Dear students,

I, Ms. Savita Mali, am a student of Department of Education, S N D T Women’s University, Mumbai, and Studying at Ph. D. level. As a part of my study I am conducting a survey for which I require your co-operation.

Enclosed herewith is a rating scale for your valued opinions. Please read every item carefully and tick (√) against the alternative, which you think the best.

I assure you that, information given by you will be kept strictly confidential and used only for the purpose of research.

Thanking you for your cooperation and support.

Yours truly,
Savita Mali

Please fill the following details;

Name of the student_____________________________________________
Class/ STD_______ Division______ Gender____________________________
Name of the School________________________________________________
## Appendix B

**Perceived Learning Environment scale**

**Name of the student**…………………………………………………………………Roll no. ....

**School name** …………………………………………………………………...STD. ....

Kindly read the following statements carefully and put tick (√) mark in the appropriate column.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Our Science teacher……...</th>
<th>Always</th>
<th>Often</th>
<th>Some Times</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Declares the activity well in advance.</td>
<td></td>
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<tr>
<td>2</td>
<td>Gives different projects than textbook.</td>
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<tr>
<td>3</td>
<td>Answers all queries related to topic.</td>
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<tr>
<td>4</td>
<td>Assigns projects well in advance.</td>
<td></td>
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<tr>
<td>5</td>
<td>Arranges experiments whenever necessary.</td>
<td></td>
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<tr>
<td>6</td>
<td>Prepares and explains the evaluation criteria of projects given.</td>
<td></td>
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<tr>
<td>7</td>
<td>Explains the relevance of topics to daily life.</td>
<td></td>
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<tr>
<td>8</td>
<td>Introduces the ‘work to be done’ with clear expectations with necessary details.</td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>Ensures that students help each others if necessary for projects or experiments</td>
<td></td>
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<tr>
<td>10</td>
<td>Allows students to discuss with each other in science class.</td>
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<tr>
<td>11</td>
<td>Allows students to help each other.</td>
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<tr>
<td>12</td>
<td>Conducts science quizzes, exhibitions.</td>
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<tr>
<td>13</td>
<td>Displays science related articles in the class and corridor.</td>
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<td></td>
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<tr>
<td>14</td>
<td>Asks to watch science movies and conducts discussion on it.</td>
<td></td>
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<tr>
<td>15</td>
<td>Displays question of a week in the class.</td>
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<tr>
<td>16</td>
<td>Asks to reason out different phenomena occurring around.</td>
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<tr>
<td>17</td>
<td>Suggests related videos to watch about topic.</td>
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<tr>
<td>18</td>
<td>Make use of films and videos related to science topics.</td>
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<tr>
<td>19</td>
<td>Encourages to use science encyclopedias by providing in the class.</td>
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<tr>
<td>20</td>
<td>Provides web links related to different chapters.</td>
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<tr>
<td>21</td>
<td>Provides additional learning material related to topic.</td>
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<tr>
<td>22</td>
<td>Suggests different ways to collect additional information related to content of science.</td>
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<tr>
<td>23</td>
<td>Maintains science corner.</td>
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<tr>
<td>24</td>
<td>Encourages displaying science articles on class notice board.</td>
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<tr>
<td>25</td>
<td>Encourages using science dictionaries for clarification of terms.</td>
<td></td>
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<tr>
<td>26</td>
<td>Encourages watching educational programs related to science and conducts discussion on it.</td>
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<tr>
<td>27</td>
<td>Asks students to bring articles on science related topics and reads in the class.</td>
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<tr>
<td>28</td>
<td>Encourages students to share science magazines- and resources with each other.</td>
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<tr>
<td>29</td>
<td>Encourages students to visit science fair, Planetarium, museum etc.</td>
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<tr>
<td>30</td>
<td>Displays appropriate instructions while working in laboratory.</td>
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<tr>
<td>31</td>
<td>Provides manual of experiment whenever required.</td>
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<tr>
<td>32</td>
<td>Orients about laboratory accidents and precautions to be taken.</td>
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<tr>
<td>33</td>
<td>Gives feedback to students at right time for our science related work.</td>
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<tr>
<td>34</td>
<td>Points out our mistakes and corrects them.</td>
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<tr>
<td>35</td>
<td>Encourages students to identify mistakes.</td>
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<tr>
<td>36</td>
<td>Advises to do projects in a systematic way.</td>
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<tr>
<td>37</td>
<td>Students are involved in setting the targets</td>
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<tr>
<td>38</td>
<td>Prepares every student to be able to learn the topic.</td>
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<tr>
<td>39</td>
<td>Motivates to find out solution to a problem.</td>
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<tr>
<td>40</td>
<td>Appreciates the new ideas given by students.</td>
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<tr>
<td>41</td>
<td>Motivates to work independently for projects.</td>
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<tr>
<td>42</td>
<td>Appreciates science related activities work after successful completion.</td>
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<tr>
<td>43</td>
<td>Displays piece of science related (Essay, Project, work of a student in the class/ exhibit model and important things.</td>
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<tr>
<td>44</td>
<td>Encourages shy students to participate in classroom discussion.</td>
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<tr>
<td>45</td>
<td>Gives reward for creative idea/thought.</td>
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<tr>
<td>46</td>
<td>Prepares group as per the requirement of activity.</td>
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<tr>
<td>47</td>
<td>Rearranges sitting arrangement of students as per requirement during different activities.</td>
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<tr>
<td>48</td>
<td>Ensures that demonstration of an experiment is clearly visible to all.</td>
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<tr>
<td>49</td>
<td>Encourages interaction in a group</td>
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</tbody>
</table>
APPENDIX C (Test of Basic Science Process Skills)

