

SPJET SAMPLE PAPER 2

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

STUDENT NAME

S P JAIN'S UNDERGRADUATE ENTRANCE TEST

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

1. Please check the number of questions before you start answering (Total 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. 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
Logic	5	2	10
Diagrammatic Reasoning	4	4	16
Numeracy	6	3	18
IQ	10	2	20
Reading Comprehension	5	4	20
General Awareness	8	2	16
Total	38		100

ANSWER FOR THE QUESTIONS ARE PROVIDED AT THE END OF THE PAPER

Note

It is advisable that the candidate reads the question carefully and avoids marking answers thoughtlessly.

Analyzing the previous question papers will help the candidate to get a clear picture of the pattern of questions asked in each section. Only answer if you are 100% sure about the correct answer.

LOGIC (50 x 2 marks = 10 marks.)

1. The sums of the weights of P and Q is more than that of R and S taken together. The weight of P is half as much as the sum of the weights of Q and S. The sum of the weights of P and R is the same as the weight of Q and S taken together.

Which of the following statements must be incorrect?

- (A) Q weighs more than S
- (B) P weighs more than Q
- (C) Q weighs more than R
- (D) All the above statements are correct

2. The squad for the girls swimming team is being decided at Malory towers school. The selection is to be made from seven girls
P, Q and R who are from the Blue House
K, L, M and N who are from the Green House
The school has decided that two of the girls from the team must be from the Green House and two from the Blue House. Also the following conditions must be kept in mind
- a. Q and K cannot be selected in the same team as they have recently fought
 - b. R and M cannot be selected together as they both specialize in the same swimming event
 - c. K and L cannot be selected together as the coach feels they would be a distraction to each other during the event

Which of the following statements must be false?

Statement A--- N and R can never be selected together

Statement B --- L and R can never be selected together

Statement C--- Q and M can never be selected together

- (A) Only Statement A is false
- (B) Statements A and B are false
- (C) Statement B and C are false
- (D) All three statements are false

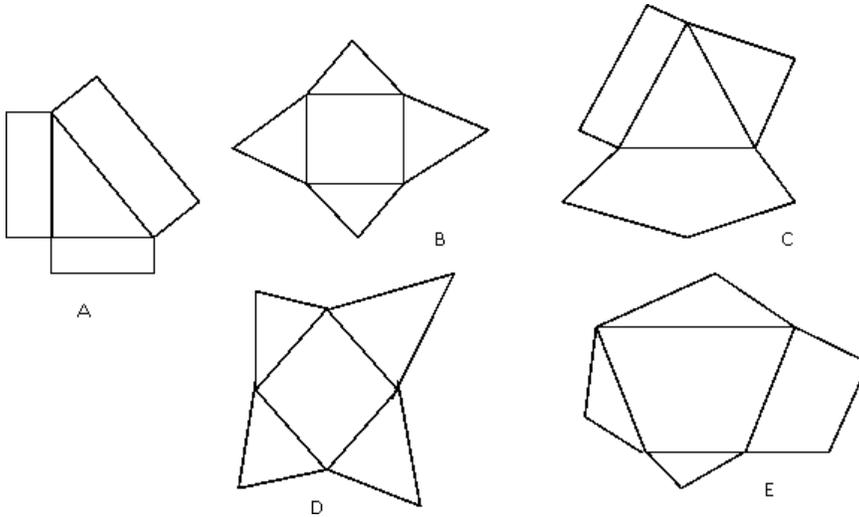
3. Seven movies are to be screened from 1 pm to 9 pm at a particular theatre. Each of the movies has a playing time of exactly one hour and a new movie starts playing at the beginning of every hour however no movie is played between 2 and 3 pm as that is the lunch break. The seven movies that are to be screened are A, B, C, D, E, F and G
1. The first movie to be played at 1pm is B
 2. Exactly one movie should be played between movies E and G
 3. Movie C should be played immediately after the lunch break
 4. Movie F should be played immediately before movie G
 5. The last movie that should be played on the day should be movie A
 6. Movie D is played immediately before movie A

How many movies are played between movie F and movie C?

