

UNIT 10

General Aptitude

2011

ONE MARK

MCQ 10.1

There are two candidates P and Q in an election. During the campaign, 40% of voter promised to vote for P , and rest for Q . However, on the day of election 15% of the voters went back on their promise to vote for P and instead voted for Q . 25% of the voter went back on their promise to vote for Q and instead voted for P . Suppose, P lost by 2 votes, then what was the total number of voters ?

- (A) 100 (B) 110
(C) 90 (D) 95

MCQ 10.2

The question below consists of a pair of related words followed by four pairs of words. Select the pair that best expresses the relations in the original pair :

Gladiator : Arena

- (A) dancer : stage (B) commuter : train
(C) teacher : classroom (D) lawyer : courtroom

MCQ 10.3

Choose the most appropriate word from the options given below to complete the following sentence :

Under ethical guidelines recently adopted by the Indian Medical Association, human genes are to be manipulated only to correct diseases for which.....treatments are unsatisfactory.

- (A) similar (B) most



(C) uncommon

(D) available

MCQ 10.4

Choose the word from the from the options given below that is most opposite in meaning to the given word :

Frequency

(A) periodicity

(B) rarity

(C) gradualness

(D) persistency

MCQ 10.5

Choose the most appropriate word from the options given below to complete the following sentence :

It was her view that the country's had been by foreign techno-crafts, so that to invite them to come back would be counter-productive.

(A) identified

(B) ascertained

(C) exacerbated

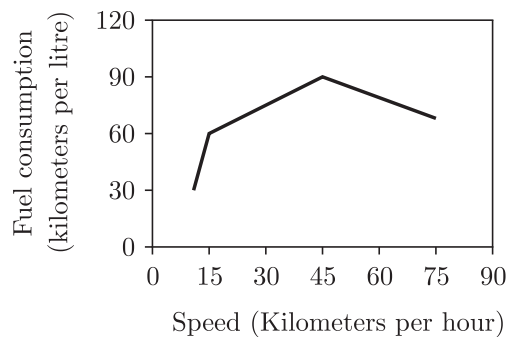
(D) analysed

2011

TWO MARKS

MCQ 10.6

The fuel consumed by a motor cycle during a journey while travelling at various speed is indicated in the graph below.



The distance covered during four laps of the journey are listed in the table below

Lap	Distance (Kilometres)	Average speed (kilometres per hour)
P	15	15
Q	75	45
R	40	75
S	10	10

From the given data, we can conclude that the fuel consumed per kilometre was least during the lap

- (A) P (B) Q
(C) R (D) S

MCQ 10.7

The horse has played a little known but very important role in the field of medicine. Horses were injected with toxins of disease until their blood build up immunities. Then a serum was made from their blood. Serums to fight with diphteria and tetanus were developed this way.

It can be inferred from the passage, that horses were

- (A) given immunity to diseases
(B) generally quite immune to diseases
(C) given medicines to fight toxins
(D) given diphtheria and tetanus serums

MCQ 10.8

The sum of n terms of the series $4 + 44 + 444 + \dots$

- (A) $(4/81)[10^{n+1} - 9n - 1]$ (B) $(4/81)[10^{n-1} - 9n - 1]$
(C) $(4/81)[10^{n+1} - 9n - 10]$ (D) $(4/81)[10^n - 9n - 10]$

MCQ 10.9

Given that $f(y) = |y|/y$, and q is any non-zero real number, the value of $|f(q) - f(-q)|$ is

- (A) 0 (B) -1
(C) 1 (D) 2



**MCQ 10.10**

Three friends R, S and T shared toffee from a bowl. R took $1/3^{\text{rd}}$ of the toffees, but returned four to the bowl. S took $1/4^{\text{th}}$ of what was left but returned three toffees to the bowl. T took half of the remainder but returned two back into the bowl. If the bowl had 17 toffees left, how many toffees were originally there in the bowl ?

- (A) 38 (B) 31
(C) 48 (D) 41

2010**ONE MARK****MCQ 10.11**

Which of the following options is the closest in meaning to the word below ?