Student Name _____________________ Gender STD._________

School Name ---------------------------------------------------------------------------

Instruction: Kindly put Tick (√) mark over the correct option.

1. Last week Ajay and Vijay went fishing with their fathers. They each caught 2 fishes. Who caught longest fish?

   A) Ajay          B) Vijay          C) Ajay’s Dad          D) Vijay’s Dad

   Ajay         Vijay        Ajay’s Dad        Vijay’s Dad

2. Which statement best describes the sounds you would hear if you were in the picture?

   A. I hear the birds singing. I hear the butterfly flying. I hear the dog bark.
   B. I hear the birds singing. I hear the sun shining. I hear the man talk.
   C. I hear the man talking. I hear the birds singing. I hear the dog bark.
   D. I hear the dog barking. I hear the sun shining. I hear the birds singing.
3. Riya and Jenifer went to summer camp. At night they looked at the moon and noticed these changes.

![Moon Phases]

4. A scientist found this ancient bone in a cave. Which group of bones should it be in?

![Bone Group]

5. Use the tree as measure. How many trees high in the hill?

![Tree Measurement]

A. 3  B. 4  C. 5  D. 6

6. Last weekend 8 of your fish died. Two are still alive. What is the best explanation for what happened?
A. The fish will get better.
B. The fish got lonely.
C. The fish have a disease.
D. Two fish died Sunday.

7. Asma and Pravin collected a basket of shells. They wanted to sort the shells into 2 groups. What would be the best way to sort these?

A. By shape
B. By age.
C. By the number of lines.
D. By where they were found

8. Rekha is playing in the park. She spotted an animal in the bushes. Which sentence tells you the most about what the animal looked like?

A. It was brown and scared.
B. It was tired and cold.
C. It was small with four legs.
D. It looked like a mouse with a short tail.

9. Suraj found this leaf on his way to school.

What is your best guess about what happened to the leaf?
A. It has a rough edge.
B. A bug was eating it.
C. It has a stem.
D. A boy picked it.

10. Namita is watching a nest of baby birds. The babies are very big. They do not have enough room in the nest. Use this information. What do you think will happen?