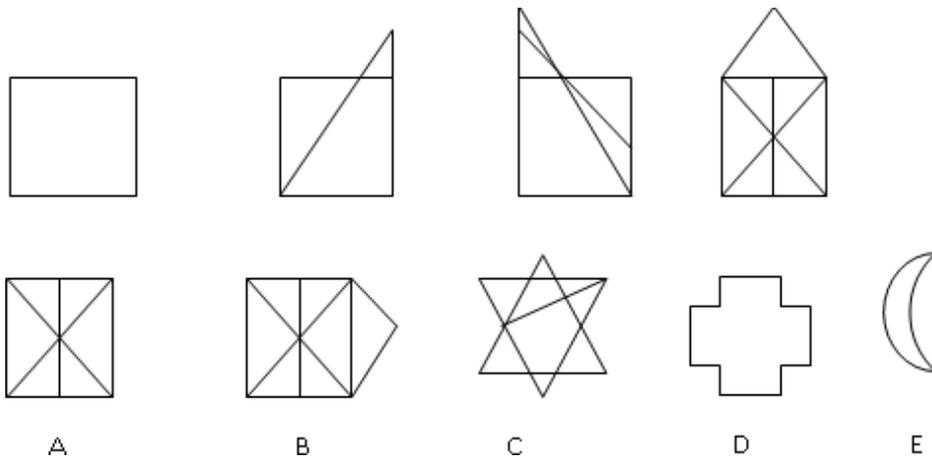
- (A) No movies are played between the two
 - (B) One movie
 - (C) Two movies
 - (D) Cannot be determined
4. Rhea tells Manisha that Rhea's maternal aunt and Manisha's paternal uncle are siblings. How is Rhea's mother related to Manisha's sister?
- (A) Paternal Aunt
 - (B) Sister
 - (C) Mother
 - (D) Niece
5. Ashwini starts running east from her house for 40 meters. She then turns left and runs another 170 meters. She then takes a right and runs for 80 meters. Ashwini then turns south and runs 140 meters. She then turns right and runs 21 meters. She finally turns left and runs 10 meters. How far is Ashwini from her house?
- (A) 80 meters
 - (B) 99 meters
 - (C) 101 meters
 - (D) 250 meters

DIAGRAMMATIC REASONING (40 x 4 marks = 16 marks.)

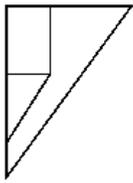
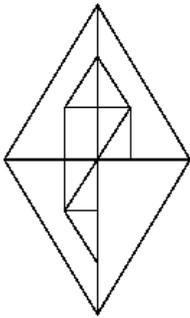
1. Find the odd one out



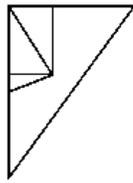
2. Find the next figure in the sequence?



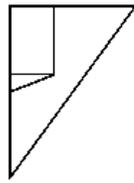
3. Find the missing part of the figure?



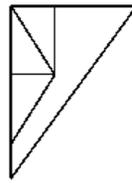
A



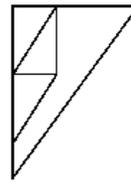
B



C

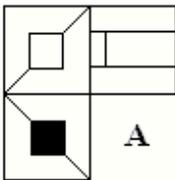
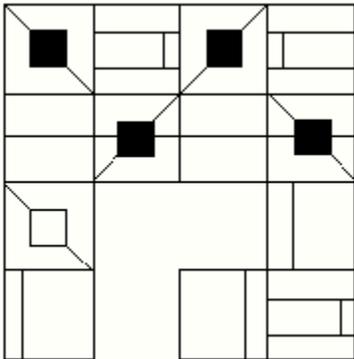


D

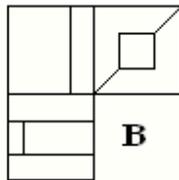


E

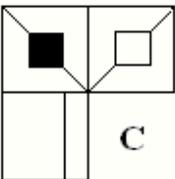
4. Which squares best fit into the figure below?



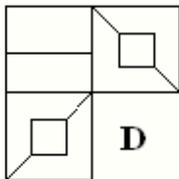
A



B



C



D

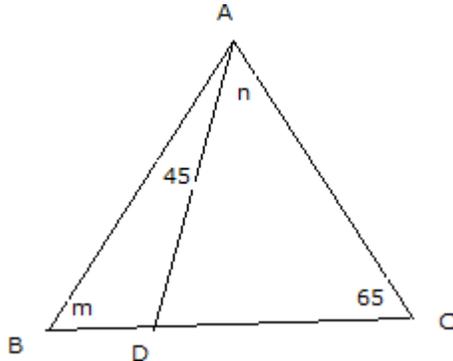
NUMERACY (60 x 3 = 18 marks.)

