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Sub. G.K

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TEST PAPER – I

Answer these questions.

1. What are the 953 pink sandstone windows in the Hawa Mahal known as? Jharokhas
2. With which sport would you associate LeBron James? Basketball
3. In which state is the Bom Jesus Basilica situated? Raja Rajachalla I
4. Who was known as 'The Wizard of Menlo Park'? Thomas Edison
5. Who was the Chairman of the Drafting Committee of the Constitution of India? B.R Ambedkar
6. In browsers, what is used to identify a space which stores web pages that you have visited? Cache
7. Seismograph is an instrument used to measure the magnitude of which natural disaster? Earthquake
8. Lake Titicaca is located in which continent? South America
9. Who is the author of *Gun Island*? Amitav Ghosh
10. *Ras*, *Sankirtana* and *Thang-Ta* are variations of which dance form? Manipuri
11. In 2010, which animal was declared as a national heritage animal? Elephant
12. What is a deep inlet of a sea partly surrounded by land with a narrow mouth called? Gulf
13. Extra-sensory perception is sometimes called the 'sixth sense'.
14. In which language were the *Ramayan* and the *Mahabharat* composed? Sanskrit
15. Still rings and pommel horse are events belonging to which sport? Artistic Gymnastics

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TEST PAPER – II

Tick (✓) the correct answers.

1. In which state are Kozhikode and Alappuzha located?
a. West Bengal b. Tamil Nadu c. Kerala d. Karnataka
2. 'Greco-Roman' and 'Freestyle' are two popular styles used in which sport?
a. squash b. wrestling c. hockey d. football
3. Which of these was formed by the calcareous remains of tiny creatures known as coral polyps and hydrocorals?
 a. Great Barrier Reef b. Sundarbans
c. Pacific Ring of Fire d. Bryce Canyon
4. Which of these is a sound produced by something rushing through air or a liquid?
a. splatter b. chirp c. swoosh d. thud
5. Coir fibres are extracted from the husks of which fruit?
 a. coconut b. banana c. mango d. cherry
6. What is a person who is concerned about protecting nature called?
a. geologist b. anthropologist c. environmentalist d. oculist
7. VIBGYOR is a mnemonic for which of these?
 a. colours of a rainbow b. periodic table
c. planets d. metric system
8. Which of these is an instrument used to measure atmospheric pressure?
a. Ohm's Scale b. endoscope c. barometer d. ammeter
9. Which of these hot deserts is located in Southern Africa?
a. Thar b. Gobi c. Atacama d. Kalahari
10. Who among these is an enemy of Batman?
a. Green Goblin b. Joker
c. Magneto d. Lord Voldemort

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TEST PAPER – III

Answer these questions.

1. The name of which dance form is derived from a word that means 'story'? Kathak
2. The Tour de France is one of the most well-known tournaments of which sport? Cycling
3. Which monument built by Akbar was traditionally known as Badalgarh? Agra Fort
4. In October 2017, 'Sophia' the robot became a citizen of which country? Saudi Arabia
5. What is the fertile land between two or more distributaries of a river called? Delta
6. Who developed the Theory of Relativity? Albert Einstein
7. 'It was the best of times, it was the worst of times...' is the opening line of which novel? A Tale of Two Cities
8. Who started a dance school named Kalakshetra in Chennai? Rukmini Devi Arundale
9. With which sport is Carolina Marin associated? Badminton
10. How many players are there in a volleyball team? Six
11. What does the Czech word 'robota' mean? Forced Labour
12. Pure cashmere is a product of which animal? Kashmiri Goat
13. What is the shortened form of 'weblog' called? blog
14. What is the official language of Andhra Pradesh? Telugu
15. The Constitution of India begins with the Preamble. True or False? True

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26. Famous Novels

Read these memorable opening lines from some famous novels. Identify and name them using the **Help Box**.

- 'It was seven o'clock of a very warm evening in the Seonee hills when Father Wolf woke up from his day's rest, scratched himself, yawned, and spread out his paws one after the other to get rid of the sleepy feeling in their tips.' The Jungle Book
- 'It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, ...' A Tale of Two cities
- 'Mr. and Mrs. Dursley, of number four, Privet Drive, were proud to say that they were perfectly normal, thank you very much.'
Harry potter and the philosopher's stone
- 'The first place that I can well remember was a large pleasant meadow with a pond of clear water in it. Some shady trees leaned over it, and rushes and water-lilies grew at the deep end.' Black Beauty
- 'It is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife.' Pride and Prejudice
- 'My father had a small estate in Nottinghamshire: I was the third of five sons. He sent me to Emanuel College in Cambridge at fourteen years old, where I resided three years, and applied myself close to my studies.' Gulliver's Travels



<i>Pride and Prejudice</i>	<i>Gulliver's Travels</i>	<i>Harry Potter and the Philosopher's Stone</i>
<i>Black Beauty</i>	<i>The Jungle Book</i>	<i>A Tale of Two Cities</i>

• Grow with Derek

Find out the names of the authors of these famous books. If you have not read any of these, make sure you start with one novel. Reading is the best way to improve your language and vocabulary.

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Literature and Entertainment

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27. Literature of India

Match these books to their authors.

