

Young Genius Exam (2020-21)
Model Test Paper
For Class – 7th
From 6th S.St, Science & Maths Syllabus



Subject: S.St.

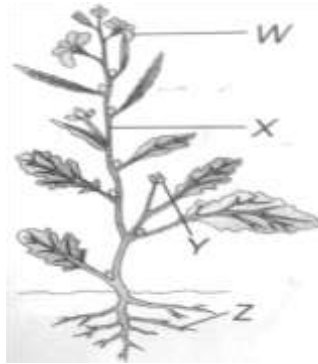
Q1. Choose the correct Answer:

1. Which is the earth consisting of solid portion?
(a) The Atmosphere (b) Hydrosphere (c) The Lithosphere (d) All of these
2. Which is the largest continent?
(a) Asia (b) Africa (c) Australia (d) None of these
3. What is biosphere?
(a) Narrow zone (b) Broad zone (c) Both (a) and (b) (d) None of these
4. Which gas is responsible for global warming?
(a) O₂ (b) CO₂ (c) N₂ (d) H₂
5. What are celestial bodies?
(a) The sun (b) The moon (c) All the shining bodies in the sky (d) All of these
6. The celestial bodies which have their own heat and light are called
(a) planets (b) stars (c) satellites (d) all of these
7. Which is the most recognisable constellation?
(a) The saptarishi (b) The moon (c) The sun (d) The mars
8. The lower blocks in Block Mountains are
(a) Graben (b) horsts (c) glaciers (d) none of these
9. Mountains may be arranged in a line known as
(a) horsts (b) range (c) glacier (d) all of these
10. Where are glaciers found?
(a) In plains (b) On mountains (c) In plateaus (d) None of these
11. What is a map?
(a) A globe (b) A drawing of the earth's surface on a flat paper according to scale
(c) A projection (d) None of these
12. What is physical map?
(a) Showing natural features of the earth (b) Showing cities, towns and villages with boundaries
(c) Showing rainfall, distribution of forests etc. (d) None of the above
13. Which map gives more information?
(a) Small scale map (b) Large scale map (c) Ordinary map (d) None of these
14. When were the trains used first?
(a) 200 years ago (b) 250 years ago (c) 150 years ago (d) 300 years ago
15. Why did hunter-gatherers move from place to place?
(a) In search of food (b) In search of shelters (c) Both (a) and (b) (d) None of these
16. Where is water found?
(a) In lakes (b) In streams (c) In rivers (d) All of these
17. How did the ancient people travel?
(a) By buses (b) By trains (c) By ships (d) On foot
18. Which are the animals shown in our national Emblem?
(a) Goats (b) Lions (c) Bulls (d) None of these
19. What was name of grandfather of Ashoka?
(a) Krishna (b) Mahavira (c) Sidhartha (d) Chandragupta Maurya
20. In which book were Chanakya's ideas written?
(a) Ramayana (b) Mahabharata (c) Arthashastra (d) None of these
21. What does this mean, Judge other people negatively or see them as inferior?
(a) Prejudice (b) Judice (c) Post judice (d) None of these

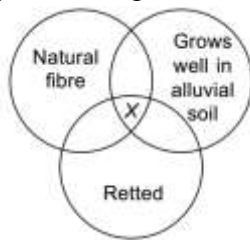
22. How can we be prejudiced about many things?
 (a) People's religious beliefs (b) The colour of people's skin
 (c) The region they come from (d) All of these
23. What do governments do for their people?
 (a) Build the roads and schools (b) Supply the electricity
 (c) Take action on social issues (d) All of these
24. What is an important part of the government?
 (a) Courts (b) Private organizations (c) Public schools (d) Parliament
25. At which level does a government work?
 (a) Local level (b) National level (c) State level (d) All of these

