



INTERNATIONAL CATS CONTESTS

COMPETENCE & APTITUDE TESTING SERVICES

FASTEST GROWING CONTESTS IN PAKISTAN



ICATS SCIENCE

CONTEST 2021

Question Booklet GRADE 5 & 6 JUNIORS

Time Allowed: 90 Mins.

Maximum Marks: 90

ICATS SCIENCE CONTEST 2021

JUNIORS (GRADE 5 & 6)

TIME ALLOWED : 90 MINUTES

MAXIMUM MARKS : 90

TOTAL QUESTIONS : 30 MCQS

INSTRUCTIONS

1. DON'T START ATTEMPTING THE PAPER UNTIL INSTRUCTED BY THE INVIGILATORS.
2. INSTRUCTIONS FROM THE EXAMINATION INVIGILATORS MUST BE CARRIED OUT PROMPTLY.
3. CAREFULLY RECHECK YOUR NAME, FATHER NAME, SCHOOL NAME, ADDRESS ETC AT THE BUBBLE SHEET / ANSWER SHEET.
4. RECORD ALL ANSWERS ON THE BUBBLE SHEET ONLY. SELECT BEST ANSWER FROM THE FOUR GIVEN OPTIONS AND MARK ONLY ONE OPTION IN EACH QUESTION.
5. USE BLUE / BLACK INK TO FILL UP THE CIRCLES FOR YOUR ANSWERS ON THE BUBBLE SHEET. USE OF LEAD PENCIL IS NOT ALLOWED.
6. USE OF ANY HELPING MATERIAL INCLUDING CELL PHONES AND ELECTRONIC DEVICES IS STRICTLY PROHIBITED.
7. EVERY CORRECT ANSWER EARNS THREE POINTS. THERE WOULD BE NEGATIVE MARKING. ONE POINT WOULD BE DEDUCTED FOR EVERY INCORRECT ANSWER.
8. CANDIDATES MAY NOT LEAVE THE EXAMINATION ROOM UNESCORTED FOR ANY REASON, AND THIS INCLUDES USING THE WASHROOM.
9. NO MATERIALS OR ELECTRONIC DEVICES SHALL BE BROUGHT INTO THE ROOM.
10. THERE ARE FIVE CATEGORIES OF THE CONTEST AS UNDER:
 - A. TODDLERS (GRADE 1 & 2)
 - B. KIDS (GRADE 3 & 4)
 - C. JUNIORS (GRADE 5 & 6)
 - D. JUVENILES (GRADE 7 & 8)
 - E. ADOLESCENTS (GRADE 9 & 10 / O-LEVELS)
11. ONLY REGISTERED STUDENTS CAN PARTICIPATE IN THE CONTEST.
12. NO CANDIDATE SHALL TAKE OUT OF THE HALL ANY ANSWER BOOK(S) OR PART OF AN ANSWER BOOK, WHETHER USED OR UNUSED, OR OTHER SUPPLIED MATERIAL.
13. IF A PARTICIPANT DOES NOT UNDERSTAND A WORD OR PHRASE ON THE EXAM PAPER, NEITHER EXAMINER NOR INVIGILATOR IS PERMITTED TO ANSWER.
14. FOR INFORMATION ABOUT UPCOMING CONTESTS OR PROVIDING VALUABLE FEEDBACK, PLEASE VISIT WWW.CATSCONTESTS.ORG
15. ANY ACADEMIC MISCONDUCT OR MALPRACTICE MUST BE REPORTED TO INTERNATIONAL CATS CONTESTS AT INFO@CATSCONTESTS.ORG

Q1. Which property do these four objects have in common?



sapphire



bracelet



trombone



metal bar

Select the best answer.

A | shiny

B | fragile

C | salty

D | transparent



Q2. Ella plays with her niece. When she pulls the sled's rope forward, the rope also pulls her backward.

As Ella walks, she can feel the pull of the rope on her hand.



What is the direction of this force?

A | toward the rope

B | toward Ella

C | upwards

D | downwards

Q3. The text below describes a pair of opposing forces. Read the text. Then answer the question below.



Two dogs, Buddy and Lola, play with a rope. Think about two of the forces that act on the rope:

- Lola pulls away from Buddy.
- Buddy pulls toward himself.

As buddy pulls on the rope, what is the direction of the opposing force?