Circuitous

- (A) Cyclic (B) Indirect
(C) Confusing (D) Crooked

MCQ 10.12

The question below consist of a pair of related words followed by four pairs of words. Select the pair that best expresses the relation in the original pair.

Unemployed : Worker

- (A) Fallow : Land (B) Unaware : Sleeper
(C) Wit : Jester (D) Renovated : House

MCQ 10.13

Choose the most appropriate word from the options given below to complete the following sentence :

If we manage to our natural resources, we would leave a better planet for our children.

- (A) unhold (B) restrain
(C) cherish (D) conserve

MCQ 10.14

Choose the most appropriate word from the options given below to complete the following sentence :

His rather casual remarks on politics.....his lack of seriousness about the subject.

- (A) masked (B) belied
(C) betrayed (D) suppressed

MCQ 10.15

25 persons are in a room 15 of them play hockey, 17 of them play football and 10 of them play hockey and football. Then the number of persons playing neither hockey nor football is

- (A) 2 (B) 17
(C) 13 (D) 3

2010**TWO MARKS****MCQ 10.16**

Modern warfare has changed from large scale clashes of armies to suppression of civilian populations. Chemical agents that do their work silently appear to be suited to such warfare ; and regretfully, their exist people in military establishments who think that chemical agents are useful fools for their cause.

Which of the following statements best sums up the meaning of the above passage ?

- (A) Modern warfare has resulted in civil strife.
(B) Chemical agents are useful in modern warfare.
(C) Use of chemical agents in ware fare would be undesirable.
(D) People in military establishments like to use chemical agents in war.

MCQ 10.17

If $137 + 276 = 435$ how much is $731 + 672$?

- (A) 534 (B) 1403
(C) 1623 (D) 1531



**MCQ 10.18**

5 skilled workers can build a wall in 20 days; 8 semi-skilled workers can build a wall in 25 days; 10 unskilled workers can build a wall in 30 days. If a team has 2 skilled, 6 semi-skilled and 5 unskilled workers, how long will it take to build the wall ?

- (A) 20 days (B) 18 days
(C) 16 days (D) 15 days

MCQ 10.19

Given digits 2, 2, 3, 3, 3, 4, 4, 4, 4 how much distinct 4 digit numbers greater than 3000 can be formed ?

- (A) 50 (B) 51
(C) 52 (D) 54

MCQ 10.20

Hari (H), Gita (G), Irfan (I) and Saira (S) are siblings (i.e. brothers and sisters.) All were born on 1st January. The age difference between any two successive siblings (that is born one after another) is less than 3 years. Given the following facts :

- Hari's age + Gita's age > Irfan's age + Saira's age.
- The age difference between Gita and Saira is 1 year. However, Gita is not the oldest and Saira is not the youngest.
- There are no twins.

In what order were they born (oldest first) ?

- (A) HSI G (B) SGHI
(C) IGS H (D) IHSG

SOLUTIONS

SOL 10.1

Let us assume total voters are 100. Thus 40 voter (i.e. 40 %) promised to vote for P and 60 (rest 60 %) promised to vote fore Q.

Now, 15% changed from P to Q (15 % out of 40)

$$\text{Changed voter from P to Q} \quad \frac{15}{100} \times 40 = 6$$

$$\text{Now Voter for P} \quad 40 - 6 = 34$$

Also, 25% changed form Q to P (out of 60%)

$$\text{Changed voter from Q to P} \quad \frac{25}{100} \times 60 = 15$$

$$\text{Now Voter for P} \quad 34 + 15 = 49$$

Thus P got 49 votes and Q got 51 votes, and P lost by 2 votes, which is given. Therefore 100 voter is true value.

Hence (A) is correct option.

SOL 10.2

A gladiator performs in an arena. Commutators use trains. Lawyers performs, but do not entertain like a gladiator. Similarly, teachers educate. Only dancers performs on a stage.

Hence (A) is correct option.

SOL 10.3

Available is appropriate because manipulation of genes will be done when other treatments are not useful.

Hence (D) is correct option.

SOL 10.4

Periodicity is almost similar to frequency. Gradualness means something happening with time. Persistency is endurance. Rarity is opposite to frequency.

Hence (B) is correct option.

