



IIT ASHRAM

JEE MAIN || JEE ADVANCED || MEDICAL || FOUNDATION

KHOJ-2019 ANSWER KEY WITH SOLUTION CLASS - 5

PART - I		PART - II		PART - III			
Q. No.	Answer	Q. No.	Answer	Q. No.	Answers	Q. No.	Answers
1	B	1	D	1	C	31	C
2	C	2	D	2	B	32	A
3	C	3	D	3	B	33	C
4	B	4	A	4	B	34	A
5	B	5	A	5	A		
6	B	6	D	6	B		
7	D	7	D	7	C		
8	A	8	D	8	C		
9	D	9	C	9	B		PART - IV
10	C	10	C	10	C	1	B
11	C	11	D	11	A	2	B
12	A	12	B	12	B	3	D
13	C	13	B	13	D	4	D
14	A	14	B	14	B	5	D
15	A	15	B	15	C	6	C
16	A	16	A	16	A	7	C
17	A	17	D	17	B	8	B
18	A	18	C	18	A	9	D
19	A	19	B	19	C	10	B
20	D	20	A	20	D	11	C
		21	D	21	B	12	C
		22	C	22	A	13	A
		23	B	23	D	14	D
		24	A	24	C	15	A
		25	A	25	B	16	C
		26	C	26	D		
		27	C	27	A		
		28	A	28	B		
		29	A	29	D		
		30	C	30	C		

PART - I

1.

Sol. (b)

Each letter in the word is moved one step forward to obtain the corresponding letter of the code.

M $\xrightarrow{+1}$ N Similarly, B $\xrightarrow{+1}$ C

A $\xrightarrow{+1}$ B O $\xrightarrow{+1}$ P

D $\xrightarrow{+1}$ E M $\xrightarrow{+1}$ N

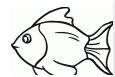

R $\xrightarrow{+1}$ S B $\xrightarrow{+1}$ C


A $\xrightarrow{+1}$ B A $\xrightarrow{+1}$ B

S $\xrightarrow{+1}$ T Y $\xrightarrow{+1}$ Z

2.

Sol. (c)

 lives in water and  called

 , So answer is



3.

Sol. (c)

He started his practice from 13 sept and finished on 29th sep.

He didn't practice on 19th and 26th sept. = 2 days

Total number of days from 13th sept is 29 sept = 17 days

Total practice days = 17 - 2 = 15 days

4.

Sol. (b)

Numbers in the given pattern differ by 11, so the best alternative in the place of question mark is $45 + 11 = 56$.

5.

Sol. (b)

The letters A, R and L occur twice in PARTICULARLY.

The answer is L, because it appears twice in PARTICULARLY and once in TERRIBLE.

6.

Sol. (b)



so, answer is fruit

7.

Sol. (d)

By observation

8.

Sol. (a)

Total number of balls = 3

Total number of lollipops = 4

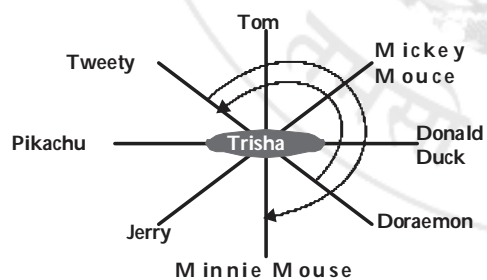
∴ Total number of combination = $3 \times 4 = 12$

9.

Sol. (d)

When she makes $\frac{1}{2}$ turn to her left, she faces tweety,

Again when she turns $\frac{5}{8}$ she faces minniemouse



10. (c)

According to Ayan his possible date of dance could be 9th sept, 10th sept, 11th sept

According to his sister his dance date is an even number.

∴ Ayan's dance completion date is 10 sept.

11.

Sol. (c)

Alphabets between W and M are 12
 W T S D F H K G C P N V M

12.

