

S P JAIN APTITUDE TEST

Time: 50 minutes

SAMPLE PAPER 1

Please fill in the following information with a ball-point pen:

STUDENT NAME

S P JAIN'S REGISTERED APPLICATION NUMBER: _____ (IF APPLIED ELSE YOUR EMAIL ID) _____

Please read instructions in the answer sheet and question booklet before answering

1. Please check the number of questions before you start answering (No. of Sections – 5)
2. All rough work to be done only on the blank sheet provided at the back of the question booklet.
Please do NOT write on the question paper
3. Laptops, calculators, slide rules, log tables, watch calculators, papers, cellular phones etc are not allowed inside the examination hall
4. You will not be allowed to leave the examination hall during the examination
5. This objective type exam is for 50 minutes
6. Any candidate found violating the instructions and receiving/giving any form of help will be disqualified

The decision of S P Jain will be final and binding on the applicant in case of any dispute.

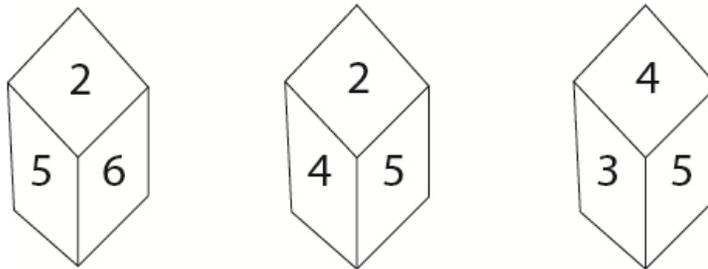
Signature of Invigilator

APPROPRIATION OF MARKS

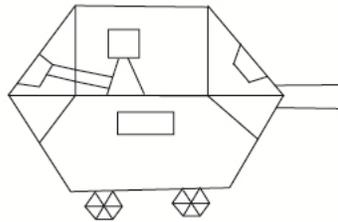
Section	No. of Questions	Marks per question	Total Marks per Section
Diagrammatic Reasoning	7	3	21
Logic	6	2	12
IQ	6	2	12
Numeracy	10	4	40
Reading Comprehension	5	3	15
Total	34		100

DIAGRAMMATIC REASONING (7Q x 3 marks = 21 marks.)

1. A regular six-sided cube is rolled out thrice, and its image from a particular angle is shown for all three times. What will be on the opposite side of 3?



- A) 1
B) 2
C) 5
D) 6
2. What is the minimum number of straight lines required to make the figure below?



- A) 46
B) 48
C) 50
D) 52

3. If the word below is reflected in a mirror, what will its mirror image look like?

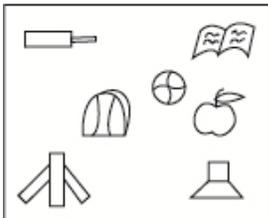
INFRINGEMENT

- A) TNEMGIRFNI
- B) TNEMDNIINI
- C) TNEMGMENT
- D) TNEMGNIINI

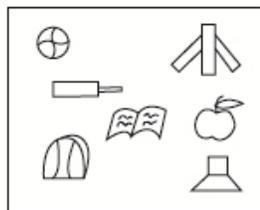
4. In which of the answer options, are all the exact components of the figure X not found?



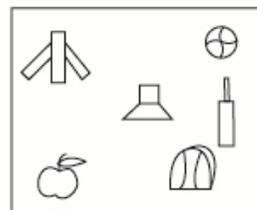
X



A



B

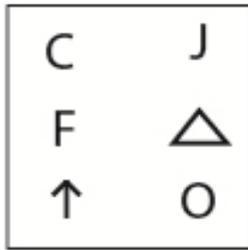
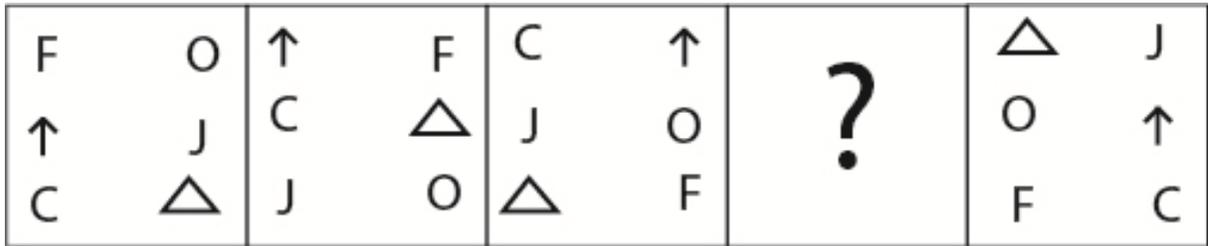


