

Duration: 2 Hours

M.M: 100

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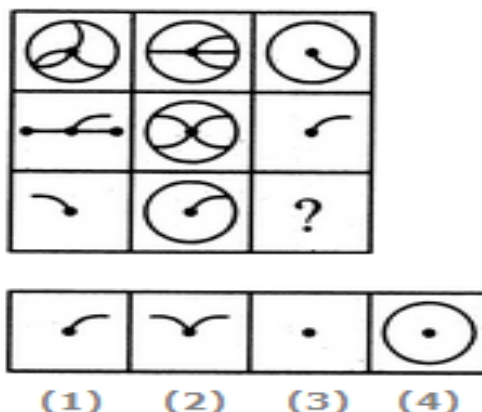
Name: _____
 Father's Name: _____
 Mother's Name: _____
 Current Class: _____
 Examination Centre: Manav Rachna International School _____

GENERAL INSTRUCTIONS:

- This paper is divided into 4 sections
SECTION – A: Logical Reasoning: 20 marks (All questions carry 2 marks each)
SECTION – B: English: 20 marks (All MCQs carry 1 mark each, Short Answer Type Questions carry 2 marks each, Long Answer Type Question carries 10 marks)
SECTION – C: Math: 30 marks (All Objective Questions carry 1 mark each. All Subjective Questions carry 2.5 marks each)
SECTION – D: Science: 30 marks (All Objective Questions carry 1 mark each. All Subjective Questions carry 2 marks each)
- All sections are compulsory.
- Read each question carefully before answering.
- Objective Questions need to be **tick marked** in the question paper itself and submitted.
- Subjective Questions need to be attempted in the answer sheets provided and submitted.

**SECTION-A
LOGICAL REASONING**

1. Select a suitable figure from the four alternatives that would complete the figure matrix.

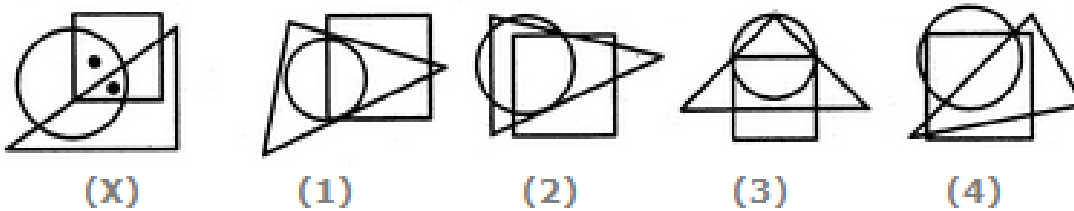


- a) 1
- b) 2
- c) 3
- d). 4

2. Look at this series: F2, __, D8, C16, B32, ... What number should fill the blank?

- a) A16
- b) G4
- c) E4
- d) E3

3. Select the figure which satisfies the same conditions of placement of the dots as in Figure-X.



- a) 1
- b) 2
- c) 3
- d) 4

4. A man has Rs.480 in the denominations of one-rupee notes, five-rupee notes and ten-rupee notes. The number of notes of each denomination is equal. What is the total number of notes that he has?

- a) 45
- b) 60
- c) 75
- d) 90

5. Find the odd man out.

396, 462, 572, 427, 671, 264

- a) 396
- b) 427
- c) 671
- d) 264

6. In question below, the passage consists of six sentences. The first and sixth sentences are given in the beginning. The middle four sentences in each have been removed and jumbled up. These are labelled as P, Q, R and S. Find out the proper order for the four sentences.

S₁: In the middle of one side of the square sits the Chairman of the committee, the most important person in the room.

P : For a committee is not just a mere collection of individuals.

Q: On him rests much of the responsibility for the success or failure of the committee.

R: While this is happening we have an opportunity to get the 'feel' of this committee.

S : As the meeting opens, he runs briskly through a number of formalities.

S₆: From the moment its members meet, it begins to have a sort nebulous life of its own.

