R A T I O N S
 P R O C T A R O S N O I

i.e. The code is each set of 4 letters in written in reverse. Hence JUDICIAL will be

→ J U D I is I O U J
 → C I A L is L A I C

Hence, IDUJLAIC

Q83. If the code for MAP is ODT, what is the code for TIN ?

- (a) WMS (b) VLR (c) UKQ (d) RLV

Answer : (b – VLR)

Word - M A P
 Code - O D T

Word - T I N
 Code - V L R

M's code is + 1 alphabet (N)
 A's code is + 2 alphabet (B,C)
 P's code is + 3 alphabet (Q, R, S)

T's code is + 1 alphabet (U)
 I's code is + 2 alphabet (J, K)
 N's code is + 3 alphabet (O, P, Q)

If LEARNT is IYLMGX, then what is to code for the following 2 Questions?

Q84. Code for TEAR

- (a) PMLX (b) XYLM (c) LMGP (d) IYTX

Answer : (b – XYLM)

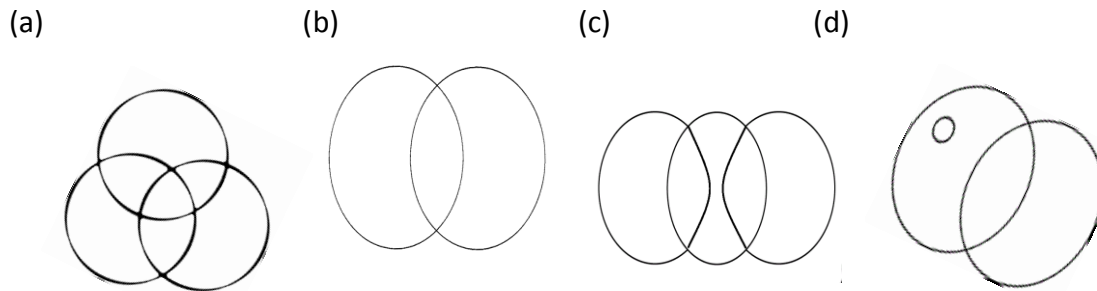
L	E	A	R	N	T
I	Y	L	M	G	X

Q85. In the same code as Q No 84, what will XLIY stand for ?

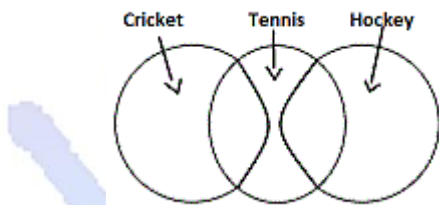
- (a) PLAN (b) EARN (c) TALE (d) RING

Answer (c – TALE)

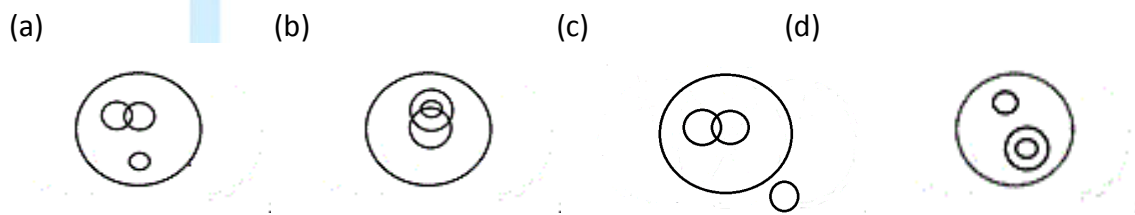
Q86. Some of the cricket players are tennis players, some tennis players are hockey players, no cricket player is a hockey player. Which diagram correctly represents the above statements?



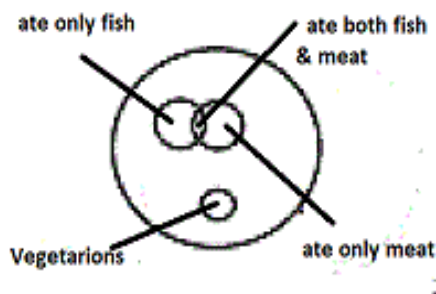
Answer (c)



Q87. In a lunch, both chicken and meat were served. Some took only chicken and some only meat. There were also a few vegetarians who did not take either. The rest accepted both chicken and meat. Which of the following logic diagrams correctly reflects this situation?



Answer – (a)



Q88. How many times do the hands of a clock coincide in a day?