C

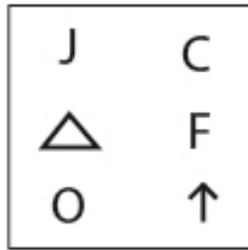


D

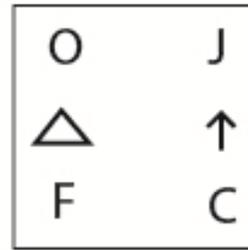
5. What will replace the question mark in the image series below such that the logic of the series is maintained?



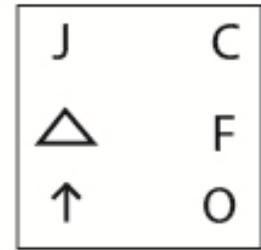
A



B

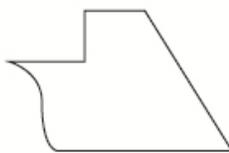
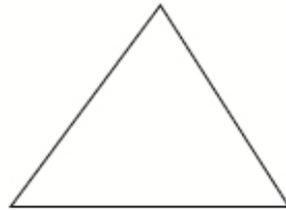


C

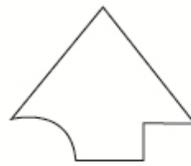


D

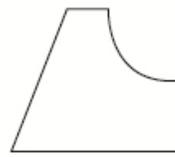
6. Given below is a triangle. Three of the four given options can be used to make a similar triangle. Which option will not be required to make the triangle?



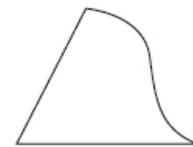
A



B

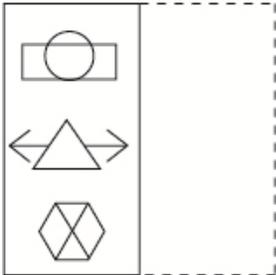
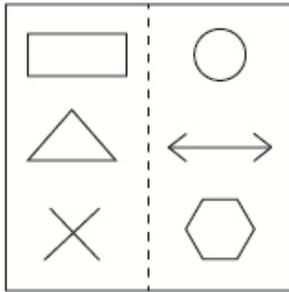


C

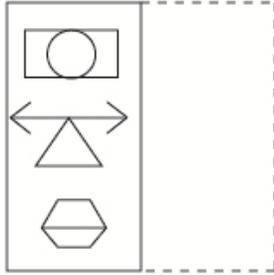


D

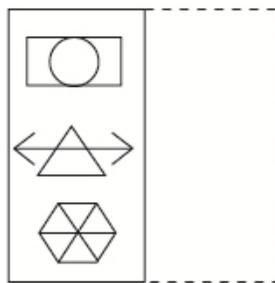
7. In the following figure, a transparent sheet with a pattern is given. Figure out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line.



A



B



C

None of
the other
options

D

LOGIC (6Q x 3 marks = 18 marks.)

Read the information carefully and answer the questions below-

Six closed boxes are placed in a straight line. Boxes are labelled A to F in alphabetical order, from left to right. Six toys - lion, cow, car, lorry, airplane and frog, have been hidden in the closed boxes in a manner that conforms to the below conditions:

- i) Only one toy is placed in each of the six boxes.
- ii) The lorry toy must be in a box that is alphabetically one less than the alphabet on the box with the car toy
- iii) The airplane toy must be in a box immediately adjacent to the box with the cow toy.
- iv) The lion toy must be hidden in the box labelled "E"

1) If the cow toy is in box "D", the airplane toy must be in box ____?

- A) A
- B) B
- C) C
- D) E

2) Given the condition in (Q1), which toy can be in box F?

- A) Frog
- B) Lion
- C) Cow
- D) Airplane

3) Which of the following statements must be true?