SOL 10.5

The sentence implies that technocrats are counterproductive



gate
help



(negative). Only (C) can bring the same meaning.
Hence (C) is correct option.

SOL 10.6

Since fuel consumption/litre is asked and not total fuel consumed, only average speed is relevant. Maximum efficiency comes at 45 km/hr, So least fuel consumer per litre in lap Q
Hence (B) is correct option.

SOL 10.7

Option B fits the sentence, as they built up immunities which helped humans create serums from their blood.
Hence (B) is correct option.

SOL 10.8

$$\begin{aligned}
 &4 + 44 + 444 + \dots \dots \dots 4(1 + 11 + 111 + \dots \dots) \\
 &= \frac{4}{9}(9 + 99 + 999 + \dots \dots \dots) \\
 &= \frac{4}{9}[(10 - 1) + (100 - 1) + \dots \dots] \\
 &= \frac{4}{9}[10(1 + 10 + 10^2 + 10^3) - n] \\
 &= \frac{4}{9}\left[10 \times \frac{10^n - 1}{10 - 1} - n\right] \\
 &= \frac{4}{81}[10^{n+1} - 10 - 9n]
 \end{aligned}$$

Hence (C) is correct option.

SOL 10.9

$$f(y) = \frac{|y|}{y}$$

Now $f(-y) = \frac{|-y|}{y} = -f(y)$

or $|f(q) - f(-q)| = |2f(q)| = 2$

Hence (D) is correct option.

SOL 10.10

Let total no of toffees be x . The following table shows the all calculations.

	Friend	Bowl Status
R	$= \frac{x}{3} - 4$	$= \frac{2x}{3} + 4$
S	$= \frac{1}{4} \left[\frac{2x}{3} + 4 \right] - 3$ $= \frac{x}{6} + 1 - 3 = \frac{x}{6} - 2$	$= \frac{2x}{3} + 4 - \frac{x}{6} + 2$ $= \frac{x}{2} + 6$
T	$= \frac{1}{2} \left(\frac{x}{2} + 6 \right) - 2$ $= \frac{x}{4} + 1$	$= \frac{x}{2} + 6 - \frac{x}{4} - 1$ $= \frac{x}{4} + 5$

Now, $\frac{x}{4} + 5 = 17$

or $\frac{x}{4} = 17 - 5 = 12$

$$x = 12 \times 4 = 48$$

Hence (C) is correct option.

SOL 10.11

Circuitous means round about or not direct. Indirect is closest in meaning to this circuitous

- (A) Cyclic : Recurring in nature
 (B) Indirect : Not direct
 (C) Confusing : lacking clarity of meaning
 (D) Crooked : set at an angle; not straight

Hence (B) is correct option.

SOL 10.12

A worker may be unemployed. Like in same relation a sleeper may be unaware.

Hence (B) is correct option.

SOL 10.13

Here conserve is most appropriate word.





Hence (D) is correct option.

SOL 10.14

Betrayed means reveal unintentionally that is most appropriate.
Hence (C) is correct option.

SOL 10.15

Number of people who play hockey $n(A) = 15$
 Number of people who play football $n(B) = 17$
 Persons who play both hockey and football $n(A \cap B) = 10$
 Persons who play either hockey or football or both :

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

$$= 15 + 17 - 10 = 22$$

Thus people who play neither hockey nor football $= 25 - 22 = 3$
 Hence (D) is correct option.

SOL 10.16

Hence (D) is correct option.

SOL 10.17

Since $7 + 6 = 13$ but unit digit is 5 so base may be 8 as 5 is the remainder when 13 is divided by 8. Let us check.

$$\begin{array}{r} 137_8 \\ + 276_8 \\ \hline 435 \end{array} \quad \text{Thus here base is 8. Now} \quad \begin{array}{r} 731_8 \\ + 672_8 \\ \hline 6723 \end{array}$$

Hence (C) is correct option.