The Proper sequence should be:

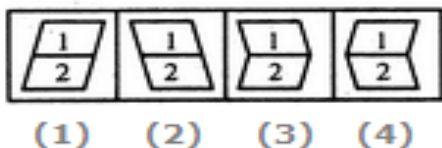
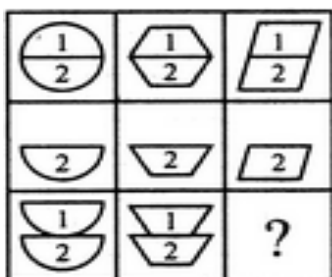
- a) RSQP
- b) PQRS
- c) SQPR
- d) QSRP

7. The question consists of two words which have a certain relationship to each other followed by four pairs of related words. Select the pair which has the same relationship.

WAN:COLOUR

- a) corpulent : weight
- b) Insipid : flavour
- c) Pallid : complexion
- d) Enigmatic : puzzle

8. Select a suitable figure from the four alternatives that would complete the figure matrix.



- a) 1
- b) 2
- c) 3
- d) 4

9. Read the below passage carefully and answer the questions:

At a small company, parking spaces are reserved for the top executives: CEO, president, vice president, secretary, and treasurer with the spaces lined up in that order. The parking lot guard can tell at a glance if the cars are parked correctly by looking at the color of the cars. The cars are yellow, green, purple, red, and blue, and the executives names are Alice, Bert, Cheryl, David, and Enid.

- * The car in the first space is red.
- * A blue car is parked between the red car and the green car.
- * The car in the last space is purple.
- * The secretary drives a yellow car.
- * Alice's car is parked next to David's.
- * Enid drives a green car.
- * Bert's car is parked between Cheryl's and Enid's.
- * David's car is parked in the last space.

Who is the CEO ?

- a) Alice
- b) Bert
- c) Cheryl
- d) David
- e) Enid

10. Choose the correct meaning of proverb/idiom, If there is no correct meaning given, E (i.e.) 'None of these' will be the answer.

To catch a tartar

- a) To trap wanted criminal with great difficulty
- b) To catch a dangerous person
- c) To meet with disaster
- d) To deal with a person who is more than one's match
- e) None of these

SECTION-B ENGLISH

1. Read the given passage carefully and answer the questions that follow:

Often, life rewards those who cherish and embrace it wholeheartedly regardless of whether they are born with a silver spoon or not. An unborn put up for adoption before birth, rejected as a newborn by a couple because he was not a girl, and eventually adopted by a common couple – Steve Jobs started his life in rejection but became the master of his destiny, thanks to an indomitable spirit and etched his name on the annals of history.

When he went to college, Steve could not make sense of the relevance of a college education to his life and soon dropped out. Trusting it would all work out, he stopped taking uninteresting and mandatory classes and chose, by chance, a calligraphy course – one that he thoroughly enjoyed in the midst of a deprived existence. He let his curiosity and intuition steer him towards creating captivating typography without knowing if he'd have any practical use of it. But 10 years later, it all made sense as he designed the first computer (Macintosh) with beautiful lettering. Had he not done what he did, the Mac and later Windows wouldn't have come with the wonderful fonts that they did. Connecting the dots backwards, life's events somehow appear to have a bearing on one's future.

But rock-bottom wouldn't leave. Steve was 20 when he started Apple with a friend in a garage and turned that into a \$2 billion company with over 4,000 employees. Soon after, he got fired publicly by the very man he hired to run his company. Though dazed and disillusioned at the repercussions, he slowly surfaced when he realised he still loved what he did. He went ahead and spent five years starting NeXT and Pixar – creator of the world's first computer animated feature film, Toy Story. In a remarkable turn of events Jobs sold NeXT to Apple and returned to Apple to incorporate his technology-from-hiatus into the heart of Apple's innovations. The awful-tasting medicine of being fired was just what he needed.

Believing that living each day as it were the last would bring out the best in him, Steve worked for the remainder of his life asking himself and answering that question every day. A consistent "No" taught him he needed to change something. Remembering death convinced him to follow his heart and even helped him face cancer. He faced death the same way he did misfortune and stayed "hungry and foolish" until the very end.

- i. What was Steve Jobs' attitude towards adversity?
 - a) Endless possibilities.
 - b) Can't live without it.
 - c) Humiliates us in public.
 - d) Teaches us to love.