- A) The lion toy is in a box that is labelled alphabetically less than the letter in the label of the box having the frog toy
- B) The car toy is in a box that is labelled alphabetically more than the letter in the label of the box having the lion toy
- C) The lorry toy is in a box that is labelled alphabetically less than the letter in the label of the box having the lion toy
- D) The lorry toy is in a box that is labelled alphabetically less than the letter in the label of the box having the airplane toy

4) If the lorry toy is in box A, the car toy is in the box labelled –

- A) C
- B) B
- C) F
- D) E

5) Which of the following is a possible order in which the toys are placed from A to F?

- A) Lion, Frog, Cow, Airplane, Lorry, Car
- B) Car, Frog, Airplane, Cow, Lion, Lorry
- C) Airplane, Lorry, Cow, Frog, Lion, Car
- D) Airplane, Cow, Lorry, Car, Lion, Frog

6) Which of the following is not a possible order in which the toys are placed from A to F?

- A) Lion, Frog, Cow, Airplane, Lorry, Car
- B) Car, Frog, Airplane, Cow, Lion, Lorry
- C) Airplane, Lorry, Cow, Frog, Lion, Car
- D) Airplane, Cow, Lorry, Car, Lion, Frog

IQ (6Q x 3 = 18 marks.)

1. What will come next in the below series?

B5278H, D5476J, F5674L, H5872N, J6070P

- A) L6872R
- B) K6268Q
- C) J6862R
- D) L6268R

2. If the word CUSHION is coded as DTTGJNO, then what will the word POPCORN be coded as?

- A) QNOBOQP
- B) QPQDPSM
- C) QNQBPQO
- D) ONOBNQM

3. What will replace the question mark in the table below?

5	7	2	6
8	2	9	12
11	3	4	?
29	11	14	62

- A) 10
- B) 32
- C) 52
- D) 18

4. Grace has a bag of marbles in which, there are 21 red marbles, 17 green marbles and 9 yellow marbles. How many marbles will Grace have to take out to ensure that she has at least 1 red marble?

- A) 26
- B) 27
- C) 22
- D) 4

5. Complete the following sentence with the most appropriate option -

Kennedy must have managed to a copy of the key

- A) Purloin
- B) Enlarge
- C) Goad
- D) Expedite

6. Find the missing term in the series below –

5, 26, 65, 122, ____, 290

- (A) 178
- (B) 197
- (C) 206
- (D) 223

NUMERACY (10Q x 4 = 40 marks.)

1. What will be the last digit of the product of $78643^6 \times 54625^7$?

- A) 3
- B) 8
- C) 5
- D) 9

2. In a wardrobe, there are a few different types of clothing: shirts, trousers, frocks and skirts.

The probability of drawing a shirt is $\frac{1}{8}$.

The probability of drawing a trouser is $\frac{1}{5}$.

The probability of drawing a frock is $\frac{1}{10}$.

If the wardrobe cannot contain more than 50 clothes, how many skirts are in the wardrobe?

- A) 23
- B) 24
- C) 20
- D) 17

3. A small circle is drawn in another larger circle such that they do not touch each other. The radius of the larger circle is 13 cm and that of the smaller circle is 7 cm. If the least distance between their circumferences is 2 cm, then the distance between their centres' is –

- A) 8 cm
- B) 6 cm
- C) 18 cm
- D) 4 cm

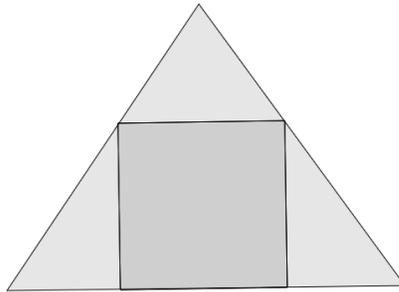
4. Juliet drove from point A to point B at an average speed of 50 kmph and returned to point A along the same route at average speed of 46 kmph. If her total driving time for the journey was 4 hours, how many minutes did it take Juliet to drive from point B to point A?