A. The birds will stay healthy.
B. The birds will learn to fly and leave the nest.
C. The birds are ready to fly.
D. The mother bird has stopped feeding her babies.

11. Ramesh found some eggs in the works. This picture shows how he put them into groups.

```
  All Eggs
    +------------------+
    |                  |
    |  Round           |
    |                  |
    |                  |
    |     Spotted      |
    |  NOT Spotted     |
    |                  |
    +------------------+
    |                  |
    |  Oval            |
    |                  |
    |                  |
    |     Spotted      |
    |  NOT Spotted     |
    +------------------+
```

What box would you place this egg in?

A. 1  B. 2  C. 3  D. 4

12. You have a plant in your garden. It has grown 3 centimeters in 3 days. Use this fact. Guess what will happen to the plant in the next 3 days.

A. The plant will stop growing.
B. The plant will grow 3 more centimeters.
C. The plant grows 1 centimeter per day.
D. The plant grows because of the sunlight.
13. Which island has something missing?

14. Sunita wanted to build a small fort. She went into the woods looking for sticks. She found one like this.

She broke the stick into 2 equal pieces. How many stones long would each piece be?

A. 2    B. 4    C. 6    D. 8

15. Ronnie was watching a squirrel in a tree. What could he tell about the squirrel just from looking at it?

A. The squirrel was born and had a long bushy tail.
B. The squirrel was 2 year old.
C. The squirrel was looking for food for its babies.
D. The squirrel lived in the park.

16. Mary Ellen brought a jar of pond water to class. She looked at the water under a microscope. She saw these creatures. Which trait do all of these creatures have?

A. A large dark spot.  B. Round shape.  C. Hairs.  D. A large white spot
17. Leena planted some seeds in a pot. This is how the plants looked.

What will this plant probably look like after 4 weeks?

A. 1, 2, 4, 3  B. 3, 4, 2, 1  C. 3, 1, 2, 4  D. 3, 4, 1, 2

18. Shyam grew corn in his garden. He wants to show what happened with pictures. Help him by choosing the correct order for these pictures?

A. 1, 2, 4, 3  B. 3, 4, 2, 1  C. 3, 1, 2, 4  D. 3, 4, 1, 2

19. Deepa found an old tree deep in the woods. She wanted to tell her friends how to get there. What would be the most important thing to know?

A. The direction and distance she went.  B. How many fields she passed along the way.
C. What the tree looked like.  D. What time she got there.

20. Komal found this old map in her grandmother’s attic. She wanted to add a store to the map. What symbol should she use?
21. What is the most common symbol on Leah’s map?

22. What is the best description of Leah’s old map?
   A. It is a town with a church, a factory and 2 ponds.
   B. It is a city with many churches and many roads.
   C. It is a city with lots of trees, stores and schools.
   D. It is a town with 2 ponds, many houses and a church.

23. Four streams are connected to a lake. The fish in each stream want to get to the lake. Which fish has the farthest to go?

   ![Diagram of streams connected to a lake]

   A. 1  B. 2  C. 3  D. 4
24. A lion was hunting for his dinner. A zebra saw the lion and knew he had to hide. What would be the best hiding place for this zebra?

![Diagram of a zebra with options A, B, C, and D]

25. Megha and Lina did a project in science class. They recorded the temperature of water each minute. This chart shows what they found.

<table>
<thead>
<tr>
<th>Time</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Minute</td>
<td>18(^0) C</td>
</tr>
<tr>
<td>2. Minutes</td>
<td>22(^0) C</td>
</tr>
<tr>
<td>3. Minutes</td>
<td>25(^0) C</td>
</tr>
<tr>
<td>4. Minutes</td>
<td>29(^0) C</td>
</tr>
<tr>
<td>5. Minutes</td>
<td>.....(^0) C</td>
</tr>
</tbody>
</table>

What do you think the temperature of the water will be after five minutes?