Books

1 *Waiting for the Mahatma*

2 *Gun Island*

3 *A Passage to England*

4 *Godaan*

5 *Our Trees Still Grow in Dehra*

6 *The God of Small Things*

7 *Coolie*

8 *English, August*

Authors

a Munshi Premchand 4

b Ruskin Bond 5

c Upamanyu Chatterjee 8

d Arundhati Roy 6

e R K Narayan 1

f Nirad C Chaudhuri 3

g Amitav Ghosh 2

h Mulk Raj Anand 7

Grow with Derek

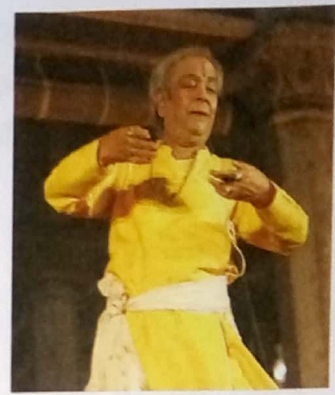
Write the names of the stories written by Indian authors in your notebook. Find out what inspired them to write these stories.



28. Legendary Dancers of India

Birju Maharaj

He is a famous Kathak dancer. He works composed the music and sang playback for two classical dance sequences in the film, Shatranj Ke Khiladi, directed by Satyajit Ray.



Sonal Mansingh

She is one of the leading exponents of Bharatanatyam and Odissi classical dances. Director Prakash Jha has made a documentary film on her titled 'Sonal'. She received the Padma Vibhushan in 2003.



Rukmini Devi Arundale

she is A famous Bharatanatyam dancer, she started a dance school named Kalakshetra in Chennai. Her efforts and contributions were integral to the revival of Bharatanatyam in the 1920s and 1930s.



Yamini Krishnamurthy

She is a renowned Kuchipudi and Bharatanatyam dancer hailing from Andhra Pradesh. She was honoured with the Padma Vibhushan in 2016. Her autobiography is titled A Passion for Dance.



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Mallika Sarabhai

A multifaceted personality, she is a renowned Kuchipudi and Bharatanatyam dancer. She is the daughter of the renowned dancer, Mrinalini Sarabhai.



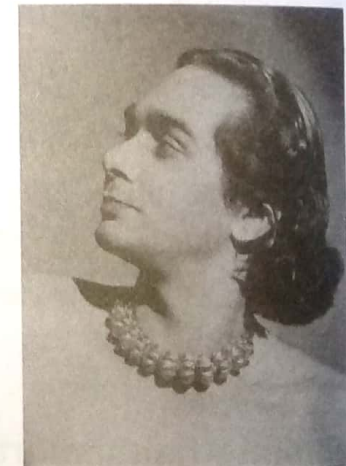
Kelucharan Mohapatra

He was a dancer, guru and proponent of Odissi dance. He trained renowned Odissi dancers like Sanjukta Panigrahi and Kumkum Mohanty. The Guru Kelucharan Mohapatra Award was instituted in 1995 in his honour.



Uday Shankar

He is a famous dancer and choreographer, he made a film on dance titled Kalpana. He also collaborated with ballerina Anna Pavlova. He received the Padma Vibhushan in 1971.



Know with Derek

In literature, the first references of dance come from the Vedas.



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29. Superheroes and Villains

We all love superhero films. Nowadays, a new superhero film comes out every couple of months. Can you match some of your favourite superheroes with the villains?

Heroes

Villains

1 Superman

a Skeletor

4

2 Batman

b Green Goblin

7

3 The Avengers

c Apocalypse

5

4 He-Man

d Lex Luthor

1

5 The X-Men

e Loki

8

6 The Flash

f Thanos

3

7 Spider-Man

g Zoom

6

8 Thor

h Joker

2



Grow with Derek

Try to design a superhero outfit for yourself. What name would you choose for yourself and what powers would you want to possess?

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Life Skills and Value Education

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30. Having a Hobby

A hobby can be described as an activity or interest pursued outside one's regular occupation primarily for self-satisfaction and pleasure. Over the years, I have had many interests, but my special hobby has always been painting. I used to love painting when I was young, and today, that hobby has transcended into another—a passion for collecting paintings.



Anything productive that you like to do in your free time is a hobby. The keyword here is 'productive'. So, lying on the sofa and watching television is not a hobby. The activity must be a stimulant for it to be a hobby. You must be excited about doing it. If you stop enjoying it, then it ceases to be a hobby.

✓ Hobbies help us to:

- relax.
- re-energise our brain.
- be more patient.
- concentrate better.
- discover our latent talents.
- have fun by ourselves.

Sometimes, a hobby can become a profession. When I first started conducting quizzes as a hobby, I never realised that, someday, it would become my profession.

Do you have a hobby? If you do not, you could start right now. But what would you like to do? Here is a suggestion. Prepare a list of your areas of interest and choose something out of that list. For instance, if your area of interest is solving Maths and logical puzzles, you could make that your hobby. You could try collecting, compiling or creating your own number puzzles. Now, wouldn't that be fun?

There is no 'best hobby' that one can prescribe. Whatever you like doing the most, is the best hobby for you.

• Know with Derek

Dilish Parekh, a photo-journalist from Mumbai, has a passion for collecting cameras. He has a collection of over 4,000 cameras, some of which date back to the early 1900s.

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31. The Better Thing to Do

What would you do in these situations? Tick (✓) the better option.

1. You are on a school outing. One of your friends falls down and bruises his knee. What would you do till he gets treatment from a doctor?

a. Clean the wound and apply some antiseptic medicine.

b. Wash the wound with hot water and cover it tightly with a piece of cloth.



