Appendix B

BASIC SCIENCE AND TECHNOLOGY PRACTICAL ACTIVITIESACHIVEMENT TEST (BST-PAT)

Dear respondent,

The instrument given to you is for the purpose of research work. Please, read carefully and answer the questions by picking the appropriate option (A-D). The data collected will be used only for the purpose of research. Your identity would be kept confidential.

Thanks.

SECTION B: BST-IQ OBJECTIVES TEST

1. **What is thermal energy?**  
   A. Light energy  
   B. Energy in moving objects  
   C. Heat energy from moving particles  
   D. Sound energy
2. **Which of the following is NOT a method of heat transfer?**  
   A. Radiation  
   B. Conduction  
   C. Convection  
   D. Refraction
3. **Conduction occurs mainly in:**  
   A. Liquids  
   B. Gases  
   C. Solids  
   D. Vacuum
4. **The movement of heat through a metal rod is called:**  
   A. Convection  
   B. Reflection  
   C. Conduction  
   D. Radiation
5. **Which substance is the best conductor of heat?**  
   A. Plastic  
   B. Copper  
   C. Rubber  
   D. Wood
6. **Convection is the transfer of heat through:**  
   A. Solids  
   B. Liquids and gases  
   C. Vacuums  
   D. Metals only
7. **Which process explains why smoke rises from a fire?**  
   A. Conduction  
   B. Convection  
   C. Radiation  
   D. Expansion
8. **The sun transfers heat to Earth mainly by:**  
   A. Conduction  
   B. Convection  
   C. Evaporation  
   D. Radiation
9. **Which material prevents the transfer of heat?**  
   A. Glass  
   B. Metal  
   C. Insulator  
   D. Conductor
10. **A good example of a heat insulator is:**  
    A. Iron  
    B. Copper  
    C. Aluminium  
    D. Wool
11. **What happens to particles when a substance is heated?**  
    A. They stop moving  
    B. They move slower  
    C. They vibrate more and move faster  
    D. They shrink
12. **Which of the following can transfer heat by all three methods?**  
    A. Solid  
    B. Liquid  
    C. Gas  
    D. Fire
13. **In which direction does heat flow?**  
    A. From hot to cold  
    B. From cold to hot  
    C. Both ways  
    D. In circles
14. **A black surface is a good:**  
    A. Reflector of heat  
    B. Conductor of heat  
    C. Absorber of heat  
    D. Refractor of heat
15. **The thermometer is used to measure:**  
    A. Heat  
    B. Temperature  
    C. Light  
    D. Energy
16. **What is the boiling point of water?**  
    A. 50°C  
    B. 80°C  
    C. 100°C  
    D. 120°C
17. **What is the freezing point of pure water?**  
    A. 0°C  
    B. 10°C  
    C. 32°C  
    D. 100°C
18. **Heat energy always flows from:**  
    A. Cold to cold  
    B. Hot to hot  
    C. Cold to hot  
    D. Hot to cold
19. **Which object will cool faster in a cold room?**  
    A. Plastic cup of tea  
    B. Metal cup of tea  
    C. Wooden cup of tea  
    D. Glass cup of tea
20. **Which of these can radiate heat without touching another object?**  
    A. Iron rod  
    B. Sun  
    C. Water  
    D. Ice
21. **Shiny surfaces are poor:**  
    A. Conductors  
    B. Insulators  
    C. Absorbers of heat  
    D. Radiators of heat
22. **Which of the following materials reduces heat loss in a vacuum flask?**  
    A. Glass  
    B. Plastic  
    C. Silver coating  
    D. Wood
23. **The feeling of warmth near a fire is due to:**  
    A. Conduction  
    B. Convection  
    C. Evaporation  
    D. Radiation
24. **Which of these methods is used in electric irons to transfer heat?**  
    A. Convection  
    B. Radiation  
    C. Conduction  
    D. Insulation
25. **What happens to most substances when heated?**  
    A. They break  
    B. They melt  
    C. They expand  
    D. They cool
26. **What is the SI unit of temperature?**  
    A. Joule  
    B. Degree  
    C. Kelvin  
    D. Celsius
27. **Which part of the flame is hottest?**  
    A. Outer part  
    B. Inner part  
    C. Middle part  
    D. Red part
28. **Which of these is a good example of radiation?**  
    A. Heat from hot soup rising  
    B. Heat passing through a metal spoon  
    C. Heat from the sun to Earth  
    D. Heat through water
29. **Convection currents are used in:**  
    A. Cooking pots  
    B. Solar heaters  
    C. Electric heaters  
    D. Thermometers
30. **A metal spoon in a hot cup of tea becomes warm due to:**  
    A. Conduction  
    B. Convection  
    C. Radiation  
    D. Expansion