A. 26 \(^0\) C  
B. 20 \(^0\) C  
C. 32 \(^0\) C  
D. 35 \(^0\) C

26. Use the chart from the question above. What is the best explanation for what happened?

A. The water was on a hot stove.  
B. The water was in cooler.  
C. The water was sitting on desk.  
D. The water was outside a tree.
27. What story does this set of picture tell?

A. The man cut down a large tree. He used it for firewood.
B. Lightening killed 3 large trees. The man planted some smaller trees.
C. A man cut off some branches from a large tree. He planted some smaller trees.
D. The man cut down a large tree. He planted some smaller trees.

28. You went on a school field tip. You saw these 2 sets of animals’ tracks. Look at these tracks. What guess can you make about what happened?

A. The animals eat at night.  B. The tracks of one set are larger than the tracks of the other set.
C. The 2 animals had a fight.  D. The tracks were made by the same kind of animals.

29. Salma wanted to plant some sod. Her yard was 3 meters long and 4 meters wide. How many pieces of sod will see need to cover her yard? Use the picture to find out.

A. 7  B. 10  C. 12  D. 14
30. The picture below shows a caterpillar that grew into a butterfly. What can you tell about what happened just from these pictures?

A. When the caterpillar grew up, it no longer ate leaves.
B. When the caterpillar grew up, it could not fly very fast.
C. When the caterpillar grew up, it had 6 legs.
D. When the caterpillar grew up, it got wings.

31. Gomathi observed these creatures in science class. She wants to put them in order by the number of legs they have. What is the correct order?

A. 5,1,3,4,2  B. 5,4,1,3,2  C. 2,3,4,1,5  D. 2,1,3,4,5

32. Tom is studying weather. This chart shows how much rain fell in his town for four years. What is the best guess about what time the sun will set on day 5?

<table>
<thead>
<tr>
<th>Day</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>6:40</td>
<td>6:38</td>
<td>6:36</td>
<td>6:34</td>
<td>?</td>
</tr>
</tbody>
</table>

33. Meet planted 5 pepper plants in his backyard. After 6 weeks, his pepper plants look like this. What does this tell you about Meet’s pepper plants?

A. All of his plants were the same size.
B. All of his pepper plants had produced peppers.
C. There were bugs on his pepper plants.
D. His pepper plants were not getting enough water.

34. Last week Huma went looking for small creature. This chart shows where she looked and what she found.

<table>
<thead>
<tr>
<th>Location</th>
<th>Spiders</th>
<th>Sowbugs</th>
<th>Worms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Under an old log</td>
<td>8</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2. In a pile of leaves</td>
<td>4</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>3. Under rocks</td>
<td>2</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>4. In the grass</td>
<td>7</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>

Where was the best place to find worms?

A. Under rocks  B. Under a pile of leaves  C. Under an old log  D. In the grass.

35. Vilma and her father went to the pet store. They classified the animals they saw this way.
Fish  Lizard  Rabbit  Mouse

Which animals belong in box 1?

A. Fish  B. Lizard  C. Rabbit  D. Mouse

36. Anuradha drew a map of a pond in her yard. The objects in the pond are lily pads. About how many lily pads would it take to cover the whole pond?