Subject: Science

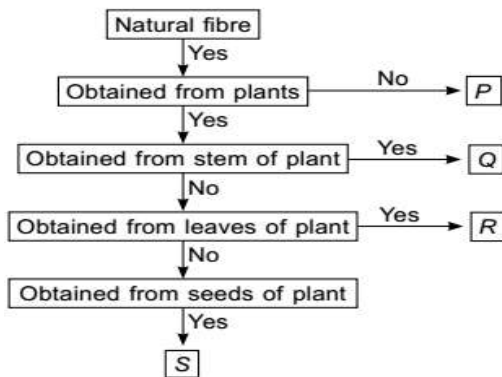
1. We eat different parts of plants as food. Refer to the given figure of a typical plant and select the option that correctly matches the labeled part (W,X,Y and Z) with examples of plants in which they are edible.



- (a) W- Tapioca; X- Sweet potato ; Y- Pepper; Z- Turnip
 (b) W-Broccoli ; X-Turmeric; Y-Clove; Z-Carrot
 (c) W-Cabbage ; X-Onion ; Y- Pepper ; Z- Carrot
 (d) W-Broccoli; X- Radish ; Y- Asparagus; Z-Brinjal
2. Identify X in the given Venn diagram



- (a) Silk (b) Wool (c) Polyester (d) Jute
3. Refer to the given flow chart and select the incorrect statement regarding P,Q,R and S.

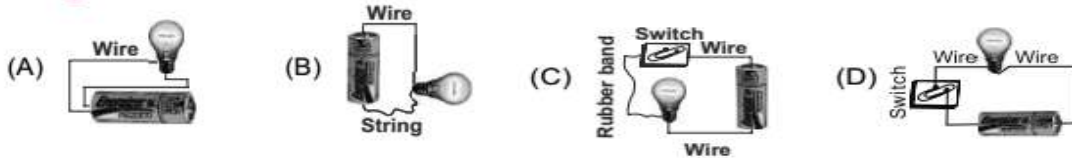


- (a) P could be protein fibre whereas Q, R and S could be cellulosic fibres.
 (b) Retting is involved in processing of Q whereas ginning is involved in processing of S.
 (c) P could be wool, Q could be jute. R could be sisal and S could be cotton.
 (d) Fabrics made from P and S are excellent winter clothing whereas fabrics made from Q and R from excellent summer clothing.

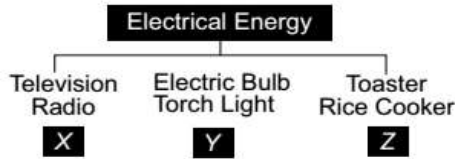
- (a) Sticks I and II only
- (c) Sticks I and III only

- (b) Sticks II and III only
- (d) All sticks (I), (II) and (III)

9. In which of the following circuits will the bulb glow?

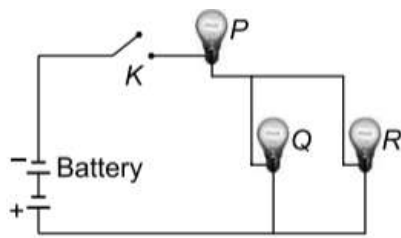


10. Study the classification carefully and select the correct option for X, Y and Z.



- | X | Y | Z |
|---------------------|-----------------|-----------------|
| (A) Refrigerator | Clock | Microwave |
| (B) Music System | Washing machine | Heater |
| (C) Walkman | Table lamp | Electric kettle |
| (D) Air conditioner | Heater | Hair dryer |

11. Three identical bulbs namely P, Q and R are connected to a battery as shown. What will happen when the circuit is closed?



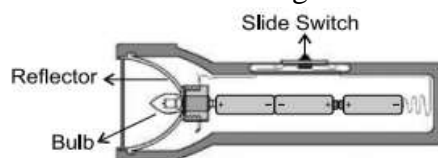
- (a) R will glow bright but Q and P will be dim.
- (b) P, Q and R all will glow equally bright.
- (c) Q and R will immediately burnout.
- (d) P will glow bright, But Q and R will be dim.