SOL 10.18

Let W be the total work.

$$\text{Per day work of 5 skilled workers} = \frac{W}{20}$$

$$\text{Per day work of one skill worker} = \frac{W}{5 \times 20} = \frac{W}{100}$$

$$\text{Similarly per day work of 1 semi-skilled workers} = \frac{W}{8 \times 25} = \frac{W}{200}$$

$$\text{Similarly per day work of one semi-skill worker} = \frac{W}{10 \times 30} = \frac{W}{300}$$

Thus total per day work of 2 skilled, 6 semi-skilled and 5 unskilled workers is $= \frac{2W}{100} + \frac{6W}{200} + \frac{5W}{300} = \frac{12W + 18W + 10W}{600} = \frac{W}{15}$

Therefore time to complete the work is 15 days.

Hence (D) is correct option.

SOL 10.19

As the number must be greater than 3000, it must be start with 3 or 4. Thus we have two case:

Case (1) If left most digit is 3 and other three digits are any of 2, 2, 3, 3, 4, 4, 4, 4.

(1) Using 2, 2, 3 we have 3223, 3232, 3322 i.e. $\frac{3!}{2!} = 3$ no.

(2) Using 2, 2, 4 we have 3224, 3242, 3422 i.e. $\frac{3!}{2!} = 3$ no.

(3) Using 2, 3, 3 we have 3233, 3323, 3332 i.e. $\frac{3!}{2!} = 3$ no.

(4) Using 2, 3, 4 we have $3! = 6$ no.

(5) Using 2, 4, 4 we have 3244, 3424, 3442 i.e. $\frac{3!}{2!} = 3$ no.

(6) Using 3, 3, 4 we have 3334, 3343, 3433 i.e. $\frac{3!}{2!} = 3$ no.

(7) Using 3, 4, 4 we have 3344, 3434, 3443 i.e. $\frac{3!}{2!} = 3$ no.

(8) Using 4, 4, 4 we have 3444 i.e. $\frac{3!}{3!} = 1$ no.

Total 4 digit numbers in this case is

$$1 + 3 + 3 + 3 + 6 + 3 + 3 + 3 + 1 = 25$$

Case 2 : If left most is 4 and other three digits are any of 2, 2, 3, 3, 3, 4, 4, 4.

(1) Using 2, 2, 3 we have 4223, 4232, 4322 i.e. $\frac{3!}{2!} = 3$ no

(2) Using 2, 2, 4 we have 4224, 4242, 4422 i.e. $\frac{3!}{2!} = 3$ no

(3) Using 2, 3, 3 we have 4233, 4323, 4332 i.e. $\frac{3!}{2!} = 3$ no

(4) Using 2, 3, 4 we have i.e. $3! = 6$ no

(5) Using 2, 4, 4 we have 4244, 4424, 4442 i.e. $\frac{3!}{2!} = 3$ no





(6) Using 3,3,3 we have 4333 i.e. $\frac{3!}{3!} = 1$. no.

(7) Using 3,3,4 we have 4334, 4343, 4433 i.e. $\frac{3!}{2!} = 3$ no

(8) Using 3,4,4 we have 4344, 4434, 4443 i.e. $\frac{3!}{2!} = 3$ no

(9) Using 4,4,4 we have 4444 i.e. $\frac{3!}{3!} = 1$. no

Total 4 digit numbers in 2nd case

$$= 3 + 3 + 3 + 6 + 3 + 3 + 1 + 3 + 1 = 26$$

Thus total 4 digit numbers using case (1) and case (2) is $= 25 + 26 = 51$

Hence (B) is correct option.

SOL 10.20

Let H , G , S and I be ages of Hari, Gita, Saira and Irfan respectively.

Now from statement (1) we have $H + G > I + S$

Form statement (2) we get that $G - S = 1$ or $S - G = 1$

As G can't be oldest and S can't be youngest thus either GS or SG possible.

From statement (3) we get that there are no twins

(A) HSI G : There is I between S and G which is not possible

(B) SGHI : SG order is also here and $S > G > H > I$ and $G + H > S + I$ which is possible.

(C) IGSH : This gives $I > G$ and $S > H$ and adding these both inequalities we have $I + S > H + G$ which is not possible.

(D) IHSG : This gives $I > H$ and $S > G$ and adding these both inequalities we have $I + S > H + G$ which is not possible.

Hence (B) is correct option.

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