A. 10  B. 18  C. 24  D. 36
## Answer Key for the Test of BAPS Scale

<table>
<thead>
<tr>
<th>Item number</th>
<th>Correct option</th>
<th>Item number</th>
<th>Correct option</th>
<th>Item number</th>
<th>Correct option</th>
<th>Item number</th>
<th>Correct option</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>10</td>
<td>B</td>
<td>19</td>
<td>A</td>
<td>28</td>
<td>C</td>
</tr>
<tr>
<td>2</td>
<td>D</td>
<td>11</td>
<td>C</td>
<td>20</td>
<td>C</td>
<td>29</td>
<td>C</td>
</tr>
<tr>
<td>3</td>
<td>D</td>
<td>12</td>
<td>B</td>
<td>21</td>
<td>A</td>
<td>30</td>
<td>D</td>
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<tr>
<td>4</td>
<td>B</td>
<td>13</td>
<td>B</td>
<td>22</td>
<td>D</td>
<td>31</td>
<td>B</td>
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<td>5</td>
<td>C</td>
<td>14</td>
<td>C</td>
<td>23</td>
<td>D</td>
<td>32</td>
<td>C</td>
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<tr>
<td>6</td>
<td>C</td>
<td>15</td>
<td>A</td>
<td>24</td>
<td>D</td>
<td>33</td>
<td>B</td>
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<tr>
<td>7</td>
<td>A</td>
<td>16</td>
<td>C</td>
<td>25</td>
<td>C</td>
<td>34</td>
<td>C</td>
</tr>
<tr>
<td>8</td>
<td>D</td>
<td>17</td>
<td>D</td>
<td>26</td>
<td>A</td>
<td>35</td>
<td>D</td>
</tr>
<tr>
<td>9</td>
<td>B</td>
<td>18</td>
<td>D</td>
<td>27</td>
<td>D</td>
<td>36</td>
<td>B</td>
</tr>
</tbody>
</table>
APPENDIX E

Student Name - Gender
Std-
Name of School

State true or false. (write T for true and F for false)

1. Scientists usually expect an experiment to turn out a certain way.
2. Science only produces tentative conclusions that can change.
3. Science has one uniform way of conducting research called “the scientific method.”
4. Scientific theories are explanations and not facts.
5. When being scientific one must have faith only in what is justified by empirical evidence.
6. Science is just about the facts, not human interpretations of them.
7. To be scientific one must conduct experiments.
8. Scientific theories only change when new information becomes available.
9. Scientists manipulate their experiments to produce particular results.
10. Science proves facts true in a way that is definitive and final.
11. An experiment can prove a theory true.
12. Science is partly based on beliefs, assumptions, and the non observable.
13. Imagination and creativity are used in all stages of scientific investigations.
14. Scientific theories are just ideas about how something works.
15. A scientific law is a theory that has been extensively and thoroughly confirmed.
16. Scientists’ education, background, opinions, disciplinary focus, and basic guiding assumptions and philosophies influence their perception and interpretation of the available data.

17. A scientific law will not change because it has been proven true.

18. An accepted scientific theory is an hypothesis that has been confirmed by considerable evidence and has endured all attempts to disprove it.

19. A scientific law describes relationships among observable phenomena but does not explain them.

20. Science relies on deduction (x entails y) more than induction (x implies y).

21. Scientists invent explanations, models or theoretical entities.

22. Scientists construct theories to guide further research.

23. Scientists accept the existence of theoretical entities that have never been directly observed.

24. Scientific laws are absolute or certain.
Appendix F

Answer key for the test of Scientific Literacy

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APPENDIX G

Situational test on Scientific Attitude

Name  Gender  Std-

School name-

Instructions: Please read the statements carefully and put a mark (√) for an appropriate answer.

1. This is not your test/examination, so do not worry about the marks.
2. Please provide true and honest answers.
3. Attempt all questions/statements.

1. You have inclination towards Arts Stream and your parents wish you to go for Science stream. What will you do?
   a. I will take admission for Science stream.
   b. I will take the decision after discussing with the teachers.
   c. I will take admission for Arts stream.

2. You are attending a function and do not know anybody over there. In such a situation what will you do?
   a. Will think of leaving at the earliest.
   b. Will try to get introduced with others and converse with them.
   c. Will wait for company to arrive.

3. You like sweets very much and you cannot live a day without it. But your doctor has advised you not to eat sweets at all. What will you do?
   a. I will reduce my intake of sweets.
   b. I will stop eating sweets till I recover.
   c. I will eat sweets and will make sure it goes unnoticed.

4. When you go for a magic show, what do you do?
   a. Watch the show as an entertainment.
   b. Observe it carefully and try to find out the facts about it.
   c. Discuss the magic tricks with friends.