12. Ravi connected three bulbs with the cells and a switch as shown. When switch is moved to ON position,



- (a) The bulb X will glow first
- (b) The bulb Y will glow first
- (c) The bulbs Z and X will glow first
- (d) All the bulbs will glow simultaneously

13. Given diagram shows the lateral section of a torch containing cells. The torch is not glowing when the switch is ON. Which of the following statements may be correct regarding the reasons?



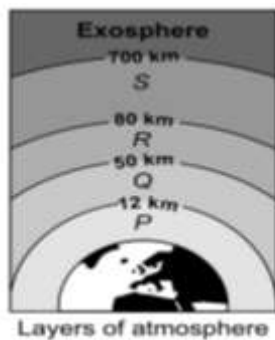
- (i) Bulb of the torch is fused.
 - (ii) Cells are not connected properly
 - (iii) The Metal parts of the torch do not make proper contact with the cell.
- (a) Only i and ii (b) only ii and iii (c) only i and iii (d) All i, ii and iii

19. Refer to the diagrammatic representation of water cycle and identify P, Q, R and S.



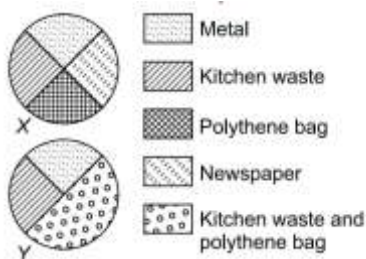
- (a) P – Condensation; Q – Precipitation;
R – Transpiration; S - Evaporation
- (b) P – Precipitation; Q - Condensation
R – Transpiration; S - Evaporation
- (c) P – Precipitation; Q - Condensation
R – Evaporation; S - Transpiration
- (d) P – Precipitation; Q - Evaporation
R – Condensation; S - Transpiration

20. Refer to the given figure representing different layers of Earth's atmosphere and select the incorrect statement regarding it.



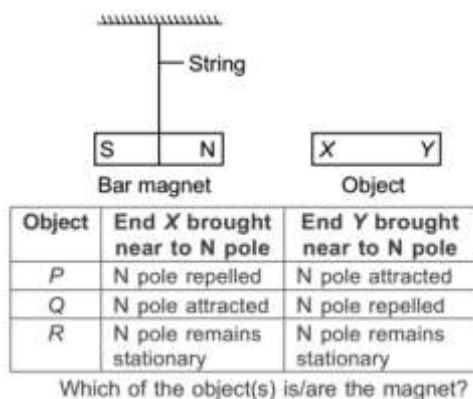
- (a) Wind, storm and snow are formed in P layer of atmosphere
- (b) Q is the atmospheric layer where most clouds are formed as, 99% of the water vapours are present in this layer.
- (c) In atmospheric layer R meteors burn up.
- (d) In atmospheric layer S temperature increases with height

21. Refer to the given pie charts based on waste segregation methods X and Y and select the correct option.

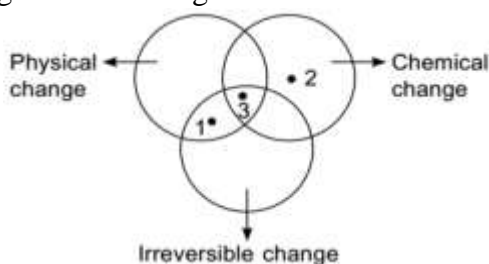


- (a) Method Y is more environmentally conscious method because polythene bags are disposed of with kitchen waste.
- (b) Method X is more environmentally conscious method because polythene bags are disposed of separately.
- (c) Method Y is more environmentally conscious method because newspapers are not generated.

22. Arun suspended a bar magnet on a string as shown in the diagram. He brought 3 bar -shaped objects P, Q and R towards the bar magnet. He placed the ends (X and Y) of each object, near the north pole of the bar magnet and recorded his observations in the table as given here.