2. When you are not using an appliance that runs on battery, you should:

a. leave the battery inside.

b. remove the battery.

3. You are playing football when suddenly your friend falls down and cuts himself deeply. The first thing that you should do when you see him bleeding is:

a. to apply pressure to stop the bleeding.

b. to wash the wound with water and apply some antiseptic medicine.



4. If a person burns her/his hand during cooking, she/he should first:

a. apply antiseptic medicine.

b. cool the burn under cold running water.

5. If a person is eating hastily and suddenly chokes on a big piece of food, you should:

a. make the person drink water.

b. tap the person firmly between the shoulder blades.

6. A new student has joined your class and all your other friends are teasing him. What should you do?

a. Inform your class teacher.

b. Try to take the matter into your own hands and defend the student.

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7. You had promised to help your brother with his project but your best friend asks you to watch a film with him. What should you do?
 - a. Tell your friend that you have to help your brother.
 - b. Watch the film with your friend.

8. You are alone at home when a stranger knocks at the door. He says that he is a family friend and wants to come in. What should you do?
 - a. Let him inside your house.
 - b. Ask him to come back later when your parents are at home.

9. While walking home from school, you see a little kitten trapped on the branch of a tree. What should you do?
 - a. Try to climb up the tree and free the kitten.
 - b. Call someone to help you free the kitten.

10. You are at a grocery store with your parents. You see an elderly person slip and fall down. What should you do?
 - a. Rush to help.
 - b. Ask your parents to help.

• Grow with Derek

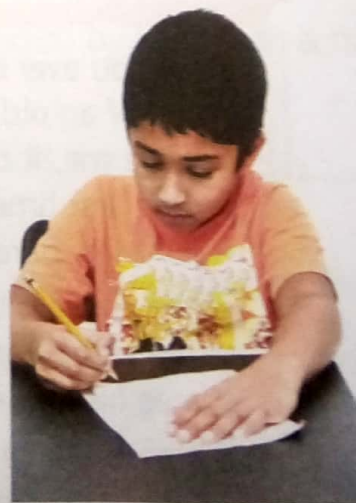
Ask the above questions to your friend. Does she/he have a different answer to any question? If so, ask her/him the reason for it. You might get a different perspective on the situation.



32. Total Recall

No, this is not the Arnold Schwarzenegger film. On this page, I would like to share with you some tips, which have helped me to study and recall better. These tips have also helped me to remember my scripts and lines on stage.

- **Study time:** Keep a fixed study time and stick to it. Let your family members and your friends know about the time. In this way, they too will know when you are busy.
- **Be comfortable:** Make yourself comfortable—not too comfortable that you fall asleep, but comfortable enough so that you can concentrate on your books.
- **Understand:** This is the most important aspect. If you do not understand what you are studying, you will find it very difficult to learn or remember.
- **Underline:** While going through the material, lightly underline (with a pencil) the parts that you feel are important. Once you have finished the chapter, go back and read only the underlined parts a couple of times.
- **Read aloud:** Some of us can recall better when we read aloud. It helps with me.
- **Write down:** Keep a pad or rough note book beside you to jot down what you feel is important. Also use this tool when you are revising. The visual aid (writing) and audio aid (reading aloud) have helped me a lot.





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- **Mnemonics:** This is a very helpful tool. It could either be a sentence or an acronym. There are many general ones like VIBGYOR that helps us remember the colours of the rainbow. For example, 'My Aunty Mary Made Ten New Aprons' helps me to remember the seven sisters of the northeast—Mizoram, Assam, Manipur, Meghalaya, Tripura, Nagaland and Arunachal Pradesh.
- **Take regular breaks:** Do not keep studying on and on. Your brain needs some rest. Take a break for ten minutes or so by listening to some music, watching television or just relaxing.
- **Sleep enough:** Your brain gets tired. Make sure that you get at least eight hours of sleep every night, especially on the night before an exam.
- **Before the exam:** Do not try to do any last minute studying just before you enter the exam hall. It will only make you more confused and nervous.

• Grow with Derek

Have you ever been in a situation where you cannot remember the name of an old friend whom you have just met after many years? Believe me, it could be very embarrassing. When I meet a person for the first time, I make sure that I always repeat the name: 'Hello Rahul, I'm Derek'.

I then connect the name to someone I know or a famous person of the same name. In this case, I could remember that the person shares his first name with cricketer Rahul Dravid.

If I fail to make a connection, then I usually do something funny with names, like making up a silly jingle: Rahul, you rule! Try it. Believe me, it works!

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19. Logical Reasoning

Tick (✓) the correct answers.

