SAINIK SCHOOL NALANDA

CLASS VIII

SUBJECT: SCIENCE (BASED ON BRIDGE PROGRAMME)

SUMMER VACATION HOME WORK (25-26)

QUESTION BANK FOR UPCOMING EXAM IN THE MONTH OF JULY 25

(COMPILED BY PK VERMA)

SHORT ANSWER TYPE QUESTIONS (SELECT AND SOLVE ANY 10 QUESTIONS AND SLOVE IT IN HOMEWORK COPY)

1. Design a poster or awareness campaign for your school to break common myths related to menstruation. What scientific facts will you include? How would you ensure both boys and girls feel involved, informed, and empathetic through your message?
2. Explain the processes of melting, boiling, and condensation using the example of water. Mention the approximate temperatures at which these changes occur.
3. Why do water droplets appear on the outer surface of a glass tumbler containing ice-cold water? What does this phenomenon tell us about water vapour in the air?
4. Compare the three states of water—ice, liquid water, and water vapour—based on their shape, ability to flow, and ability to spread. Use examples from your daily life to support your answer.
5. Why are millets considered more climate-resilient compared to other cereals? Mention two benefits of including millets in our diet.
6. List two ways your school can promote awareness of millets and healthy eating habits among students.
7. What is seed germination? Describe briefly what you observe when a seed begins to germinate.
8. How can mapping the different types of millets grown across India help in understanding regional food habits and agriculture?
9. What are millets? Name any three types of millets and their commonly used local names.
10. Describe an experiment to test the thermal conductivity of a metal wire. What does the result prove about the nature of metals?
11. Why do metal objects produce a ringing sound when struck? Name this property and explain how it helps differentiate metals from non-metals.
12. Define malleability. How can you demonstrate that aluminium is malleable, but coal is not?
13. You are given an iron nail and a piece of coal. How would you test their hardness? What conclusion can you draw from the results?
14. What is metallic lustre? Describe an activity that helps you identify whether a substance has metallic lustre or not.
15. What conditions increase the rate of rusting in iron? How can rusting be prevented based on these observations?
16. Why do metals and non-metals form oxides of different nature when burned in oxygen? Support your answer with two examples.
17. What is the reaction that takes place when sulphur burns in oxygen? What is the nature of the product formed? How is it tested?
18. Describe an activity to test the acidic or basic nature of rust. What does the result tell us about the nature of rust?
19. What type of oxide is formed when magnesium burns in air? How do you test its nature, and what is the result?
20. Explain how the water cycle helps in maintaining life on Earth. Mention at least two benefits of this cycle.
21. Describe the role of warm air in the formation of rain as part of the water cycle.

22. Why does the paper cup rise when a candle is placed beneath it in Activity W4.1? Explain the scientific principle behind this observation.

LONG QUESTIONS OF FIVE MARKS EACH

(SELECT AND SOLVE ANY 5 QUESTIONS AND SLOVE IT IN HOMEWORK COPY)

1. Reflecting on your own experiences and the questionnaire in Activity W4.4 (a), list any four emotional or behavioural changes you have noticed during adolescence. What scientific reasons (such as hormonal influences) explain these changes? How can adolescents manage these changes in a healthy way?
2. You are asked to design a night sky observation activity for your classmates using minimal tools (e.g., torch, compass, sky map). Explain how you would conduct it, what constellations you would focus on, and how you would ensure accurate identification and data collection.
3. Describe the steps involved in observing and identifying the Big Dipper and Pole Star using both physical observation and the Stellarium app. How does this activity enhance your understanding of the night sky and constellations?
4. Imagine the Earth suddenly stopped rotating. Based on your understanding of the day-night simulation, explain what changes would occur on Earth in terms of sunlight, temperature, and life. Support your answer with scientific reasoning.
5. Design your own classroom model using simple materials to demonstrate the difference between a solar eclipse and a lunar eclipse. Justify the changes (if any) you make to improve the clarity of the demonstration. Reflect on what safety and observational precautions should be taken during a real eclipse.
6. Create a table listing at least five changes around you and classify them as reversible or irreversible.
7. Design a simple activity to demonstrate the process of filtration. Explain with materials used and conclusion.
8. Design an awareness campaign poster (describe it in text) promoting the segregation of waste and sustainable practices.