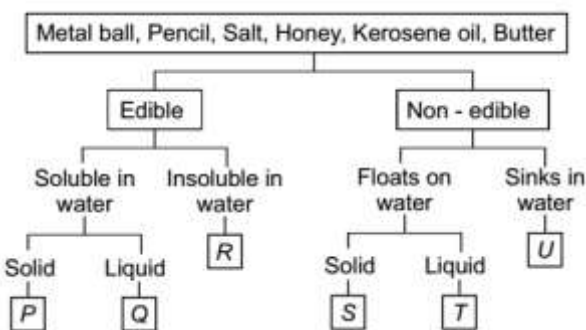
- (a) P only (b) Q only (c) R and Q only (d) P and Q only
23. Study the given Venn diagram



Identify points 1, 2 and 3

- | | | |
|-------------------------|----------------------|---------------------------|
| 1 | 2 | 3 |
| (a) Melting of ice | Boiling of rice | Burning of a candle |
| (b) Burning of paper | Rusting of iron | Cutting of fruits |
| (c) Breaking of a glass | Baking a cake | Burning of LPG in kitchen |
| (d) Tearing of paper | Evaporation of water | Making lemon made |

24. The given flow chart was prepared by Natasha for sorting materials into different groups. She handed over the chart to her teacher with few blanks. Fill in the blanks from the given options.



- (a) P- Butter, Q- Honey, R- Salt, s-Metal ball, T- Kerosene oil, U- Pencil
 (b) P- Salt, Q- Honey, R- Butter, s-Pencil, T- Kerosene oil, U- Metal ball
 (c) P- salt, Q- butter, R- Honey, s-Metal ball, T- Pencil, U- Kerosene oil
 (d) P- Metal ball, Q-Honey, R-Butter, S-salt, T-Kerosene oil, U-Pencil

25. Properties of three substances X , Y and Z are given below:

X: Heavy and non-Magnetic
 Y: Light and non- magnetic
 Z: Magnetic

If X, Y and Z are of same size and colour then, which of the following can be used to separate these particles from the mixture?

- (a) Handpicking followed by filtration
- (b) Magnetic separation followed by winnowing
- (c) Magnetic separation followed by sieving
- (d) Sublimation followed by distillation

Subject: Maths

1. If a new number is formed by interchanging the tens and thousands place digits of 8727, then what is the relation between them?
 - (a) New number is greater than the original number.
 - (b) New number is smaller than the original number.
 - (c) New number is equal to the original number.
 - (d) Can't be determined

2. 50 chairs and 15 blackboards were purchased for a school. If each chair costs Rs. 115 and a blackboard costs Rs. 345, then find the total amount of the bill.
 - (a) Rs. 10925
 - (b) Rs. 74740
 - (c) Rs. 51750
 - (d) Rs. 11940

3. State 'T' for true and 'F' for false.

I. If a whole number is divided by another whole number which is greater than the first one, then the quotient is not equal to zero.

II. Sum of two whole numbers is always less than their product.

III. Whole numbers are not closed under multiplication.

	I	II	III
(A)	T	T	T
(B)	T	F	F
(C)	T	T	F
(D)	F	T	T

4. Observe the following patterns. Then find the sum of $1 + 3 + 5 + 7 + 9 + \dots + 19$.

$$\begin{aligned}
 1 &= 1 \times 1 = 1 \\
 1 + 3 &= 2 \times 2 = 4 \\
 1 + 3 + 5 &= 3 \times 3 = 9 \\
 1 + 3 + 5 + 7 &= 4 \times 4 = 16 \\
 1 + 3 + 5 + 7 + 9 &= 5 \times 5 = 25
 \end{aligned}$$

.....