1. If $y \ominus x = y^{x+1}$, what is $[(1 \ominus 2) \ominus 3]$?

- (A) 1
- (B) 16
- (C) 81
- (D) 4096
- (E) None of the above

2. Find the value of x in: $(1/3)^{x-1} = (9)^{1-3x}$

- (A) 0
- (B) 1
- (C) 3/10
- (D) 1/5
- (E) None of the above



3. In the above diagram ABC is a triangle
Angle ABC measures m degrees
Angle DAC measures n degrees
Angle BAD measures 45 degrees
Angle BCA measures 65 degrees
In the triangle what is n in terms of m

- (A) $70-m$
- (B) $m-70$
- (C) $110-m$
- (D) $m-110$
- (E) Cannot be determined

4. If $u - v = 10$ and $2v + 3u - 20 = 0$, then $v = ?$

- (A) -10
- (B) -2
- (C) 0
- (D) 8
- (E) 12

5. A jar filled with cookies weighed 4 pounds in the morning. After $\frac{4}{5}$ of the cookies are consumed at tea, the jar with the remaining cookies weighs only 1 pound. What was the weight of the total number of cookies in the morning?
- (A) 3.75
 - (B) 3.25
 - (C) 2.50
 - (D) 1.75
 - (E) None of the above
6. Your company's vehicle expense reimbursement policy pays 50 cents per mile for the first 250 miles and 10 cents for each additional mile beyond 250 miles. If you were reimbursed \$200, how many miles would you have driven your vehicle?
- (A) 100
 - (B) 250
 - (C) 500
 - (D) 750
 - (E) None of the above

IO (100 x 2 = 20 marks.)

1. 2 2 4 5 9 4 3 6 8 7 7 5 2 5 6 1 4 8 2 6 7 3 9 1 4 8 3 9 1 2 5 4

In the above series how many such prime numbers are there which are immediately preceded by an even number and immediately followed by an even number as well?

- (A) 3
- (B) 4
- (C) 5
- (D) 6

2. 421 525 624 124

Of the four numbers given above the following operation is performed

The position of the first and third digits within each of the four numbers given above is interchanged

What will be the third digit of the fourth highest number after the above operation is performed?

- (A) 4
- (B) 5
- (C) 2
- (D) 6

3. Sharleen is standing in a line at the bank counter. Sharleen notices that she is the eighteenth person from the front of the line. She also notices that there are double the number of people behind her as there are in front of her. How many people are there between Sharleen and the fourth person from the end of the line?

- (A) 24
- (B) 26
- (C) 30
- (D) 32

4. What goes into the blank cell in the below table?

B	O	
X	D	J
Z	S	K

- (A) A
- (B) F
- (C) K
- (D) O

5. In a certain code language
 coo too moo means football is fun
 moo boo ioo means studying is boring
 too noo boo means football and studying
 Which of the following means boring in the code?

- (A) noo
- (B) moo
- (C) ioo
- (D) boo

6. If $W+X=Y+Z$ and $W+Z>X+Y$ then which of the following must be false?

- (A) $W>Y$
- (B) $Y>Z$
- (C) $W>X$
- (D) $X>Z$

7. What number should replace the question mark?

	7	
4	65	5
	8	

	2	
1	22	3
	9	

	4	
7	?	3
	7	

- (A) 18
- (B) 38
- (C) 41
- (D) 49

8. What number continues the below series
45,54,70,95,
- (A) 115
 - (B) 131
 - (C) 144
 - (D) 153
9. Given below are four words out of which only one is spelt correctly. Select the option which has been spelt correctly
- (A) dasterdly
 - (B) premeditated
 - (C) tyranny
 - (D) obilvious
10. A word has been jumbled and given below
- W A N A S T B O
- What does the word spell when it is properly arranged?
- (A) The name of a city in Asia
 - (B) The name of an African country
 - (C) The name of a river in Europe
 - (D) The name of a mountain range in North America

READING COMPREHENSION (50 x 4 = 20 marks.)

History is a story told over time. It is a way of recreating the past so it can be studied in the present and re-interpreted for future generations. Since humans are the sole beneficiaries of history, it is important for us to know what the purpose of history is and how historians include their own perspective concerning historical events. The purpose and perspective of history is vital in order for individuals to realise how it would be almost impossible for us to live out our lives effectively if we had no knowledge of the past. Also, in order to gain a sound knowledge of the past, we have to understand the political, social and cultural aspects of the times we are studying.

In what is History, Alan Bullock believes that history is an attempt to explain the sequence and connections of events. He believes that "History is to explain why...it is not to explain why they had to follow, but why they did in fact follow." It is believed by Bullock that history is taken apart and is put together by an historian, so that it may yield new evidence that will teach us a lesson from the past in order to become more aware of the future. This connective account helps us "get inside the skin of this man or group of men."

Russel B. Nye a prominent American historian explains "History is a response to the eternal desire of human beings to know about themselves." Nye believes that history is concerned with societies and the individuals who live in these societies. He emphasises the importance of people, their individual choices, the values they hold and the angles of vision by which they have looked at themselves and the world. It is important to look at history if one is to understand how and why men and women have acted together in society. Nye also shares the same view as Bullock in suggesting that "History has the special obligation to recall, reassess and re-interpret the past, bringing it to bear on the present and translating it into a form each new generation can use." Nye believes that history is a social science which requires hypotheses and observations. If we are to make proper use of history, historians have to arrange it in a way that makes it easy for us to identify the facts. This again relates to the argument of 'identifying one's self'.