1. In the given sequence, which set of letters will logically replace the hash sign? GAN, HCQ, #, JGW
a. ATG b. IGT c. WAB d. ✓ IET
2. How many consonants appear immediately after a vowel but not immediately before a vowel in the word BUCKMINSTERFULLERENE?
a. ten b. seven c. ✓ four d. none
3. If yesterday is the day before yesterday of Saturday, what day is day after tomorrow?
a. ✓ Sunday b. Monday c. Wednesday d. Thursday
4. Imran likes to eat apples and oranges. Ranveer likes to eat bananas and oranges. Suresh likes to eat oranges. Ramesh eats only apples. Which fruit is liked by only one person?
a. orange b. ✓ banana c. apple d. none
5. Ronny is taller than Rachel but shorter than Rancho. Amit is taller than Taren but shorter than Rachel. Who is the shortest of them all?
a. Ronny b. Amit c. Rancho d. ✓ Taren
6. In a certain language, if HORSE is written as JMTQG, then how will TIGER be written in the same language?
a. VGCIT b. EVCIN c. ✓ VGICT d. NOCTG
7. My first letter is in RUN but not in FUN. My second letter is in POT but not in PUT. My third and fourth letters are in SEAT but not in MOAT. Which word am I?
a. nose b. fond c. post d. ✓ rose
8. One morning, Roshan and Varun were talking to each other face to face at a crossing. If Varun's shadow was exactly to the left of Roshan, which direction was Roshan facing?
a. South b. West c. ✓ North d. East

• Grow with Derek

To improve your logical reasoning, try solving puzzles such as sudoku, Rubik's cube and word search. Just like any other body muscle, your brain becomes sharper the more you exercise it.





20. The Smart Detective

You are a young detective. You chase a thief to a large building with 25 rooms. With the help of 4 successive eye-witnesses' accounts, find out the room in which the thief is hiding.

R	T	Y	U	O
S	D	F	G	H
K	L	Z	X	C
B	Q	M	W	A
E	N	P	J	V

Clues:

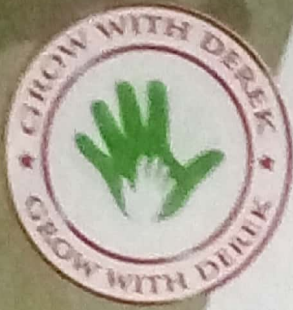
1. I saw him go into the apartment just above M.
2. I saw him go into the one just before the one above that.
3. I saw him in the apartment that is just after the one that is two below that.
4. I thought I saw him leave the apartment below that but I was mistaken. I am certain that I saw him later; he was in the one that is just before the one that I just said I thought he was in.



Grow with Derek

Here is a fun game that you can play with your friends. Ask all your friends to stand in a line and appoint one of them as the 'picker'. Now, choose a friend in the line without telling the picker. Give clues to the picker so that she/he can figure out who that person is. Clues could be like, 'He is neither the shortest person, nor the tallest.' or 'He has short hair'.

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21. The Number 6

- If you add or multiply 1, 2 and 3, you will get the number SIX.
- SIX refers to half a dozen.
- All insects have SIX legs.
- In Astrology, Virgo is the SIXTH astrological sign of the Zodiac.
- The number of faces on a cube is SIX.
- The highest number you can roll with a dice is SIX.
- The number of dots in a Braille cell is SIX.
- There are SIX feet in a fathom. A fathom is a unit of length used for measuring the depth of water.
- Volleyball and ice hockey are both played with teams of SIX players each.
- SIX is the most runs scored off a single ball in cricket.
- Extra-sensory perception is sometimes called the 'SIXTH sense'.
- The group of strong and well-shaped muscles that can be seen on a person's stomach is called SIX-pack abs.
- Six is the atomic number of carbon.
- 'Hexa' means SIX. So, there are SIX sides in a hexagon.
- Hexagonal structures are quite common in nature—the cells of a honeycomb, the eyes of a housefly and even a bunch of soap bubbles.

6



• Grow with Derek

You can play the numbers version of the game Twenty Questions. One person secretly writes down a number and the others ask questions like 'Is it an even number?', 'Is it more than a thousand?', 'Does it have a 4 in it?'. The answers can only be a 'yes' or a 'no'. The maximum number of questions that can be asked is twenty. You have to guess the secret number.



22. Number Grid

Fill in the missing numbers so that in each problem, each of the three vertical lines, three horizontal lines and two diagonal lines add up to the number given on the side.

1. 30

12	2	16
14	10	6
4	18	8

2. 36

18	4	14
8	12	16
10	20	6

3. 72

23	28	21
22	24	26
27	20	25

Know with Derek

The number grids that you just solved are also called 'magic squares'. These grids were used by the people of ancient India. One such magic square has been found at the Parshvanath Jain Temple in Khajuraho.

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23. Earth Quiz

Choose the correct answers.

1. What is the imaginary longitudinal line that connects the North and the South Poles of the Earth called?
a. grid b. scale c. meridian d. latitude
2. What is the deep inlet of a sea partly surrounded by land with a narrow mouth called?
a. isthmus b. lagoon c. strait d. gulf
3. Which of these is a piece of land that is surrounded by a waterbody on three sides but connected to the mainland?
a. isthmus b. lagoon c. estuary d. peninsula
4. It is a large piece of land jutting into the sea and also a sleeveless cloak.
a. estuary b. peninsula c. cape d. isle
5. Which type of vegetation is characterised by continuous tall grasses and trees that are scattered across?
 a. savanna b. desert c. oasis d. tundra
6. What is a vast treeless Arctic region of Europe, Asia and North America called?
a. taiga b. savanna c. tundra d. prairies
7. It is the fourth letter in the Greek alphabet and refers to the fertile land between two or more distributaries.
a. alpha b. delta c. beta d. omega
8. Which of these was formed by the calcareous remains of tiny creatures known as coral polyps and hydrocorals?
 a. Great Barrier Reef b. Sundarbans
c. Pacific Ring of Fire d. Bryce Canyon

• Grow with Derek

Look at the map of India. Find out the longitude and latitude of the town or city that you live in. Make a note of the rivers that pass through your state.