- (a) 121
- (b) 81
- (c) 100
- (d) 64

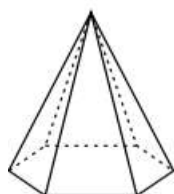
5. Read the following statements carefully and select the correct option

Statement-1: A sector is the region in the interior of a circle enclosed by an arc on one side and a pair of radii on the other two sides.

Statement-2: A segment of a circle is the region in the interior of the circle enclosed by an arc and a chord.

- (a) Both Statement -1 and Statement -2 are true.
- (b) Statement -1 is true but Statement -2 is false.
- (c) Statement -1 is false but Statement -2 is true.
- (d) Both Statement 1- and Statement -2 are false.

6. The given figure has



(i) Faces: _____

(ii) Edges: _____

(iii) Corners: _____

(a) 8, 12, 7 (b) 6, 11, 6 (c) 7, 12, 7 (d) 5, 11, 7

7. Which of the following statement is correct?

- (a) A right angle is $\frac{1}{2}$ of a revolution
- (b) A straight angle is $\frac{1}{4}$ of a revolution
- (c) The measure of a reflex angle is greater than that of a straight angle
- (d) The angle formed in one revolution is a reflex angle.

8. State 'T' for true and 'F' for false.

- (i) Since, $5 > 3$. Therefore, $-5 > -3$.
- (ii) The difference between an integer and its additive inverse is always even.
- (iii) The sum of three different integers can never be zero.
- (iv) All whole number are integers.

	(i)	(ii)	(iii)	(iv)
(A)	T	F	T	F
(B)	F	F	T	T
(C)	F	T	F	T
(D)	T	T	F	F

9. Which of the following statement is correct?

Statement-1 : Mrs Soni bought $7\frac{1}{2}$ litres of milk. Out of this, $5\frac{3}{4}$ litres was consumed. $1\frac{1}{3}$ litres of milk is left with her.

Statement-2 : Amit reads $\frac{3}{5}$ of a book. He finds that there are still 80 pages left to be read. Total number of pages in the book is 200.

- (a) Only statement-1
- (b) Only statement-2
- (c) Both statement-1 and statement-1
- (d) Neither statement -1 and nor statement -2

10. The given figure shows 4 nails of different length. What is the length of the shortest nail?



- (a) 7.8 cm (b) 8.2cm (c) 7.6 cm (d) 8.1 cm

11. Fill in the blanks.

- (i) 53 tenths = 5 ones + P tenths.
- (ii) 14.987 rounded off to first decimal place is Q.
- (iii) The fraction $14\frac{2}{10}$ is equal to R.

	P	Q	R
(A)	3	14	14.2
(B)	3	15	14.2
(C)	5	15	14.02
(D)	5	14	14.02

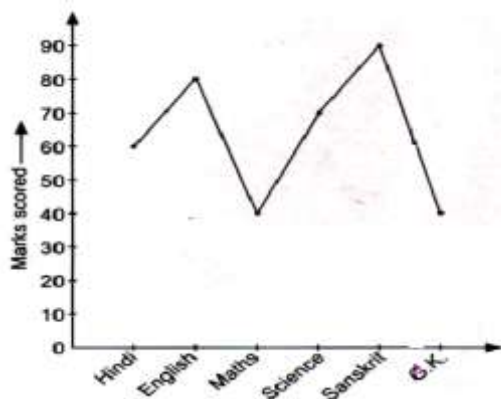
12. Study the following statements carefully and select the correct option.

Statement-1: Place value of a digit increases by 10 times as the digit moves from the right to the left place by place.

Statement-2: Any number of zeroes placed to the right of the decimal part of a number does not change the value of the number.

- (a) Both statement-1 and Statement -2 are true
- (b) Statement-1 is true but statement -2 is false
- (c) Statement-1 is false but statement-2 is true
- (d) Both statement-1 and Statement -2 are false

Direction (13-14) : Given line graph shows the marks scored by Raghav in each subject in exams. Study the graph carefully and answer the following questions.