In The Historians Craft by Marc Bloch, he states that history is nothing more than an 'inquiry' into the past. Unlike Nye, Bloch believes that the notion of history being a "science of the past" is a very poor idea. He believes that the purpose of history shares absolutely no characteristics with a scientific approach at all. However, like Nye, Bloch also believes that the object, and hence purpose of history, is man. He feels that human factors seem to determine the direction of history. Since mankind is behind everything in existence, it is important to acknowledge our roots in society.

The Historian's Purpose another book by Alan Bullock, concentrates on the fact that an historian's perspective will play a key part in writing history, as they are often "sensitive to the interests and problems of society in which they live." Bullock believes that it is impossible to leave out bias when writing history because we are greatly influenced on that particular subject due to the experiences of your own time. After all, to deny our own impulses, is to deny the very thing that makes us human. He feels that that is why it is important to only look to the past when one is studying history. Therefore, the role of an historian is also very important when perspective is being studied. His cultural background, people he has lived with and events he has endured will all be key factors when he is giving his view on a particular topic. But as Bullock says, an historian must "keep a critical eye on his own assumptions and pre-conceptions" and as well as the fact that historians must "break down, rather than build up generalisations."

1. What would be an apt title for the passage?
 - (A) The Origins of History
 - (B) Methods and Techniques of Studying History
 - (C) The Perspective and The Purpose Of History
 - (D) History – A Science as well as Art

2. According to the passage which of the following statements would be in contradiction to what is stated in the book “What is History”?
 - (A) One of the primary purposes of history is to dissect the past to better help mankind grapple with the future
 - (B) History helps us see things from the perspective of the individuals who lived through the periods of the past
 - (C) The study of history focuses on establishing the reasons behind events that took place in the past
 - (D) All of the above statements are in agreement with the book “ What is History”

3. On which of the following points do the historians Marc Bloch and Russel B.Nye differ?
 - (A) The main purpose of history is to understand and assist man
 - (B) History is similar to a science as it deals with the facts of the past
 - (C) History is largely concerned with societies and the individuals who made up those societies
 - (D) The historians perspective affects how history is written

4. What is meant by the line “it is important to only look to the past when one is studying history” mentioned in the last paragraph of the passage?
 - (A) While studying history only age old and proven techniques must be utilized
 - (B) Historians must accept old theories of the past events without trying to introduce new conflicting theories
 - (C) Historians must ignore their personal biases while studying history focusing instead on historical facts
 - (D) None of the above

5. Which of the following words comes closest to the meaning of the word pre-conceptions as used in the passage?
 - (A) Prejudice
 - (B) Ideas
 - (C) Confuse
 - (D) Transform

GENERAL AWARENESS(80 x 2 = 16 marks.)

1. The Prius is a hatchback hybrid car produced by which auto manufacturer?
 - (A) Nissan
 - (B) Mitsubishi
 - (C) Honda
 - (D) Toyota

2. What is the name of the new social network launched by Google in the last week of June 2011?
 - (A) Google Buzz
 - (B) Google Wave
 - (C) Google + (Plus)
 - (D) Google Talk

3. Ayrton Senna was a popular sportsperson associated with which sport?
 - (A) Formula 1
 - (B) Football
 - (C) Baseball
 - (D) Basketball

4. The Samsung group is headquartered in which country?
 - (A) Japan
 - (B) China
 - (C) Taiwan
 - (D) South Korea

5. Which of the following nations is not a part of the G8 group of nations?
 - (A) Germany
 - (B) Italy
 - (C) France
 - (D) Australia

6. Which nation is the world's largest emitter of CO₂ (Carbon Dioxide) in the world?
 - (A) USA
 - (B) India
 - (C) China
 - (D) Japan

7. Who is the director of the movie Harry Potter and the Deathly Hallows – Part 2?
- (A) David Fincher
 - (B) David Yates
 - (C) Quentin Tarantino
 - (D) None of the above
8. Who won the 2011 Wimbledon Men's Singles championship?
- (A) Rafael Nadal
 - (B) Novak Djokovic
 - (C) Roger Federer
 - (D) Andy Murray

ANSWERKEY FOR SPJET SAMPLE PAPER 2

LOGIC

1	B
2	D
3	B
4	A
5	C

IQ

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

DIAGRAMMATIC REASONING

1	E
2	C
3	A
4	B

READING COMPREHENSION

1	C
2	D
3	B
4	C
5	A

NUMERACY

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

GK

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