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24. Geographical Features

Fill in the missing letters with the help of the given clues.

1. Located in South America, it is one of the highest navigable lakes in the world.

IIIIICACA

2. This is a dormant volcano located in Hawaii.

MAUNA KEA

3. This hot desert is located in southern Africa.

KALAHARI



4. This is a large saltwater body located in northeastern Canada.

HUDSON BAY



5. Located between Canada and the USA, it is one of the grandest waterfalls in the world.

NIAGARA FALLS

6. This mountain region in southwest Germany is the source of the Danube and Neckar rivers.

BLACK FOREST



7. This is a large, tropical rainforest located in South America.

AMAZON RAINFOREST

Know with Derek

Asia has both the highest and the lowest points on the surface of the Earth.

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Our World and the Environment
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25. Saving Our Environment

Today, there are much fewer trees than there were ten years back. People continue to cut trees and harm our environment so that they can live more comfortably.

The harmful smoke and gases emitted by vehicles and factories pollute the air that we breathe.



Here are a few facts related to the environment.

1. Deep roots hold the tree and the topsoil to deeper layers and reduce the chances of a landslide.
2. Aluminium cans are, by far, the most recycled drinks package in the world.
3. According to one of the Noise Pollution Rules in India, a loud speaker or a public address system shall not be used at night (between 10:00 p.m. and 6:00 a.m.), except in closed auditoriums, conference rooms and banquet halls.
4. Lack of water that is safe for drinking and sanitation purposes is believed to be the world's single largest cause of illness.
5. In 2004, Indian Railways introduced clay cups or *kulhads* as a replacement for plastic cups.
6. Nearly 15,000 glaciers and 9,000 glacial lakes in the Himalayan mountain chain, that are a lifeline for nearly 1.3 billion people downstream, are shrinking at an average rate of 10 to 60 metres annually.
7. Many Indian states, such as Maharashtra, Karnataka, Punjab and Jammu and Kashmir, have decided to ban the use, sale, production, storage and distribution of polythene bags.

• Grow with Derek

An environmentalist is a person who is concerned about the natural environment and works towards protecting and improving it. Find out the names of at least two to three well-known environmentalists of India and read about their concerns and achievements.

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12. Animal World

Identify and name the animals using the **Help Box**.

1.



Gharial

2.



Tapir

3.



Moose

4.



Wolverine

5.



Sloth

6.



Gecko

7.



Mandrill

8.



Slow Loris

9.



Manatee

Wolverine

Mandrill

Tapir

Slow Loris

Gecko

Gharial

Moose

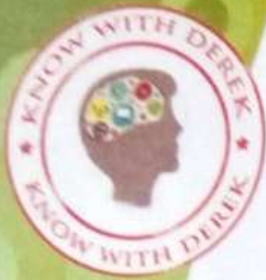
Manatee

Sloth

Know with Derek

On 22 October 2010, the elephant was declared as a National Heritage Animal by the Ministry of Environment and Forests.

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13. Natural Fibres

Tick (✓) the correct answers.

1. Silk is an animal fibre obtained from the cocoon of a silkworm.

True

False

2. Coir fibres are extracted from the husk of the banana plant.

True

False coconut

3. Cotton is a soft fibre that grows around the leaves of the cotton plant.

True

False seed



4. The flax fibre is obtained from the stem of the plant.

True

False



5. Hemp fibre is obtained from the seed of the plant.

True

False stalk

6. Jute is extracted from the bark of the white jute plant.

True

False



7. Pure cashmere fibre is a product of the Kashmiri rabbit.

True

False Goat

8. The *sisal* fibre is extracted from the leaves of the plant.

True

False

Know with Derek

Palm leaves are a source of natural fibres. The palm leaf fibre is used in making ropes, hats, brushes, fishnets and brooms.

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14. Plant Adaptations

Read about the given adaptations and state whether they are true or false.

1. Swollen and spongy petioles or leaf stalks keep the water hyacinth afloat. True
2. Onion and garlic bulbs have modified leaves for storing food. True
3. Plants like sugarcane have prop roots that grow from the lower nodes of the plant. False (stilt roots)
4. Found in the Sundarbans, the Sundari tree has pneumatophores that grow upwards from its root system to take in oxygen from the air. True
5. Weak-stemmed plants, like money plant, develop roots from nodes that help them climb. True
6. A potato is a rhizome, a swollen underground stem, characterised by 'eyes'. False (it is a tuber)
7. Epiphytes are plants that have aerial roots to absorb moisture from the host plant. False (moisture from air)
8. The leaves of the cactus plant are capable of photosynthesis. False (stem)
9. Intensive roots of the grasses in the Prairies absorb more moisture from the ground and prevent the grazing animals from pulling them out. True
10. Trees with needle-like leaves retain less water than broad leaves. False (they retain more water)

Know with Derek

The term 'plant' is also used for a factory/place where an industrial or manufacturing process takes place.



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15. Robots

From R2D2 in *Star Wars* to WALL-E in *Wall-E*, from Vicki in *Small Wonder* to Doraemon in *Doraemon*, robots have been extremely popular in fiction.

In real life, though, robots have not reached the same level as their esteemed fictional counterparts. But every year, more and more advances are being made in this field.