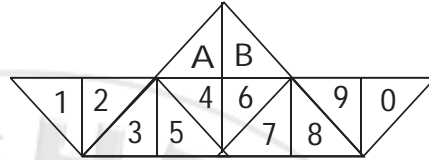
Sol. (a)

Triangles are given below

1, 2, 3, 4, 5, 6, 7, 8, 9, O, A, B

AB, 12, 35, 46, 78, 90

A4, B6, 354A, B678, 354AB678



13.

Sol. (c) By observation

14.

Sol. (a)

Rohit secured fourth Position

15.

Sol. (a)

Pattern (1) Pattern (2) Pattern (3)Pattern (n)

4 8 124n

∴ Pattern (6)

$$4 \times 6 = 24$$

16.

Sol. (a)

Walk is by foot unlike the rest by transport.

17.

Sol. (a)

$$15 \text{ } \ominus = 3 \text{ } \omin� \Rightarrow 1 \text{ } \omin� = 5 \text{ } \ominus$$

Now

$$1 \text{ } \omin� + 7 \text{ } \omin� = 12 \text{ } \omin� = 2 \text{ } \boxplus$$

Now

$$12 \text{ } \omin� = 2 \text{ } \boxplus$$

$$\therefore 1 \text{ cube} = 6 \text{ spheres} \quad \Rightarrow 5 \text{ cubes} = 30 \text{ spheres}$$

18.

Sol. (a)

Six days ago: Friday

Five days ago: Saturday

Four days ago: Sunday

Three days ago: Monday

Two days ago: Tuesday

One day ago: Wednesday

 \Rightarrow Today the day is Thursday. \Rightarrow Hence, answer is option (a).

19.

Sol. (a)

The letter just on the left side of 'P' means the letter which comes before 'P', i.e. 'O'.

So, answer is option (a).

20.

Sol. (d)

It takes the same number of days (100 days)

So, answer is option (d)

PART - II

1.

Sol. (d)

3 digit number

Starting from 3 → 357, 375 = 2 numbers

Starting from 5 → 537, 573 = 2 numbers

Starting from 7 → 735, 753 = 2 numbers

Total = 6 numbers

2.

Sol. (d)

$$\therefore 5 \times \square = 175$$

$$\square = \frac{175}{5}$$

$$\square = 35$$

$$\therefore \square \div \star = 5$$

$$35 \div \star = 5$$

$$\star = 7$$

$$\text{So } \star + \star + \square = 7 + 7 + 35 = 49$$

3.

Sol. (d)

By counting = 16 (in one trolley)

In five trolley = $5 \times 16 = 80$

4.

Sol. (a)

Total earning of stall R on

Saturday and Sunday = $196 + 245 = 441$

5.


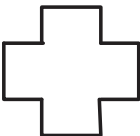
Sol. (a)

Earning of S - Earning of P

$$[486 + 510] - [278 + 352]$$

$$996 - 630 = 366$$

6. (d)

In fig  and  have both parallel and perpendicular lines

7.

Sol. (d)

$$\text{LCM}(9, 12) = 36$$

First two common multiples are 36 and 72 their sum $36 + 72 = 108$

8.

Sol. (d)

$$\begin{array}{r} 96 \\ \times 89 \\ \hline 864 \\ 7680 \\ \hline 8544 \end{array}$$

$$P + Q + R = 8 + 6 + 4 = 18$$

9.

Sol. (c) 5,05,05,050

10.

Sol. (c) $\frac{19}{8}$

11.

Sol. (d)

$$\begin{array}{r} 1445 \\ \times 78 \\ \hline 11560 \\ 101150 \\ \hline 112710 \end{array}$$

12.

Sol. (b) Total members = 2 boys + 1 girl = 3

$$\text{girls} = \frac{1}{3} \text{ of } 3 = 1$$

13. (b)

Total Hexagons = 25

$$\text{unshaded} = \frac{2}{5} \text{ of total} = \frac{2}{5} \times 25 = 10$$

$$\text{So, shaded} = \text{total-unshaded} = 25 - 10 = 15$$

14.

Sol. (b)

Point of concurrence (By definition)

15.