- A) 115 minutes
- B) 120 minutes
- C) 125 minutes
- D) 130 minutes

5. Margaret is three years younger than Stanley, whom she got married to forty years before now. At the time of the marriage, doubling the age of Stanley and then subtracting it from thrice Margaret's age gave 16. How old would Stanley be when he celebrates his diamond wedding anniversary with Margaret (sixty years of successful marriage)?

- A) 62 years
- B) 70 years
- C) 82 years
- D) 85 years

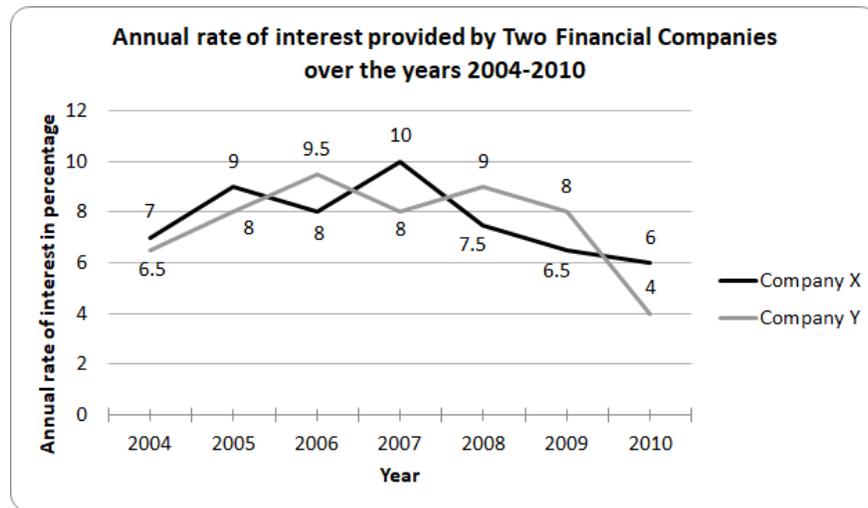
6. A table is being produced by a manufacturer who gains 10% on selling it to the wholesale dealer. The wholesale dealer gains 15% on selling to a retailer. The retailer sells the table and gains 25%. If the retail price is \$253, find the cost of production of the table.
- A) \$126
 B) \$160
 C) \$253
 D) None of the other options
7. Machine A produces rubber soles at a constant rate of 40 soles per hours. Machine B produces 15 more soles per hour than machine A. Working together, how many hours (approx.) will it take for machines A and B to produce 2500 soles?
- A) 27 hours 20 minutes
 B) 26 hours 52 minutes
 C) 26 hours 19 minutes
 D) 26 hours 2 minutes
8. A square is inscribed in an equilateral triangle as shown in the figure below. What is the ratio of the area of the square to that of the equilateral triangle?



- A) $12 : 12 + 7\sqrt{3}$
 B) $24 : 24 + 7\sqrt{3}$
 C) $18 : 12 + 15\sqrt{3}$
 D) $6 : 6 + 5\sqrt{3}$

Questions 9 & 10 are based on the graphical representation below -

Two financial companies, company X and company Y, disclose their annual rate of interest on the money invested with them by their investors. However, these rates vary depending on the economic changes in the country.



9. Two different amounts in the ratio 8:9 have been invested in the Companies X and Y respectively in the year 2010. What will be the ratio of interest received on those amounts after one year from Company X and Company Y?
- A) 2:3
B) 3:4
C) 4:3
D) 6:7
10. In 2008, a part of \$30,000 was invested in the Company X and the remaining was invested in the Company Y for one year. The total interest received was \$2430. What was the amount invested in Company X?
- A) \$9,000
B) \$11,000
C) \$12,000
D) \$18,000

READING COMPREHENSION (5Q x 3 = 15 marks.)

John, a final-year medical student was out with friends one weekend on a misty day in January 2003. While riding back to the hostel, a road accident left him brain dead. His parents, both professors faced the most difficult — and the most important — decision of their lives. They gave Johnny's organs away to be harvested in five persons. My nephew, Johnny, today lives through them.

In the corridors of the same campus where Johnny is still spoken of, where future doctors romp in pristine white coats, a baby monkey with its tail held high ran merrily on a November day in 2016. Four young students caught the monkey, abused it, and watched the hapless creature die in their hands. The killing was heinous.