- ii. Job's philosophy of 'stay hungry and foolish' could be best interpreted as ____
 - a) pursue success like a fool.
 - b) be a reckless lover of food.
 - c) work as long as you win
 - d) be curious and keep learning.

- iii. According to the passage, our attitude to life is more important than _____
 - a) how we estimate ourselves.
 - b) our circumstances.
 - c) who our parents are
 - d) silver and gold.

iv. “Connecting the dot backwards,” could be best rephrased as _____

- a) with introspection.
- b) in retrospect.
- c) sans contemplation.
- d) circumstantial.

v. The word, ‘indomitable’ can be best replaced with _____

- a) unbreachable
- b) surmountable
- c) defenceless
- d) vulnerable

vi. The phrase, “born with a silver spoon’ signifies _____

- a) gifted a silver spoon at the time of birth.
- b) inherited wealth.
- c) silver coloured spoon in the mouth.
- d) low rank in the society.

vii. The word, ‘disillusioned’ is opposite in meaning to _____

- a) disenchanting
- b) downcast
- c) discouraged
- d) encouraged

viii. Which of the following is not true for Steve Jobs?

- a) Steve started Apple when he was 20 years old.
- b) Steve was born with a silver spoon.
- c) Being fired from Apple, could not deter him to innovate.
- d) Steve enjoyed learning calligraphy.

ix. What does the passage suggest about death?

- a) can’t be avoided
- b) destroys dreams
- c) cheats us at last
- d) enhances life

x. According to the passage, embracing challenges of life half-heartedly does prove rewarding.

- a) true
- b) false

2i. If you could travel anywhere in the world, where would you go to and why? (Write your response in 150 words)

OR

ii. Write a letter to someone your age who lives in another country. Describe your life and find out how his or hers is different. (Word limit 150 words)

SECTION-C
MATH

OBJECTIVE

1. If $35.4067 = \frac{3}{P} + 5Q + 4R + \frac{6}{S} + 7T$, then find the value of $2P + 4Q + 5R + 7S + 3T$ is

- a) 7004.7003 b) 7004.70003 c) 704.003 d) 74.7003

2. Which of the following is equal to 1?

- a) $\frac{0.0121}{1.21 \times 0.1}$ b) $\frac{0.0121}{0.121}$ c) $\frac{(0.011)^2}{(1.1)^2(0.01)^2}$ d) $\frac{(0.11)^2}{(11)^2 0.01}$

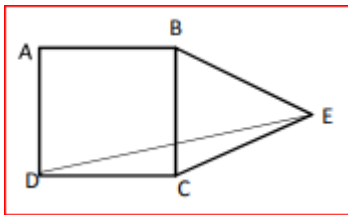
3. The number of factors of 1080 is :

- a) 16 b) 32 c) 28 d) 8

4. If d is the distance from a point to the centre of the circle of radius r and $d-r > 0$, then the point P lies _____ the circle.

- a) Inside b) outside c) on d) none of these

5. ABCD is a square and triangle EBC is an equilateral triangle .Find $\angle BED$.



- a) 45° b) 35° c) 40° d) 60°

6. Find the difference between the measure of the larger and smaller angle formed by the hour and the minute hands of a clock at 7 O'clock.

- a) 60° b) 45° c) 55° d) none of these

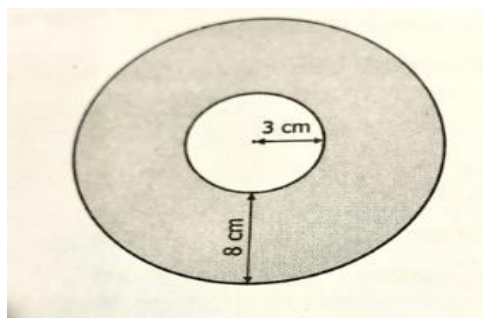
7. An angle O whose measure is $\frac{2}{3}$ rd of right angle is seen through a microscope which magnifies any length six times. What will be the measure of angle O under the microscope?

- a) 60° b) 120° c) 360° d) 240°

8. Naresh has a habit of walking 2 km 35m in the morning and 1 km 7m in the evening. How much distance did he walk in 2 days?