- (a) 21 (b) 24 (c) 22 (d) 20

Answer : (c)

Generally

- Hands of a clock coincide only once every hour.
- However, between 11^o Clock and 10^o Clock, they coincide only once.
- Therefore, the hands of a clock coincide 11 times in 12 hrs.
- Hence in 24 hrs, they coincide $11 \times 2 = 22$ times

Q89. The bus for Bangalore leaves every 25 minutes. The last bus for Bangalore had already left 10 minutes to 2 PM. When will the next bus leave for Bangalore ?

- (a) 02.05 PM (b) 02.15 AM (c) 02.10 PM (d) 02.15 PM

Answer : (d)

The interval between 2 buses = 25 minutes
 Last Bus left at = 01.50 PM
 Next Bus will leave at 01.50 PM + 25 minutes i.e. 02.15 PM

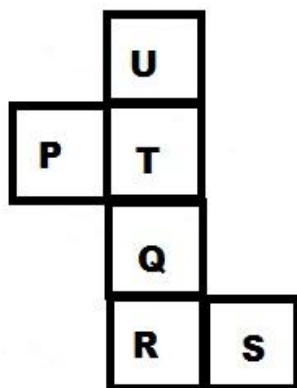
Q90. How may times from 5 AM to 5 PM, are the hands of a clock at right angles ?

- (a) 20 (b) 10 (c) 18 (d) 22

Answer : (d)

The hands are at right angles 22 times in every 12 hrs.

See the diagram below which gives the plane view of a cube. Then answer the 3 questions below :-



Q91. Which face will be opposite to face "T" after folding the cube ?

- (a) P (b) Q (c) R (d) U

Answer : (c)

Q92. Which face will be on top if face "T" is at the bottom ?

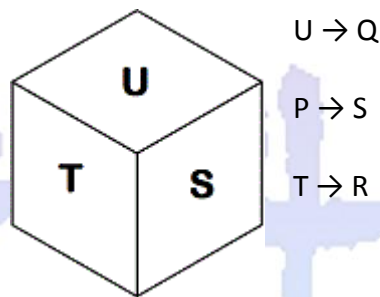
- (a) Q (b) R (c) S (d) U

Answer : (b)

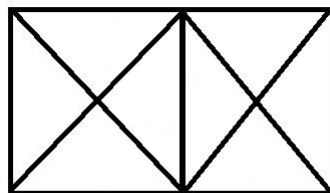
Q93. Which two faces will be opposite to each other ?

- (a) P & R (b) Q & S (c) P & U (d) Q & U

Answer : (d)

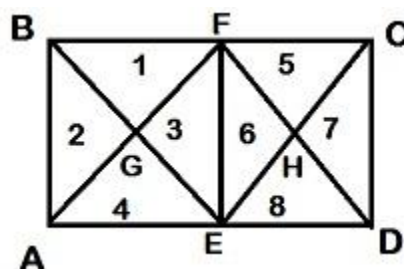


Q94. How many triangles does the following figure have ?



- (a) 12 (b) 18 (c) 15 (d) 20

Answer : (b)



Simplest Triangles – 8
FBE, FEA, EAB, ABF, FCD, CDE, DEF, EFC – 08

AFD and BEC – 2
Total = 8+8+2 = 18

Q95. What comes next ?

A, I, P, V, A, E, ?

- (a) F (b) G (c) H (d) I

Answer : (c)

+8 +7 +6 +5 +4 +3
A → I → P → V → A → E → H

Q96. What comes next ?

258, 130, 66, 34, 18, 10, ?

- (a) 16 (b) 8 (c) 6 (d) 4

Answer : (c)

258 130 66 34 18 10 6
┌───┬───┬───┬───┬───┬───┬───┐
÷ 2+1 ÷ 2+1 ÷ 2+1 ÷ 2+1 ÷ 2+1 ÷ 2+1

Identify the following words based on clues given.

Q97. A small pool of water?

- (a) RMAF (b) ADYC (c) UDLEPD (d) RCNTA

Answer : (C) – PUDDLE

Q98. An east African country?

- (a) NANZKCT (b) IANZTAAN (c) NYAENK (d) KCDMRST

Answer : (b) – TANZANIA

Q99. A town in UK is famous for studying?

- (a) FDOXRO (b) ONNOOL (c) MNCYW (d) RTNMC

Answer : (a) – OXFORD

Q100. Suppose BELT in code is written as MRIC and SUM is written as TBM. Then how will SMELT be written in that code.

- (a) RTNCV (b) IARTC (c) NTRCV (d) TARIC

Answer : (d) – TARIC

2015 - 2016
YATIT