Monkey menace isn't uncommon. Just as crows and pigeons don't necessarily pick the expensive cars to poop on, monkeys — like other living beings besides humans — do not intend to be a nuisance or *wantonly* cause a commotion, except when intimidated. A definite design in their DNA allows them to be who they are. I've had a monkey for a pet, knowing its bite could cause rabies. No flower blossomed, no fruit ripened, no intruders stepped into the garden for as long as she was there. Clothes hung out to dry would have to be collected from the neighbour's compound.

Some people objected when she imitated them. She grinned at herself in the mirror and threw stuff away at will. Things went missing; all of a sudden, a few reappeared. Our neighbours also knew where to look for their missing things. Having a monkey around meant all this and more. In man-animal co-existence, the price is paid by both sides. Nature's rule, however, is broken only by the human. In such a violation, it's the innocent who often pays the price with life.

In July this year, two students of another medical college were suspended for pushing a dog from the terrace of a tall building and filming the act to boot. The dog didn't die, but one wonders if the offenders sensed the point of existence. How justified is an act of barbarism that isn't for self defence? Doesn't being human mean that our 'superiority' in the food chain is about a mind that tells the heart what to do — the seat of the intellect perpetually pushing the seat of the emotion to be human?

Where lies human nature when the mind is forcefully driven towards becoming inhuman the instant one can't help oneself? Can a merciless mind ever be wholly and naturally human? An intact intellect isn't what really counts — for one ceases to be human when compassion isn't a quality in one anymore.

If it is ingrained upon our DNA to enslave, oppress, lie, steal, kill, destroy, we are also inevitably pitted one against the other to overcome wrong. Whenever cruelty comes to light, unforeseen challenges tag along. Recently, in a sting operation of sorts, six pups were rescued away from the media glare. The situation demanded anonymity and very sensitive planning — as in any rescue measure — to save 'all' of them. These were pups, yes, and precious lives — just like ours — who were trapped and locked up in obnoxious conditions. I knew nothing of the dark world until matters got alarmingly out of control. In a fit of despair and shock, I flagged the crisis. Help came by. With dedicated help from activists and like-minded souls, the pups were freed, and adopted in due course.

We should ask ourselves why human nature chooses cruelty over kindness. The extra care is for the vulnerable, the weakest. They need it. A destructive human mind operates no differently than a lion moving in for a kill among a flock of sheep. It seeks to not fulfill a need so much as to show what else it is capable of, to a futile end. Cruelty is a conscious choice. If we understood that compassion also is, we would see ourselves and the world with empathetic eyes.

1. What is the tone of the passage?
 - A) Informative
 - B) Poignant
 - C) Descriptive
 - D) Critical

2. What does the author mean by the phrase “Cruelty is a conscious choice”?
 - A) Acts of cruelty by human beings are intentional
 - B) The human mind is cruel because it is governed by the heart
 - C) The human mind is cruel as its emotions govern its actions
 - D) Human beings are cruel only in cases of self-defense

3. As per the passage, which of the following statements is true with regards to the behavior of monkeys?
 - A) Monkeys are a nuisance and should not be kept as pets
 - B) Monkey bites can cause rabies
 - C) Our superiority in the food chain dictates our behavior towards others
 - D) All of the above

4. Which of the following statements uses the word “wantonly” in the most similar fashion as it is used in the passage?
 - A) He was wantonly extravagant with his money
 - B) During the attacks, the terrorists wantonly destroyed public property
 - C) Marriage is not something to be undertaken wantonly
 - D) Viruses continue to spread wantonly across networks

5. As per the passage, who or which of the following is considered to be the deadliest weapons?
 - A) Pets which create nuisance for their neighbours
 - B) A lion among a flock of sheep
 - C) Medical students who have access to a variety of animals
 - D) The human mind which chooses cruelty over kindness

**DIAGRAMMATIC
REASONING**

1	B
2	B
3	D
4	C
5	B
6	C
7	D

LOGIC

1	C
2	A
3	C
4	B
5	D
6	A

IQ

1	D
2	C
3	A
4	B
5	A
6	B

NUMERACY

1	C
2	A
3	D
4	C
5	D
6	B
7	C
8	A
9	C
10	D

READING COMPREHENSION

1	B
2	A
3	B
4	B
5	D