Sol. (b)

$$\therefore 1 \text{ cm} = \frac{1}{100} \text{ m}$$

$$\therefore \frac{228000}{100} = 2280 \text{ m}$$

$$\text{and } 1 \text{ m} = \frac{1}{1000} \text{ km}$$

$$\therefore \frac{2280}{1000} = 2.28 \text{ km}$$

16. (a)

Total journey in 3 hours

$$\begin{array}{r} 64 \quad . \quad 324 \\ 58 \quad . \quad 056 \\ + 62 \quad . \quad 008 \\ \hline 184 \quad . \quad 388 \end{array}$$

$$= 184 \text{ km and } 388 \text{ m} = 184.388 \text{ km}$$

17.

Sol. (d) $6000 \times 50 = 3,00,000$

18. (c)

One hundred twenty three millions eighty thousands six hundreds three

19. (b)

Greatest 8 digit number = 99999999

smallest 9 digit number = 100000000

sum = 99999999 + 100000000

$$= 19,99,99,999$$

20. (a)

$$(i) \text{ DCLV} = 500 + 100 + 50 + 5 = 655$$

$$(ii) \text{ XLVI} = 40 + 6 = 46$$

$$(iii) \text{ MDCL} = 1000 + 500 + 100 + 50 = 1650$$

$$\therefore (iii) \text{ is wrong}$$

21. (d)

Factors of 156 are 1, 2, 3, 4, 6, 12, 13, 26, 39, 52, 78, 156

22. (c)

 $684 > 68.4 > 6.84 > 0.684$ $R > Q > S > P$

23. (b)

In one hour, hour hand covers = 30° \therefore In 10 hours, hour hand cover = $30 \times 10 = 300^\circ$

24.

Sol. (a)

$$\begin{array}{r} 526 \ . \ 800 \\ - 287 \ . \ 930 \\ \hline 238 \ . \ 870 \end{array}$$

 \therefore 238.870

So P and Q are 238 and 870 respectively

25.

Sol. (a)

 $36^\circ\text{C} - 24^\circ\text{C} = 12^\circ\text{C}$ (Maximum)

26.

Sol. (c)

Time taken by Deva = 59sec

Time taken by Harish = 68sec

Difference = $68 - 59 = 9$ sec.

27.

Sol. (c)

$$\frac{6}{10} = 0.6 \quad (\text{correct})$$

28.

Sol. (a)

(Area of square = side \times side)

29.

Sol. (a)

 $\therefore x = y - 36^\circ$

$$\therefore \text{complete angle} = 360^\circ$$

$$38^\circ + x + y = 360^\circ$$

$$38 + y - 36^\circ + y = 360^\circ$$

$$2y + 2 = 360^\circ$$

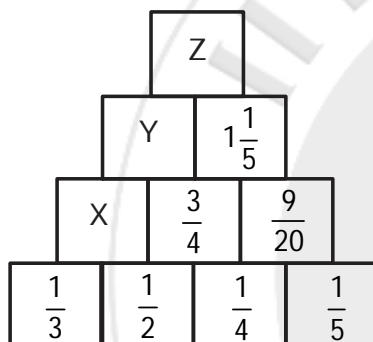
$$2y = 360 - 2$$

$$2y = 358$$

$$y = \frac{358}{2} \Rightarrow y = 179^\circ$$

30.

Sol. (c)



$$\therefore X = \frac{1}{3} + \frac{1}{2} = \frac{5}{6}$$

$$\therefore Y = X + \frac{3}{4}$$

$$Y = \frac{5}{6} + \frac{3}{4} = \frac{19}{12} \Rightarrow Y = 1\frac{7}{12}$$

$$Z = Y + 1\frac{1}{5} = 1\frac{7}{12} + 1\frac{1}{5} = \frac{19}{12} + \frac{6}{5} \Rightarrow Z = \frac{167}{60} = 2\frac{47}{60}$$

PART - III

1.

Sol. (c)

It is measured in light year.

2.

Sol. (b)

It looks blue

3.

Sol. (b)

Do more work with less effort

4.