5. Which points should be taken into consideration by the family members while arranging a marriage of son or a daughter?
   a. They should match their Kundalis/horoscope scores.
   b. They should think about financial status of bride and groom.
   c. They should think about bride’s and groom’s blood group.
6. You are walking on the road and you see a crowd gathered in the middle of road. It means that …
   a. The magician is performing a show there.
   b. You need to go there and find out the reason of a crowd.
   c. Accident might have taken place.

7. Your teacher has assigned you a project which is taking too much of time to get completed. What will you do?
   a. I will complete the project with the help of family members.
   b. I will complete the project with the help of friends.
   c. I will submit the half completed project to the teacher and request the teacher to get for some more time for completion.

8. What will you do if you see an enormous snake at your home?
   a. I will kill it with a stick.
   b. I will call a ‘Sarp-mitra’ (Snake-catcher)
   c. I will call neighbors to kill it.

9. When traditional rituals are against the facts discovered by the scientists. What will you do at such times?
   a. Accept the facts discovered by scientists.
   b. Believe in traditional rituals only.
   c. Accept what elders say about it in the family.

10. When the milk gets spoiled for three consecutive days at your home. What will you do?
    a. I will complaint about it to the milkman.
    b. I will stop buying milk from that milkman.
    c. I will make sure about the proper cleanliness of the milk vessel.

11. What do you do when teacher asks questions while teaching?
    a. I try to answer the question at my best.
    b. I don’t think too much about it.
    c. I am scared that my answer will be wrong so I don’t answer.

12. You want to travel to a place via bus only, and the last bus for it has got cancelled. What will you do?
    a. You’ll cancel the travel plan and go back to home.
    b. You’ll wait for other bus to come.
    c. You’ll travel by the vehicle whichever is available.
13. In the garden you saw the rose bush with beautiful flowers of different colors. What will you do?
   a. I will pluck the flowers and bring home.
   b. I will take photographs of it.
   c. I will enquire with gardener how that plant has flowers with different colour.

14. You visit a temple and you see a person possessed by spirit. Then you will...
   a. Pay respect and touch that person’s feet.
   b. Ignore, considering it as a mental disorder.
   c. Consider the person’s speech as God’s voice and so you will ask different questions.

15. What is essential to predict about any incidence/event?
   a. Complete information about the incidence/event.
   b. Direct experience of that incidence/event.
   c. Information provided by/ received from others about the incidence/event.

16. Some students are quarrelling in class in your presence. Teacher has punished everyone including you. What will be your reaction about it?
   a. I will accept the punishment.
   b. I will explain your part in that incidence to teacher.
   c. I will not accept the punishment given by teacher.

17. It's raining very heavily. Your car has struck in a small stream and the water level is increasing gradually. What will you do?
   a. You will try to repair the car.
   b. You will try to go to the other end without thinking much about car.
   c. You will remain seated in car.

18. When the teacher asks you to prepare some scientific toys...
   a. You enjoy doing it as a part of an entertainment.
   b. You follow the teacher’s instruction and make the toys
   c. Try to discover the scientific facts/rules through the making of toys.
19. Everyone should wear a neat and clean uniform in the school because...
   a. All look good in uniform.
   b. Because it is the order by the Principal.
   c. It is the part of school discipline.

20. Your teacher has formed a discussion group of 5 students; the teacher has given a topic for discussion. Which role will you like to play in the group?
   a. You will take note of other’s work?
   b. You will put forward your thoughts in a group without any fear.
   c. You will not utter a word as you don’t know much about the matter.

21. What one should one do when decision taken does not resolve the problem in hand?
   a. One should take an alternate decision.
   b. One should give up the problem.
   c. One should not change the decision.

22. The textbook contains information about the stars and the planets but does not contain information about the distance between the planet and the earth. Then what will you do?
   a. I will study the information thoroughly given in the textbook.
   b. I will refer other books and internet documents to find out the distance between the planets and the earth.
   c. I will ignore it as it’s not a part of syllabus.