- 13. In which subject he got second highest marks?
 (a) Sanskrit (b) Maths (c) English (d) G.K.
- 14. Find the difference between the marks scored in Maths and Sanskrit.
 (a) 50 (b) 60 (c) 30 (d) 90
- 15. Find the values of P, Q, R and S.

Length of rectangle (cm)	Breadth of rectangle (cm)	Area (cm ²)	Perimeter (cm)
25	P	300	Q
18	R	S	66

- | | P | Q | R | S |
|-----|----------|----------|----------|----------|
| (A) | 12 | 74 | 15 | 207 |
| (B) | 12 | 15 | 74 | 270 |
| (C) | 12 | 74 | 15 | 270 |
| (D) | 42 | 15 | 270 | 74 |

- 16. Figure P is made up of six identical squares. Two squares were removed from figure P to form figure Q. The perimeter of figure P is 240 cm. What is the perimeter of figure Q?

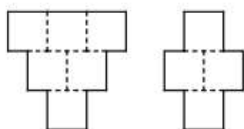


Figure P

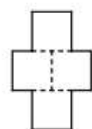


Figure Q

- | | |
|------------|------------|
| (A) 220 cm | (B) 180 cm |
| (C) 200 cm | (D) 160 cm |

- 17. Fill in the blanks.

- (i) An expression with a variable, constant and the sign of equality is called an P.
- (ii) 8 more than 2 times the number x can be written in algebraic form as Q.
- (iii) An equation is a condition on a R.

	P	Q	R
(A)	variable	$8x + 2$	equation
(B)	equation	$2x + 8$	variable
(C)	equation	$2x - 8$	variable
(D)	variable	$2x + 8$	equation

18. Which of the following is equivalent of 7:8?

- (a) 142 : 128 (b) 112:124 (c)136:136 (d)119:136

19. State 'T' for true and 'F' for false.

- (i) 12 hours : 30 hours = 8km : 20km (ii) The ratio of 1 hour to one day is 1:1
 (iii) The two terms of a ratio can be in two different units.

	(i)	(ii)	(iii)
(A)	T	T	T
(B)	F	F	F
(C)	T	F	F
(D)	F	T	F

20. Which square must be shaded so that the figure has a line of symmetry?

(A) P
 (B) Q
 (C) R
 (D) S

21. Fill in the blanks.

- (i) Perpendicular bisector of the diameter of a circle passes through the P of the circle.
 (ii) If B is image of A in line l and D is image of C in line l , then $AC =$ Q.
 (iii) Angle bisector is a ray which divides the angle in R equal parts.

	P	Q	R
(A)	Centre	BD	2
(B)	Centre	AD	1
(C)	Centre	AB	1
(D)	Centre	BC	2

22. Read the statements carefully and select the correct option.

Statement 1 : Bisector of a line segment means dividing the line segment into equal halves.

Statement 2: Set squares can be used to draw a perpendicular and parallel lines.

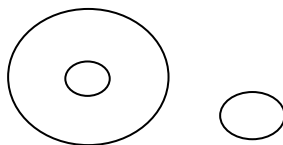
- (a) Both statement-1 and Statement -2 are true
 (b) Statement-1 is true but statement -2 is false
 (c) Statement-1 is false but statement-2 is true
 (d) Both statement-1 and Statement -2 are false

23. Some letters are given which are numbered 1,2,3,4 and 5. Find the combination of numbers from the options so that the letters are arranged accordingly to form a meaningful word.

R	X	E	T	P	E
1	2	3	4	5	6

- (a) 2,3,5,4,1,6 (b)2,3,6,5,1,4 (c) 3,2,5,6,1,4 (d)3,1,5,4,2,6

24. Which of the following elements satisfies the Venn diagram given below



- (a) Judge, Thief, Criminal (b) Father, Mother, Parents (c) Teacher , college, students
 (d) Polygons, Rectangles, square

25. How many lines of symmetry are there in a triangle which has all the angles equal?

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