Sol. (b)

Gravitational force

5.

Sol. (a)

$$\text{Mechanical advantage} = \frac{\text{load}}{\text{Effort}} = \frac{80}{100} = 0.8$$

6.

Sol. (b)

Heat Energy required to boil the water

7.

Sol. (c)

Light travel in straight path

8.

Sol. (c)

There are seven colour VIBGYOR

9.

Sol. (b)

Speed of light is much more than the speed of sound

10.

Sol. (c)

It is Fulcrum around which the rod of a lever moves.

11.

Sol. (a)

L.P.G stands for liquefied petroleum Gas.

12.

Sol. (b)

1000 meter = 1 km

$$\text{so } 930 \text{ meter} = \frac{1 \times 930}{1000} = 0.93 \text{ km}$$

13.

Sol. (d)

$$\text{K.E.} = \frac{1}{2}mv^2 = \frac{1}{2} \times \frac{100}{1000} \times 1 \quad \Rightarrow \quad \frac{50}{1000} = \frac{1}{20} = \frac{0.5}{10} = 0.05 \text{ Joule}$$

14.

Sol. (b)

Sun is a Star

15.

Sol. (c)

$$\text{Power} = \frac{\text{work done}}{\text{time}} = \frac{100}{20} = 5 \text{ watt}$$

16.

Sol. (a)

P.E = mgh as height increases so its P.E.

17.

Sol. (b)

Potential Energy = mgh

18.

Sol. (a)

Atom is the smallest particle of an element that still has all the properties of the element.

19.

Sol. (c)

Air pressure inside the straw becomes lower than the atmospheric pressure.

20.

Sol. (d)

Ice (solid) is changed to water (liquid) by heating.

21.

Sol. (b)

When we go up in the sky, the atmospheric pressure will decrease.

22.

Sol. (a)

Water can dissolve many substances in it, that's why it is also known as universal solvent.

23.

Sol. (d)

Air contains 78.09% nitrogen, 20.95% oxygen, 0.93% argon, 0.04% carbon dioxide, and small amounts of other gases.

24.

Sol. (c)

Anything which occupies space and has mass is called a matter.

25.

Sol. (b)

1 - Evaporation, 2 - Condensation, 3 - Freezing

26.

Sol. (d)

Carbon dioxide, sulphur dioxide and ammonia are soluble in water.

27.

Sol. (a)

Gas has no definite volume and no definite shape, it takes shape and volume of container.

28.

Sol. (b)

When the air is humid it carries water vapour, so there is no space for more, therefore evaporation rate decreases.

29.

Sol. (d)

Air is not a biotic component of environment. Biotic components are the living things that shape an ecosystem. Examples of biotic components include animals, plants, fungi, and bacteria.

30.

Sol. (c)

Amount of water vapour present in air is called humidity.

31.

Sol. (c)

Water, minerals, coal and petroleum are underground natural resources.

32.

Sol. (a)

Taj Mahal is made up of white marble (Calcium carbonate).

33.

Sol. (c)

Petroleum is also known as liquid gold or black gold.

34.

Sol. (a)

The sea water is first collected and it is kept for evaporation. When the water is fully evaporated the salt remains.

PART - IV

1.

Sol. (b) Lions and tigers are carnivorous animals

2.

Sol. (b) Tortoise is oviparous

3.

Sol. (d) Tiger roars

4.

Sol. (d) Koel doesn't build its nest

5.

Sol. (d) As its covers trunk and is hard

6.

Sol. (c) Vegetative propagation

7.

Sol. (c) minerals will not cause obesity

8.

Sol. (b) There are 4 types of teeth, its one of them

9.

Sol. (d) Vit D is prepared in presence of sun light

10.

Sol. (b) Unwanted substances in water

11.

Sol. (c) Cell can function independently

12.

Sol. (c) Amoeba is unicellular

13.

Sol. (a) They prepare their own food

14.

Sol. (d) All groups are necessary for balanced diet

15.

Sol. (a) As named by WHO

16.

Sol. (c) Another name of vit D.