PLEASE SEE NEXT PAGE

ALL QUESTIONS ARE COMPULSORY

(SOLVE IT IN NDA NOTE BOOK)

1. **Which of the following phenomena occurs due to the Earth's rotation?**
   A. Seasons
   B. Day and Night
   C. Equinox
   D. Solstice

2. **The precession of equinoxes is caused due to:**
   A. Tilt of the Earth’s axis
   B. Gravitational pull of the Moon and Sun
   C. Revolution of the Earth
   D. Rotation of the Earth

3. **Which of the following is the correct sequence from smaller to larger celestial bodies?**
   A. Planet < Star < Galaxy < Universe
   B. Star < Planet < Galaxy < Universe
   C. Planet < Galaxy < Star < Universe
   D. Galaxy < Planet < Star < Universe

4. **Which constellation is known as the 'Hunter'?**
   A. Cassiopeia
   B. Orion
   C. Ursa Major
   D. Canis Major

5. **Which of the following best describes a galaxy?**
   A. A group of stars arranged in a pattern
   B. A huge system of billions of stars and other celestial bodies
   C. A star that emits radio waves
   D. A planet with multiple moons

6. **Which of the following is a physical property of matter?**
   A. Combustibility
   B. Reactivity with acid
   C. Boiling point
   D. Corrosiveness

7. **Which of these is an example of a chemical change?**
   A. Dissolving sugar in water
   B. Melting of wax
   C. Rusting of iron
   D. Breaking of glass

8. **Which of the following is not a characteristic of a physical change?**
   A. No new substance is formed
   B. Easily reversible
   C. Involves change in state or appearance

D. Produces energy in the form of light or heat

9. **Which of the following methods is used to separate salt from seawater?**
   A. Filtration
   B. Sedimentation
   C. Distillation
   D. Sublimation

10. **Which method is best suited to separate cream from milk?**
    A. Filtration
    B. Decantation
    C. Centrifugation
    D. Distillation

11. **Winnowing is used to separate:**
    A. Water from oil
    B. Husk from grain
    C. Iron fillings from sand
    D. Sugar from water

12. **Which of the following millets is richest in iron content?**
    A. Pearl Millet
    B. Ragi (Finger Millet)
    C. Foxtail Millet
    D. Sorghum

13. **Which among the following is considered a 'Smart Food' for combating malnutrition and climate change?**
    A. Rice
    B. Maize
    C. Millets
    D. Wheat

14. **Which nutrient is essential for tissue building and repair?**
    A. Carbohydrates
    B. Proteins
    C. Fats
    D. Vitamins

15. **Vitamin D is essential for absorption of:**
    A. Iron
    B. Calcium
    C. Potassium
    D. Phosphorus

16. **Which of the following materials is not attracted by a magnet?**
    A. Cobalt
    B. Iron
    C. Plastic
    D. Nickel

17. The magnetic compass works on the principle that:

A. The Earth is a giant magnet
B. Compass is attracted by gravity
C. Compass reacts to sunlight
D. Compass is charged with static electricity

18. **The tilt of the Earth's axis is approximately:**

A. 23.5°
B. 90°
C. 0°
D. 45°

19. **Revolution of the Earth causes:**

A. Day and Night
B. Formation of eclipses
C. Change in Seasons
D. Phases of the Moon

20. **Which of the following turns red in acidic medium and blue in basic medium?**

A. Phenolphthalein
B. Methyl orange
C. Litmus
D. Turmeric

CADETS TO NOTE

25 MCQ TO BE DONE BY YOUR SELF STUDY ON OTHER NDA BASED CHAPTERS AND TO BE UPDATED ACCORDINGLY.