23. You are watching skyline and suddenly you notice a falling star. You will...
   a. Close my eyes and make a wish.
   b. Try to find out exact facts about it by asking it to the teachers and others.
   c. Curiously discuss this incident with my friends.

24. You found your lost pen in your friend’s school bag. How will you interpret this?
   a. Your friend stole that pen.
   b. You’ll ask your friend how that pen was found in his school bag.
   c. Somebody else might have done this to create a dispute between you and your friend.
25. You are travelling by a bus. You are standing at the door. You haven’t taken ticket and the bus has reached your bus stop. What will you do then?
   a. I will get down from bus after taking ticket from the conductor.
   b. I will get down without ticket as bus stop has come.
   c. I will ask my friend in bus to get a ticket for me.

26. It’s your 10th standard annual examination and you reach exam hall without your hall ticket. What would you do in such a situation?
   a. I will inform this to the teacher.
   b. I will call at home and ask my father to get the hall ticket.
   c. I will go home and get the hall ticket by myself.

27. Present scientists have challenged the Einstein’s theory which states that ‘light travels fastest’. What do you think about this?
   a. As Einstein is very intelligent scientist therefore no one should challenge for his theory.
   b. One should accept if any other particle found faster than light gets discovered.
   c. One should accept Einstein’s theory only.

28. While reading any scientific story/science fiction which points should be considered?
   a. The characters in story.
   b. The entertaining facts from the story.
   c. The various points given in the story.

29. What do you do after watching a movie?
   a. I will discuss with the others about the movie.
   b. Consider movie as a part of entertainment so do not think much about it.
   c. I will imitate actor’s style from the movie.

30. When you are on the way to visit a new doctor, you meet a close friend of yours who recommends you to another doctor. What will you do?
   a. I will listen to friend and go to another doctor.
   b. Continue the same doctor I had planned to visit.
   c. I will enquire with others and then take the decision.
31. You are suffering with jaundice and doctor has given you the medicines to get well. What will you do?
   a. I will take my medicines regularly at prescribed times.
   b. Ask doctor about the root cause of jaundice and the information about the medicines prescribed.
   c. I will not take medicines as you don’t like them.

32. A pregnant lady shouldn’t do any movements during solar eclipse because...
   a. Baby may be born with defects as mother did movements during eclipse.
   b. The radiations during the eclipse affect mother and baby.
   c. The elders in family wish so.

33. Raju had stolen something in class the before. Today you have lost your book. This means....
   a. Raju has stolen your book.
   b. You will think about the possible places where the book could be found.
   c. You will think that you might have forgotten the book at home.

34. What is important while sketching a concept picture drawing?
   a. Editing the drawing.
   b. Drawing a circle around the concept.
   c. To find out the relation between the central elements with the other elements.

35. To solve any problem, I......
   a. Use any one of the way to solve it.
   b. Think about the various ways and select the right path.
   c. Follow the way suggested by somebody else.

36. What will you do to understand the working of compass?
   a. I will read more information about the compass.
   b. I will go to laboratory personally and understand the working of compass.
   c. I will believe in what teacher has taught.
37. Your class has planned a secret election for class-representatives. Your close friend is contesting for that. Whom will you vote?
   a. The student who has better leadership qualities.
   b. Close friend.
   c. The humble student.

38. If a student of std. V points out your spelling mistake from your writing in front of everyone. Then what will you do?
   a. I will accept that mistake.
   b. I will feel insulted.
   c. I feel that he/she shouldn’t have pointed out the mistake in front of others.

39. Your annual exams are going on and your mother has been hospitalized suddenly, what will you do?
   a. I will get worried about my mother and stay in the hospital.
   b. I will attend my exam.
   c. I will send somebody to hospital to take care of my mother.

40. If you get a very expensive mobile phone at home. What will you do?
   a. I will make calls as per the needs.
   b. I will make calls and listen to the music.
   c. I will try to find out its working and the new functions of it.