- a) 6.84km b) 6.084km c) 3.402km d) 6.804km

9. The difference between two numbers is 7 and their sum is 35. What will be their product?
- a) 324 b) 294 c) 79 d) 245
10. A factory packs 48 chocolates in each box. They have 243 boxes to be filled. They have already made 10,000 chocolates. The number of chocolates they have to make more to fill the boxes is _____.
- a) 1664 b) 1820 c) 1600 d) 1864
11. Number of isosceles triangles that can be formed having a perimeter 23cm is _____. [Note: Sides have length in natural numbers]
- a) 4 b) 8 c) 7 d) 6
12. 60 % of 25% of $\frac{5}{6}$ th of X = 630. The value of x is
- a) 5060 b) 4880 c) 4000 d) 5040
13. By what percent is the sum of Rs. 100 more than the sum of Rs. 90?
- a) $11\frac{1}{9}$ b) $10\frac{1}{9}$ c) $1\frac{1}{9}$ d) none of these
14. Which one of the following is greater?
- a) Hundred millions b) Hundred Lakh c) Five millions d) One Crore
15. Two 7cm by 7cm rectangles overlap to form a 7cm by 9cm rectangle. The area of the region where two rectangles overlap is –
- a) 35 cm^2 b) 12 cm^2 c) 20 cm^2 d) 10 cm^2
16. The average mass of 3 boys is 64kg. If the total mass of 2 of them is 119 kg, how heavy is the third boy?
- a) 27 kg b) 73 kg c) 72kg d) 34kg
17. In the figure given below, two circles are shown and they share a common center point. Which expression can be used to find the approximate circumferences of the outer circle in cm?



- a) $\pi(3 + 8)$ cm b) $\frac{1}{2}(3 + 8)$ cm c) $2\pi(3 + 8)$ cm d) $2(3+8)$ cm

18. If 40 nails are used in making one shoe, the number of nails needed to make 20 pairs of shoes is _____.
- a) 1600 b) 600 c) 800 d) 3400
19. Sachin earns twice as much in the month of March as in each of the other months of the year. What part of his entire annual earnings was earned in March?
- a) $\frac{1}{7}$ b) $\frac{1}{6}$ c) $\frac{2}{11}$ d) $\frac{2}{13}$
20. A polygon has prime number of sides. Its number of sides is equal to the sum of the least two consecutive primes. The number of vertices is _____.
- a) 3 b) 5 c) 9 d) 7

SUBJECTIVE

- a) The product of two numbers is 210. Find the LCM.

b) Rita completes her task in 4hrs 45min and Sheela completes the same task in 5hrs 9min. What is the difference between time taken by them in hours?
- In a certain game, points are assigned to every word. Each q, x and z in word is worth 5 points, and all other letters are worth 1 point each. What is the sum of the points assigned to the word “exquisite”?
- The weight of an empty container is $25\frac{1}{4}$ kg and it contains $12\frac{1}{5}$ kg of rice. What is the weight of the container filled with rice?
- A garden is in the shape of a square with a semicircle on one of its sides. The side of the square is 7cm. What is the perimeter of the resulting figure?

SECTION D SCIENCE

OBJECTIVE

- Which person is using a wedge?





c)



d)

2. Ramya read in the newspaper about a village practicing Rain Water harvesting. She enquired about it from her father. Her father suggested that Rain Water harvesting can be practiced to prevent,
 - a) floods
 - b) tsunami
 - c) drought
 - d) earthquakes

3. While watching a movie, Sita saw a scene in which a violent and very strong windstorm moving in a spiral broke building coming its way. What do you think it is?
 - a) Thunderstorm
 - b) Cyclone
 - c) Tsunami
 - d) Drought

4. Akshi loved watching the Moon. She noticed that, on the first day, it was round and fully lit. At the end of the week, the Moon was lit on the left side and looked like it had been cut in half. How do scientists describe this stage of the moon phase cycle?
 - a) Waxing
 - b) Wasting
 - c) Waning
 - d) Warming