The modern term 'robot' comes from the Czech word *robota*, meaning 'forced labour'. It was introduced in Karel Čapek's play Rossum's Universal Robots.

The word 'robotics' first appeared in Isaac Asimov's story *Runaround* (1942). In this story, he gave his famous *Three Laws of Robotics*:

1. A robot may neither injure a human being, nor, through inaction, allow a human being to be harmed.
2. A robot must obey the orders given to it by human beings except in situations where such orders would conflict with the First Law.
3. A robot must protect its own existence as long as such protection does not conflict with the First or the Second Law.

AIBO is a series of robotic pets manufactured by Sony. Most of these models were inspired from dogs and were dog-like, while some others were inspired from lion cubs and space explorers.

Activated in 2015, 'Sophia' is a social humanoid robot that can display more than fifty facial expressions. In October 2017, Sophia became a Saudi Arabian citizen, the first robot to receive the citizenship of any country.



The first RoboCup games were held in 1997 in Nagoya, Japan.

Know with Derek

First held in 2004, the World Robot Olympiad is an international robotics competition for elementary, junior high and senior high students, aged nineteen and below.

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17. Inside the Internet

Fill in the blanks using the **Help Box**.

1. A blog is the shortened form of a weblog.
2. To download means to copy data from one computer system to another using the Internet.
3. The unique address of any web document is called its URL.
4. The @ sign is used in email addresses between the user's name and the domain name.
5. To surf means to move from one website to another on the Internet.
6. A browser is a software program that enables you to view web pages and other documents on the Internet.
7. 'WWW' in a URL stands for world wide web.
8. In browsers, cache is used to identify a space where the web pages that you have visited are stored in your computer.



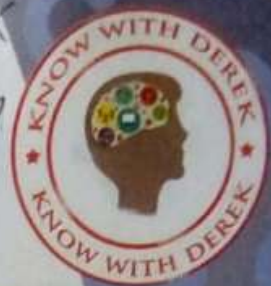
browser	cache	download	blog
URL	surf	World Wide Web	@

Search

Grow with Derek

The human eye can comfortably look at objects that are more than six metres away. While working on a computer, keep the monitor either at eye level or slightly lower than eye level. Look away from the screen after every twenty minutes and focus on faraway objects. This will reduce the risk of computer-related eye strain.

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18. Scientific Instruments

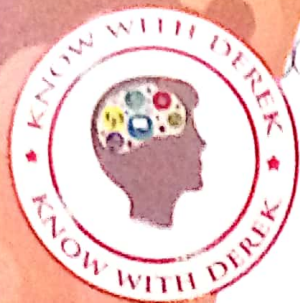
Unscramble the letters and write the names of these scientific instruments.

1. A MICROSCOPE (IMROCOSCEP) is used to view very small objects such as plant or animal cells.
2. A SEISMOGRAPH (GERIASPMHSO) is an instrument that measures and records the magnitude of earthquakes.
3. A MOHS' SCALE (MHOS' SACEL) is a scale of hardness that is used for testing the scratch-resistance of minerals.
4. An ENDOSCOPE (DNESOPCOE) is an instrument that is used to look inside the human body.
5. A LACTOMETER (MEETRLCAOT) is an instrument that is used for measuring the purity of milk.
6. A THERMOSTAT (OMREHTTATS) is a device that automatically regulates temperature in certain electrical appliances.
7. A DYNAMO (OMANYD) is a machine used for converting mechanical energy into electrical energy.
8. A BAROMETER (RABORETEM) is an instrument that is used for measuring atmospheric pressure, forecasting the weather and for measuring altitudes.



Know with Derek

An **odometer** is an instrument that is used for measuring the distance travelled by a vehicle.



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9. Colourful English

English is a colourful language. Some colours are also used to describe a mood, person or situation. Try your hand at this colourful exercise!

1. They caught the thief red -handed.
2. He is an excellent gardener. He has green fingers.
3. When the teacher showered her with praises, she felt shy and turned pink.
4. When the children stood up to the bully, he turned yellow.
5. A harmless lie told to avoid hurting someone's feelings is called a white lie.
6. He is a prince. He has blue blood.
7. His crime was a black mark on his record.
8. Virat Kohli has been playing superbly throughout this series. He has hit a purple patch.

purple	green	yellow	blue
red	white	black	pink



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Know with Derek

Names of colours are not universal. Some languages do not have separate words for green and blue or for yellow and orange. It is believed that eskimos use multiple words for the colour white to describe different conditions of snow.



10. Onomatopoeia

Onomatopoeia is a word that mimics the sound of the object or action that it refers to. For example, 'hissing' mimics the sound that a snake makes and 'woof' mimics the bark of a dog.

Fill in the missing letters to complete these onomatopoeia words.

1. A sound that is produced when food is fried: S I Z Z L E
2. A continuous rattling sound of hard objects falling on or striking each other: C L A T I E R
3. A short, sharp and high-pitched sound made by small birds and some insects: C H I R P
4. Laughing lightly and repeatedly out of amusement or nervousness: G I G G L E
5. Moving or travelling very quickly: Z O O M
6. The sound produced by something rushing through air or a liquid: S W O O S H
7. A sudden movement of the diaphragm of the human body causes this: H I C C U P
8. A sound made by the splashing of a liquid: S P L A T I E R

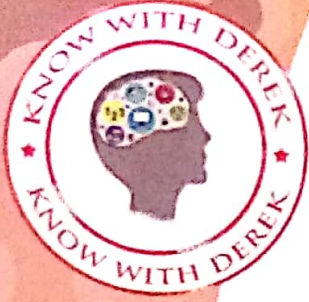


Know with Derek

The word onomatopoeia comes from the Greek word *onomatopoiia*, meaning 'making of a name or word'.