A | away from Buddy

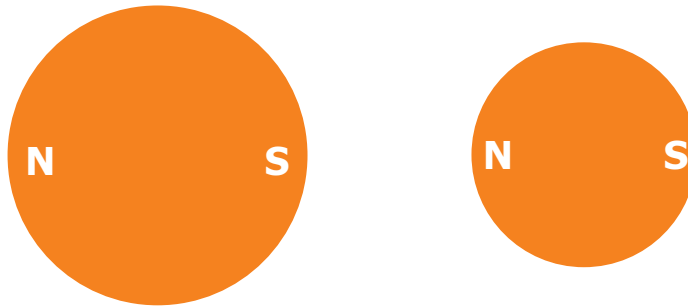
B | toward Buddy

C | upwards

D | downwards



Q4. Two magnets are placed as shown.



Will these magnets attract or repel each other?

A | attract

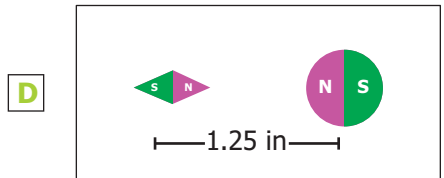
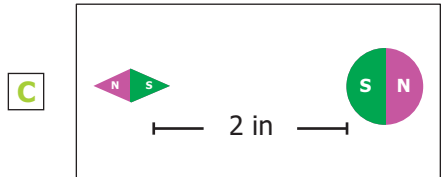
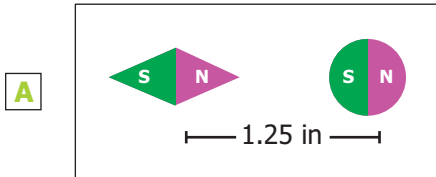
B | repel

C | first attract then repel

D | none of these

Q5. The images below show four pairs of magnets. The magnets in different pairs do not affect each other. All the magnets shown are made of the same material, but some of them are of different sizes and shapes.

Think about the magnetic force between the magnets in each pair. Select the pair with the magnetic force of smallest magnitude.



Q6. Breathing is a process that refers to the inhaling and exhaling of

A | gas

B | air

C | molecule

D | proton



Q7. Intake of carbon dioxide and giving out of oxygen is the only process named

A | photosynthesis

B | respiration

C | rusting

D | excretion

Q8. Weather on Earth is caused by heat from the sun and _____ .

A | climate

B | slope

C | wind

D | direction



Q9. Compared to the temperature, more oxygen is present in

A | clean water

B | hot water

C | cold water

D | dilute water



Q10. Which organ allows nutrients from digested food to be absorbed into the body's blood stream?

A | bladder

B | liver

C | diaphragm

D | small intestine



Q11. We can find them growing on the ground in deserts, on the sides of dry rock, hanging from the branches of trees, those are _____ .

A | crab

B | amoeba

C | lichens

D | snail

Q12. People use apple trees for food. We usually eat the part of this plant that contains the seeds. It grows from a pollinated flower.

Which part of the apple tree do we usually eat?

- A** | the fruit
- B** | the root
- C** | the stem
- D** | all of these



Q13. A savanna is a warm grassland with a few trees and shrubs. Savannas have a long dry season, during which food is hard to find. Some animals solve this problem by eating the leaves of tall trees.

Which animal's neck is best adapted for reaching the branches of a tall acacia tree?



A



giraffe

B



hippopotamus

C



warthog

D



cow

Q14. A fish near the surface of the water might look like easy prey. But many fish are fast and slippery. This helps them escape from predators.

Which animal's feet are best adapted to grab a fish swimming near the surface of the water?



brahminy kite



ostrich



mallard



hen



Q15. Crystal Cove is a beach in southern California. It was mostly clear at the beach on Friday because there was a high pressure system over the coast.

Does this passage describe the weather or the climate?

Hint: Weather is what the atmosphere is like at a certain place and time. Climate is the pattern of weather in a certain place.



A | weather

B | climate

C | Neither weather nor climate.

D | Both, weather and climate.

Q16. Below are three examples of using energy from natural resources. Select the use of energy that did not add to air pollution.

A Because gasoline had become expensive, the engine on a police car was changed. The new engine burned propane, a fuel made from natural gas.



B A power plant used a river's flowing water to produce electricity. This type of power plant is called a hydroelectric power plant.



C When the railway from Saint Petersburg to Moscow in Russia opened in 1851, its trains had engines that burned wood.



D The engine of a container ship burned fuel made from petroleum oil.



Q17. Select the part whose main job is to give strength and stiffness to a plant cell.

A | cytoplasm

B | cell wall

C | chloroplasts

D | mitochondria

Q18. Read the passage. Then answer the question.

Most of Earth's surface is covered by salt water located in oceans. Ocean water contains between three percent and four percent salt. This is about as salty as one teaspoon of salt mixed into a six-ounce cup of water.



The water in rivers also contains a tiny amount of salt. Rivers eventually carry this salt into oceans. As ocean water evaporates, salts and minerals are left behind. Over time, the ocean becomes more and more salty.