5. Consider the following statements and identify the right ones.

I: Moon is the Natural Satellite of the Earth

II: Moon is a luminous object

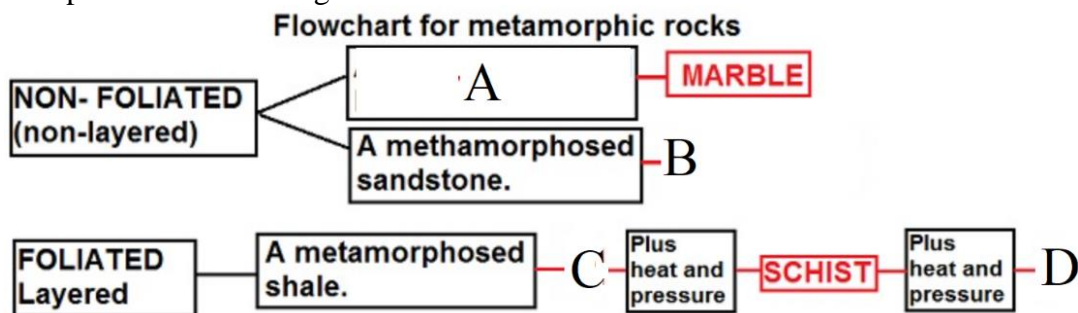
 - a) I
 - b) II
 - c) I and II both
 - d) None amongst I and II

6. Match the monuments or statue shown in column I with the stones they are made up of in column II.

Column - I	Column - II
i) 	a) Sandstone (Sedimentary)
ii) 	b) Diorite (Igneous)
iii) 	c) Granite (Igneous)
iv) 	d) Marble (Metamorphic)

- a) i-d, ii-c, iii-a, iv-b
- b) i-a, ii-b, iii-d, iv-c
- c) i-c, ii-a, iii-d, iv-b
- d) i-d, ii-b, iii-c, iv-a

7. Complete the flowchart given below:



- a) A-Pumice, B-Scoria, C-Gneiss, D-Basalt
- b) A-Limestone, B-Quartzite, C-Slate, D-Gneiss
- c) A-Limestone, B-Scoria, C-Gneiss, D-Slate
- d) A-Pumice, B-Rhyolite, C-Slate, D-Gneiss

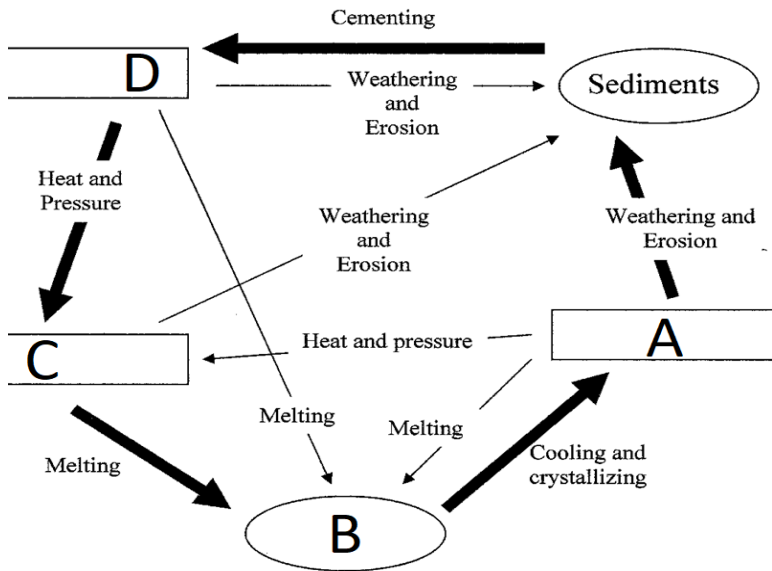
8. Who am I?



I am shiny and dark grey in colour. I am formed due to metamorphism of shale.