41. Amit’s father got an excellent job on the same day when he was born. You take this as…
   a. Amit brings a good luck.
   b. It’s just a coincidence.
   c. Amit’s father wouldn’t have got this job if he would have not born.

42. You met one of your father’s friends and he bought a lots of food items for you. This means…
   a. His nature is good.
   b. You can’t understand a person’s nature in the first meeting.
   c. He offered food because he has some work with my father.
43. You are performing an experiment and you think that your readings differ from the teacher’s readings. What will you do?
   a. I will try to recollect teacher’s readings and write them.
   b. I will write down my own readings.
   c. I will copy readings from my friend’s notebook.

44. The sudden earthquake at midnight collapses staircase of your building. You are trapped at the upper floor. What would you do?
   a. I will jump off to ground.
   b. I will call others for help.
   c. I will try to get down using saree.

45. You believe in a superstition and an anti superstition speaker has proved it false experimentally. What will you do?
   a. I will accept what has been experimentally proved by an experiment.
   b. I will not give up that particular superstition as your family members have said it.
   c. I will think that it is a sleight of hand (Hatchalakhi).
APPENDIX H

CORRECT ANSWERS FOR THE SITUATIONAL TEST SCIENTIFIC ATTITUDE

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For each correct option 1 score was given.
Appendix I

List of Experts

For validation of Perception of Learning Environment Scale

1. Dr. Rekha Chavhan, Dept of Education,
   S. N. D. T. Women’s university, Mumbai
2. Dr. Sudha Pingale Dept. of Education,
   University of Mumbai
3. Dr. Kalpana Kharade , Vice Principal,
   KJ Somaiya COE, Vidyavihar, Mumbai
4. Ms. Alaka Virkar Jonh Twenty Third High School
   Agashi, Virar, Mumbai
APPENDIX J

List of Schools

1. K. A. Bhanthia Secondary High school, New Panvel, Cidco Colony, Sec. 8 Panvel
2. Changu Kana Thakur High School, New Panvel, Sec. 15, Panvel
3. The English High School, Plot no. 97, MCH Society, Tal. Panvel
4. Sushma Patil Vidyalay, Plot. No. 16, Sec. 12, Kamothe, Tal. Panvel
5. M. U. M. English High School, Near Police Station, Sec. 36, Kamothe, Tal. Panvel
6. K. P. C. English High School, Plot No. 218, Sec. 13, Kharghar, Tal. Panvel
7. Dnyanajyot Vidyalay, Plot No. 5, Sec. 21 Kharghar
8. Siddharth Multipurpose Residential High School, Plot. No. 52, Sec. 19, Kharghar
9. Harmony Public High School, Sec. 5, Kharghar Tal. Panvel
10. Dnyanpushpa Vidyaniketan, Sec. 4, C.B. D. Belapur, Tal. Thane
11. M. E. S. Vidya Mandir, Sec. 21-22, Income tax Colony, CBD Belapur, Tal. Thane
12. Shreemati Radhabai Meghe Vidyalay, Sec. 16, Thane Belapur road, Ghansoli, Tal. Thane
13. Sarswati Vidyalay, Cidco Vasahat, Sec. 5, Airoli, Tal. Thane
14. Shreeram Vidyalay and Junior College, Sec. 3, Airoli, Tal. Thane
15. Ramchandra Fakirji Naik Vidyalay, Plot no. 22-23, Sec. no. 8, Koparkhirane, Tal. Thane
16. Modern High School, Sec. 7, Vashi
17. Saint X’vier High School, Sec. 3, Nerul Town, Nerul, Tal. Thane
18. N.R. Bhagat English Medium high school, Near Railway station, Nerul, Tal. Thane
19. Swami Sukhdevanand High School, Thane Belapur Road, A/P Shiravane Gaon, Nerul, Tal. Thane
21. I.E. S. Jawaharlal Nehru Port high School, Nhavasheva Port township, sec. 1, Tal. Uran
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