- A. Ocean water contains equal amounts of salt and water.
- B. Rivers move salt into oceans.
- C. Salt remains in the oceans when ocean water evaporates.
- D. Glaciers cover most of Earth's surface.

How many of the above statements are true?

A | 1

B | 2

C | 3

D | 4



Q19. Ahmad intends to visit his friend in the neighboring city. How long is the road from his city to his friend's city? Select the best estimate.

A | 3 feet

B | 3 yards

C | 3 inches

D | 3 miles



Q20. Aslam purchased a large trash can for his office. What could be its volume? Select the best estimate.

A | 17 cups

B | 17 fluid ounces

C | 17 gallons

D | none of these

Q21. Areeba purchased a new pen. How long that could be? Select the best estimate.

A | 6 inches

B | 6 feet

C | 6 yards

D | 6 miles



Q22. Daewoo Pakistan added a new bus into their fleet. What could be the mass of that city bus? Select the best estimate.

A | 10 ounces

B | 10 tons

C | 10 pounds

D | 10 kgs



Q23. Sughra is drinking coffee in a cold day of winter. What could be the temperature of a cup of hot coffee? Select the best estimate.

A | 145 °C

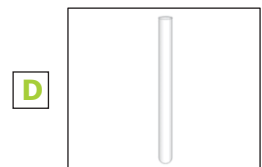
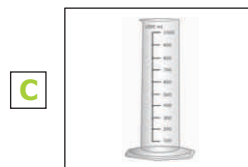
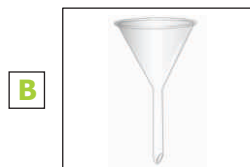
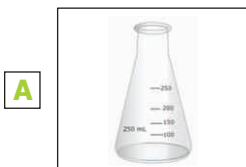
B | 145 °F

C | -145 °C

D | -145 °F



Q24. Ajmal needs a funnel to do an experiment in the science lab. Which one of the following he needs?



Q25. To check a leaf that either it has made food or not we can use test using

A | iron solution

B | iodine solution

C | calcium solution

D | water

Q26. Read the text about an animal in motion.

A gecko used its sticky feet to crawl from the bottom of a window to the top of the window.

Complete the statement. Assume that the gecko's mass did not change.

The gravitational potential energy stored between the gecko and Earth _____ as the gecko crawled on the window.

A | increased

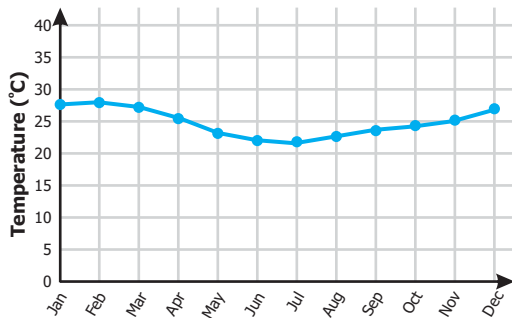
B | decreased

C | stayed the same

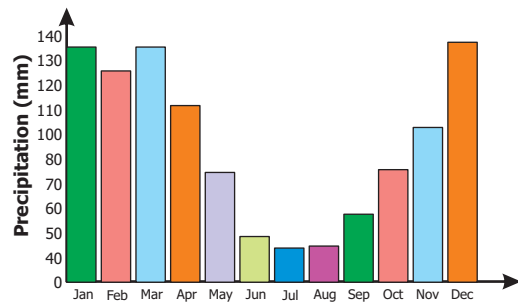
D | none of these

Q27. Use the graphs to answer the question below.

Average temperature in Rio De Janeiro, Brazil



Average precipitation in Rio De Janeiro, Brazil



Select the best weather prediction for Rio De Janeiro in November.

A | The average temperature will be higher than in December, and there will be about 60 millimeters of precipitation.

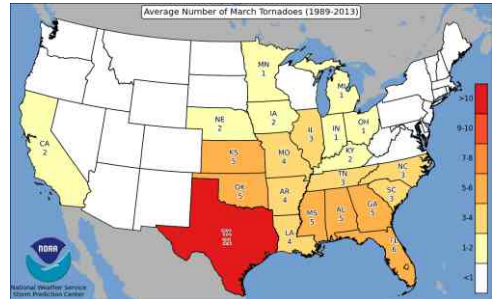
B | There will be a higher average temperature and more precipitation than in April.

C | It will be warmer and wetter than in July.

D | The average temperature will be about 20 °C, and there will be more precipitation than in July.

Q28. Natural hazard maps can show data about large areas, such as entire countries, or smaller areas, such as states or cities. The map below shows data about tornadoes in a region.