- a) Gneiss b) Slate c) Onyx d) Obsidian

9. Identify the types of rock labelled as A, B, C and D in the following flowchart:



The Rock Cycle

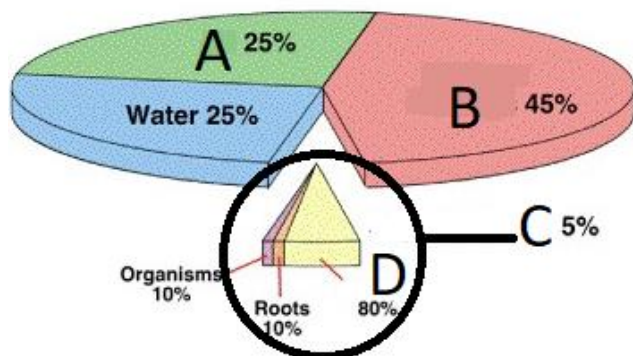
- a) A-Igneous, B-Magma, C-Metamorphic, D-Sedimentary
 b) A-Metamorphic, B-Igneous, C-Sedimentary, D-Magma
 c) A-Igneous, B-Sedimentary, C-Magma, D-Metamorphic
 d) A-Sedimentary, B-Metamorphic, C-Magma, D-Igneous

10. Complete the following table:

NAME OF THE ROCK	TYPE OF ROCK	USE OF ROCK
A	Metamorphic	Component of toothpaste
Limestone	B	Source of Calcium in food
Slate	C	Making Blackboard
D	Igneous	Making ornaments

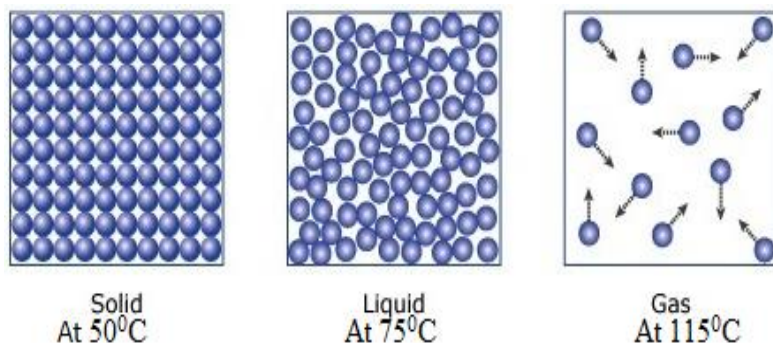
- a) A-Limestone, B-Metamorphic, C- Sedimentary, D- Granite
- b) A-Marble, B-Sedimentary, C- Metamorphic, D- Obsidian
- c) A-Shale, B-Igneous, C- Metamorphic, D- Pumice
- d) A-Schist, B-Metamorphic, C- Igneous, D-Gneiss

11. The pie-chart given below is showing composition of soil. The components of soil labelled as A, B, C and D in the following chart are:



- a) A-Air, B-Humus, C-Soil particles, D-Organic material
- b) A-Humus, B-Soil particles, C-Humus, D-Organic material
- c) A-Organic material, B-Air, C-Humus, D-Soil particles
- d) A-Air, B-Soil particles, C-Organic material, D-Humus

12. The given figures show arrangement of particles of a substance 'X' at different temperatures:



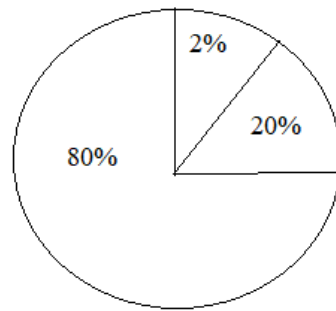
Which of the following statements is correct?

- a) Freezing point of the substance 'X' is below 50 °C.
- b) The temperature at which the substance 'X' condenses is between 75 °C to 115 °C.
- c) The kinetic energy of the molecules of 'X' is maximum at 100 °C.
- d) The inter-molecular force of attraction is very strong at 90 °C.

13. The production of starch, and not glucose, is often used as a measure of photosynthesis in leaves because

- a) starch is immediate product of photosynthesis
- b) glucose formed in photosynthesis soon gets converted into starch
- c) starch is soluble in water
- d) sugar cannot be used

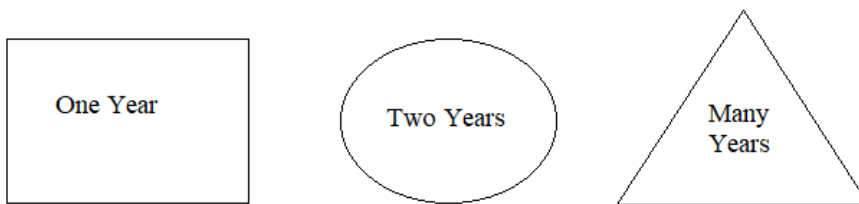
14. The given pie chart shows the composition of the different components of food found in fish.