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11. Indian Languages

Though English and Hindi are used for most of the official purposes, many states have their own local languages.

Fill in the blanks using the **Help Box**.

1. Tamil was the first language to be declared a classical language by the Indian government.
2. The *Ramayan* and *Mahabharat* were composed in this language.
Sanskrit
3. This is the official language of Andhra Pradesh. Telugu
4. This language appears first on the language panel of an Indian currency note. Assamese
5. The National Anthem of India was written in this language.
Bengali
6. In 1987, Konkani in Devanagari script was declared the official language of Goa.
7. It is the official language of Jammu and Kashmir. Urdu
8. It is the official language of Karnataka. Kannada

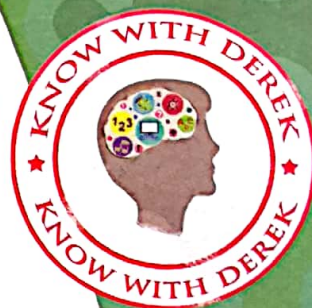
Sanskrit	Assamese	Konkani	Kannada
Bengali	Telugu	Tamil	Urdu

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Know with Derek

To be declared as a classical language of India, it must meet three criteria—its literary tradition should be original and not borrowed; it should possess a recorded history over a period of about 1500–2000 years and it should have a considerable body of ancient literature, considered valuable by its speakers.



5. Know Your Sports

Identify and write the names of these sports using the **Help Box**.

1. In this sport, the participants jump off a 3m springboard or a 10m platform at the Olympic Games. diving

2. A game in which two or four players use rackets to hit a small, hollow rubber ball against the walls of an indoor court. squash

3. 'Greco-Roman' and 'freestyle' are two popular forms of this sport. wrestling



4. It is a sport in which the participants attempt to lift heavy weights that are mounted on steel bars. weightlifting

5. Floor, balance beams, vault and uneven bars are different equipment used in this sport. gymnastics



6. This is a team sport played outdoors on horseback where the objective is to score goals against an opposing team. Polo

7. Foil, epee and sabre are the three weapons used in this Olympic sport. fencing

8. The Tour de France is one of the most well-known tournaments of this sport. cycling

wrestling	fencing	cycling	squash
diving	gymnastics	weightlifting	polo

Know with Derek

Luge is one of the oldest winter sports. The competitors lie on their backs on a tiny sled and race down an icy track.

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6. Great Sportspersons of Today

Identify these great sportspersons and the sport they play using the **Help Box**.

1.



Name: LeBron James

Sport: Basketball

2.



Name: Rory McIlroy

Sport: Golf

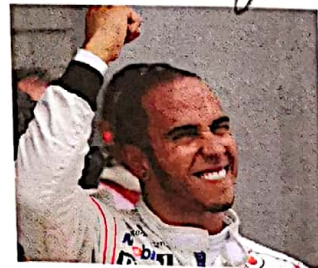
3.



Name: Carolina Marin

Sport: Badminton

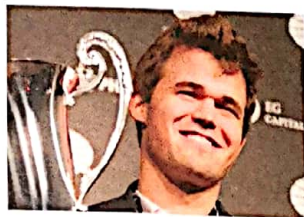
4.



Name: Lewis Hamilton

Sport: Formula One

5.



Name: Magnus Carlsen

Sport: Chess

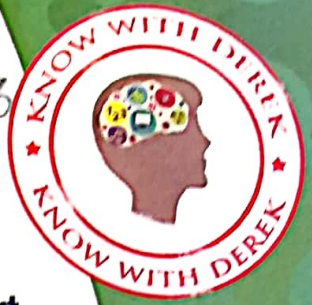
6.



Name: Mo Farah

Sport: Athletics

Athletics	Golf	Basketball
Badminton	Formula One	LeBron James
Mo Farah	Rory McIlroy	Magnus Carlsen
Chess	Lewis Hamilton	Carolina Marin



7. Championships, Trophies and Cups

Match these championships, trophies and cups with the sport.

Championships, Trophies and Cups

Sport

- 1 Copa Libertadores, FA Cup, Ballon d'Or
- 2 Frank Worrell Trophy, Wisden Trophy, Trans-Tasman Trophy
- 3 Linares, Dortmund, M-Tel Masters
- 4 Champions Trophy, Sultan Azlan Shah Cup, Asia Cup
- 5 Thomas Cup, Sudirman Cup, All England
- 6 Davis Cup, Hopman Cup, Venus Rosewater Dish
- 7 Augusta Masters, US Open, The Open Championship
- 8 NBA, World Championship, European Championship

- a chess 3
- b badminton 5
- c basketball 8
- d tennis 6
- e football 1
- f golf 7
- g hockey 4
- h cricket 2

Know with Derek

From 1930-1970, the winners of the FIFA World Cup tournament were awarded the Jules Rimet Trophy. The first Jules Rimet Trophy was won by Uruguay.