Which of the following areas had the largest number of tornadoes between 1989 and 2013?



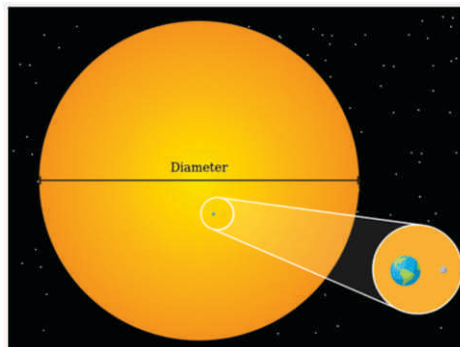
A | OK

C | TX

B | MN

D | OH

Q29. Our solar system is made up of the Sun and all the objects that move around it. These objects include planets, moons, asteroids, and comets. The sizes of the objects in the solar system are difficult to imagine without the help of a model. Models make certain characteristics of a system easier to understand. A model can be a physical object, a graph, a diagram, or a simulation. The diagram below is a model that shows the relative sizes of the Sun, the Moon, and Earth. The two small dots represent the accurate sizes of Earth and the Moon compared to the Sun. A close-up view of Earth and the Moon is also shown.



Complete the sentence to estimate the diameter of the Sun compared to Earth.

The Sun's diameter is about _____ times greater than Earth's.

A | 100

B | 3

C | 10

D | 50

Q30. The passage below describes a student creating a physical model of Earth's rotation.



Tony is creating a model showing how Earth rotates over the course of one day. He uses a globe to represent Earth.

Tony knows that Earth spins on its axis, completing one rotation every 24 hours. He slowly spins the globe counterclockwise, completing one rotation in about 6 seconds.

In Tony's model, 1 second of rotation represents about _____ .

A | 2 hours

B | 4 hours

C | 6 hours

D | 8 hours

National Toppers
ICATS
ART
Contest
2021

Student Name	Father Name	Grade	School
TEHREEM SHIRAZ	SYED SHIRAZ ALAM	1	CANTT. PUBLIC HIGH SCHOOL & GIRLS COLLEGE (HYDERABAD)
MUHAMMAD AHMED KHAN	UZAIR AHMAD KHAN	2	ARMY PUBLIC SCHOOL (JUNIOR)
RAMISHA SAHAR	RAJA ISHAQ ASAD	3	FATIMA FERTILIZER SCHOOL
ZARLISH MOMINAH	TAYYAB SIDDIQUE	4	ARMY PUBLIC SCHOOL (DEFENCE COMPLEX ISLAMABAD)
DARSAMIN RAFIQUE	AZHAR RAFIQUE	5	NOVA CITY SCHOOL
AAFEEN KHALIL	KHALIL FAZIL	6	ISLAMABAD COLLEGE OF ARTS AND SCIENCES
HOORIA NOUMAN	NOUMAN ILYAS	7	KOSHAR CHILDREN'S ACADEMY
FATIMA RIZWAN	RIZWAN LIAQAT	8	LAHORE GRAMMAR SCHOOL
DUA ZAIN	M. ZAIN	9	HIRA FOUNDATION SCHOOL
WAJIHA SHAKEEL	SHAKEEL SIDDIQ	10	THE INTELLECT SCHOOL

Congratulations

National Toppers
ICATS
Creative Writing
Contest
2021

Student Name	Father Name	Grade	School
MUHAMMAD HAZIQ UMAR	UMAR SARWAR	1	LAHORE GRAMMAR SCHOOL
M ABDULLAH	IKHTIYAR AHMED	2	FAUJI FOUNDATION SCHOOL (IAND)
ALISHBA HAMEED	ABDUL HAMEED	3	ST. GREGORY'S HIGH SCHOOL
SHAHMEER	AMEER HUSSAIN	4	LAHORE GRAMMAR SCHOOL (VALENCIA TOWN)
ESHAAL ALEEM	ALEEM AHMED KHAN	5	THE CITY SCHOOL (GULSHAN JUNIOR CAMPUS)
MUHAMMAD YAHYA	IFTIKHAR MANZOOR	6	INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD SCHOOL
SYEDA SABA ZAWAR	SYED ZAWAR	7	THE CITY SCHOOL (JHELUM CAMPUS)
EMAN AMNA	AFTAB	8	HAYAT SCHOOL & COLLEGE
ALIZHA NOOR ARSHAD	MRS. FOZIA ARSHAD	9	THE INTERNATIONAL SCHOOL OF CHOUEIFAT
MANAAM RAZA	RAZA UL MOHSIN	10	LAHORE GRAMMAR SCHOOL (1A1 SENIOR)

Congratulations

Compete
if you are the best