Why is the part labelled 80% needed?

- a) For growth and early healing of injuries
- b) To provide energy
- c) To absorb soluble vitamins
- d) To prevent constipation

15. Sia was grouping plants. She decided to sort them by drawing geometrical figures depending upon their life cycle



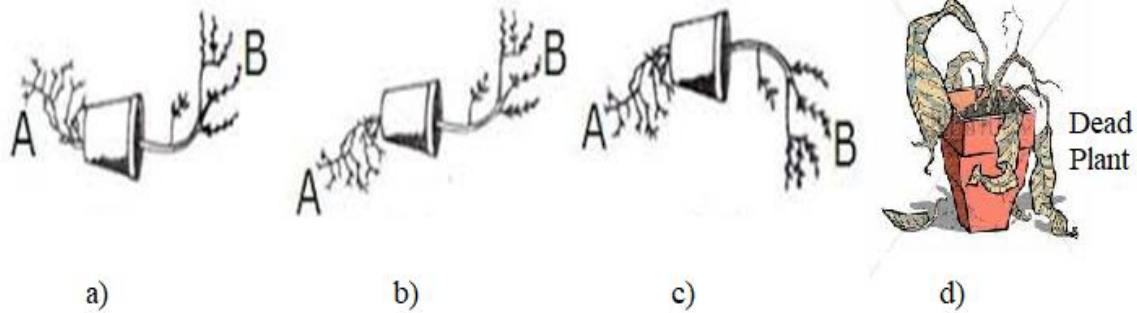
Around which plant Sia drew a circle?

- a) Banana
- b) Papaya
- c) Neem
- d) Hibiscus

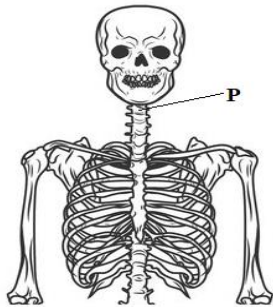
16. Beri-beri is a condition caused by the deficiency of a vitamin in our body. A regular intake of these food items will help in preventing it?

- a) Soya beans, corn, wheat – rich in vitamin E
- b) Wheat, oil seeds, meat – rich in vitamin B1
- c) Sweet potato, carrot, radish – rich in vitamin A
- d) Citrus fruits, tomatoes – rich in vitamin C

17. A plant placed outside the laboratory window is shown in the figure:
What will be expected to happen in one week?



18. Which of the joint is located at point P?



- a) Pivot joint
- b) Gliding joint
- c) Ball and socket joint
- d) Hinge joint

19. Earthen pots cool water because

- a) Earthen pots absorb heat of water
- b) Earthen pots are made up of soil that has a cooling effect
- c) Earthen pots have pores through which water evaporates using the heat of the stored water
- d) Earthen pots are filled with both ice and water

20. Which of the following is not a stem

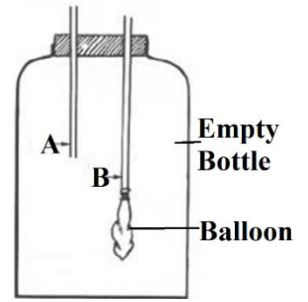
- a) Potato
- b) Sweet potato
- c) Turmeric
- d) Ginger

SUBJECTIVE

1. What are the different agents causing soil erosion? Use any graphic organizer to differentiate between weathering and soil erosion.
2. ‘Scientists can find out about life on Earth by studying sedimentary rocks.’ Justify the statement.
3. Observe the picture of an activity given below that is showing an experiment carried out with leaves of a potted plant which is covered with a polythene bag. The pot is watered and is then left for few hours under sunlight. What is your observation and conclusion for this activity?



4. a) What will happen if you blow into the tube A or if you suck air out of the tube A as shown in the following diagram? Give reasons to support your answer?



b) What do you think will happen if we block the mouth of the tube A and we blow air in the tube B? Justify your answer.

5. Natural factors like climate, ocean currents and asteroids can also cause extinction of plant and animal species. So why are we worried about human factors?