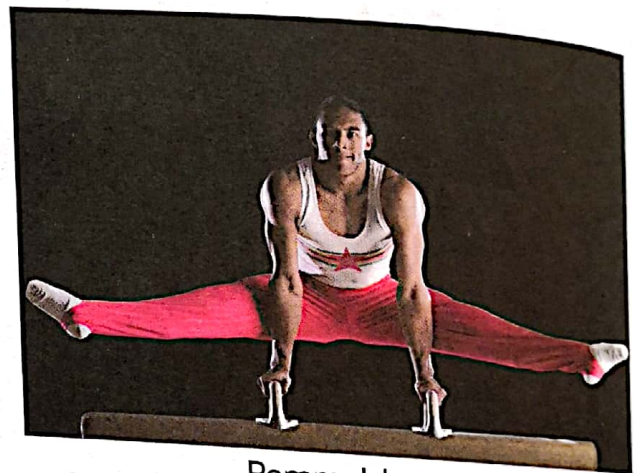
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8. Artistic Gymnastics

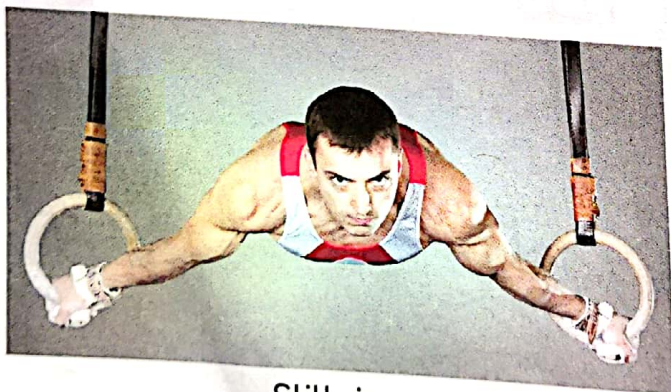
Artistic gymnastics is divided into Women's and Men's Gymnastics.

Women compete in four events—vault, uneven bars, balance beam and floor exercise while men compete in six events—floor exercise, pommel horse, still rings, vault, parallel bars and horizontal bar.

This is the **pommel horse**.
Gymnasts must use only their hands to perform continuous circular movements around the horse.



Pommel horse

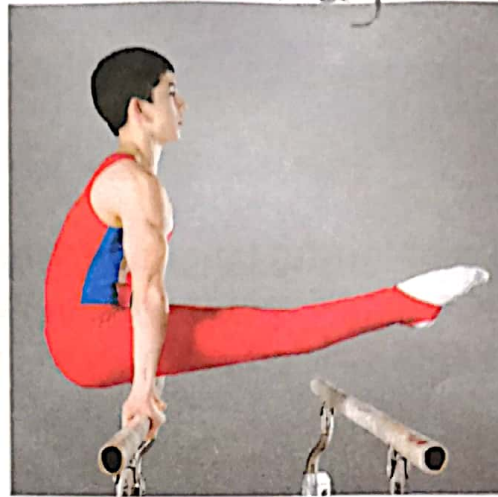


Still rings

Still rings or **Roman rings** is a true test of strength and balance. While performing this routine, the gymnast must ensure that the rings do not swing too much.

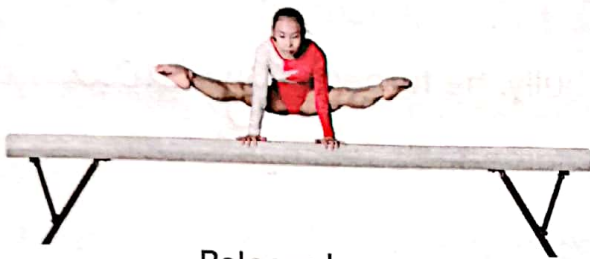


The **parallel bars** are a little more than a shoulder's width apart. The gymnast performs a series of swings, balances and releases that require great strength and coordination.



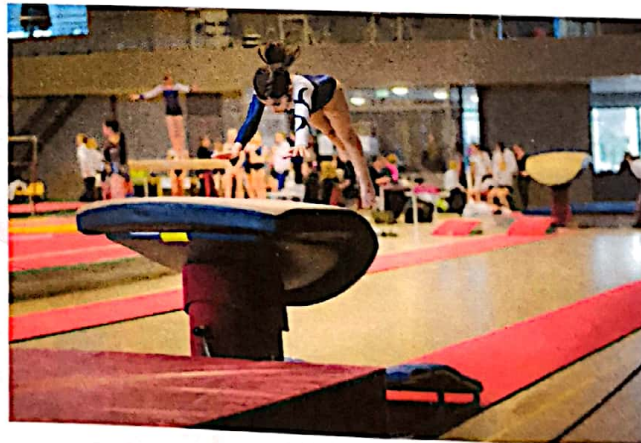
Parallel bars

The **balance beam** is one of the toughest apparatus in women's gymnastics. The gymnast performs a choreographed routine consisting of leaps, somersaults and turns, while balancing on this 10cm wide padded beam.



Balance beam

In the **vault**, the gymnast sprints, steps on to a springboard to gain momentum, touches the vault with her/his hands and then proceeds to do a series of twists and/or somersaults in the air, landing on their feet on the far side. This is the event in which **Dipa Karmakar** just missed out on a Bronze at the 2016 Rio Olympics.



Vault

Know with Derek

Both men and women participate in the floor exercise routine. The only difference is that the women's routine is choreographed to music.

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