



INTSO EDUCATION

SCIENCE TALENT SEARCH OLYMPIAD (STSO) 2015-16

STAGE - 2

TIME : 60 min.

CLASS : VI

Max. Marks : 50

Instructions:

- ⇒ Fill the OMR sheet completely and carefully.
- ⇒ Each question carries one mark and has only one correct answer. $\frac{1}{4}$ (one fourth) marks will be deducted for indicating incorrect response of each question.
- ⇒ The question paper contains 50 questions to be answered in 60 minutes.

PHYSICS

1. Making a magnetic substance like a magnet by bringing it closer to another magnet without physical contact is []
1) magnetic induction method 2) single touch method
3) double touch method 4) electric method
2. The distance between the magnetic north pole and the magnetic south pole is called []
1) length of magnet 2) magnetic equator 3) effective length 4) magnetic axis
3. The quantity of matter present in a body is called its []
1) mass 2) weight 3) pressure 4) force
4. One quintal is equal to _____ kg []
1) 10 2) 100 3) 1000 4) 10000
5. Among the following, electric conductor is []
1) plastic 2) pure water 3) wood 4) copper
6. _____ is used to make (or) break the electric circuit []
1) bulb 2) cell 3) switch 4) fuse
7. The length of rope is 5 feet, then its length in inches is []
1) 5 inch 2) 15 inch 3) 30 inch 4) 60 inch
8. The symbol of square centimetre is []
1) cm^2 2) Cm^2 3) cM^2 4) CM^2
9. The speed of light in vacuum is []
1) 3×10^8 km/s 2) 3×10^8 m/s 3) 3×10^8 mm/s 4) 3000 m/s
10. Among the following, transparent substance is []
1) air 2) paper 3) wood 4) stone
11. The image formed in pinhole camera is []
1) small and inverted 2) large and inverted 3) small and erect 4) large and erect
12. The percentage of methane present in Biomass is []
1) 10% to 20% 2) 40% to 50% 3) 60% to 70% 4) 80% to 90%
13. The following device which converts electrical energy to kinetic energy is []
1) Electric bulb 2) Table fan 3) Loudspeaker 4) Heater
14. The ultimate source of energy is []
1) sun 2) coal 3) petroleum 4) wind

15. Among the following the substance which is not attracted by the magnet is []
 1) aluminium 2) steel 3) nickel 4) Iron
16. _____ discovered that there is magnetic field around current carrying wire. []
 1) Magnus 2) Newton 3) Oersted 4) Einstein
17. The S.I. unit of work is []
 1) second b) kilogram 3) joule 4) newton

CHEMISTRY

18. Ramu is observing different materials at home. He has taken three objects like steel plate, a polyethene sheet and a glass jar full of water. He tried to classify them into transparent, translucent and opaque objects. Then choose the correct classification of above three respectively. []

Steel plate	Polyethene Sheet	Glass jar full of water
1) Opaque	Transparent	Translucent
2) Translucent	Opaque	Transparent
3) Transparent	Translucent	Opaque
4) Opaque	Translucent	Translucent

19. While thinking about properties of solids, a group of students in class 6 put sugar in a glass , in a bowl and in a vessel. They observed that sugar takes the shape of the container. since they know that liquids take the shape of the container. They concluded that sugar is a liquid .

The second group in the class disagreed with the first group. Razia a student from the second group came up with an Idea. She took a single crystal of sugar and one drop of water and declared that sugar is a solid while water is a liquid. What must she have argued using only one crystal of sugar and one drop of water to declare their physical states []

- i) A drop of liquid can be compressed but a sugar crystal cannot.
- ii) A single sugar crystal have a definite shape but a drop of water does not have
- iii) Few solids like sand can be heaped and takes the shape of container

Choose the correct reason for the above arguement

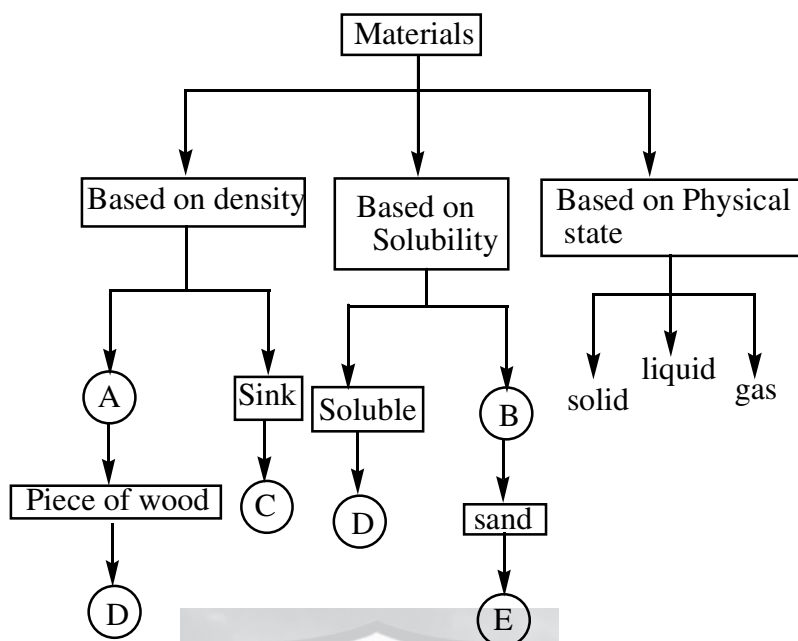
- 1) i, ii only 2) ii, iii only 3) i, iii only 4) all are correct
20. Which of the following are the examples of periodic change ? []
- i) Rotation of the moon on its axis
 - ii) Appearance of Halley's comet in the sky
 - iii) Revolution of the earth around the sun
 - iv) Occurrence of thunder and lightening
- 1) Only i and ii 2) Only iii and iv 3) Only i, ii and iii 4) Only i and iii

21. **Experiment I** :Take some water in a wide mouthed bowl and put an Iron nail in it and observe.
Experiment II : Put an empty Iron tin in the water in a wide mouthed bowl and observe.

Based on your observation what can you conclude []

- i) Some materials in one shape will sink in water but float on water when they are in other shape
 - ii) The materials that can sink can be made to float by changing their shape.
 - iii) All materials that float can be made to sink by changing their shape
- 1) i, ii only 2) ii, iii only 3) i, iii only 4) all are correct

22. Choose the correct set from the following []

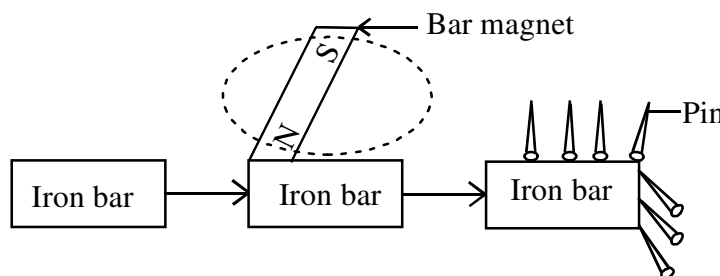


A	B	C	D	E
1) Float	Insoluble	Iron Nail	Opaque	can be heaped
2) Insoluble	Iron Nail	Opaque	can be heaped	Float
3) Iron Nail	Opaque	can be heaped	Float	Insoluble
4) Opaque	can be heaped	Float	Insoluble	Float

23. Diffusion is the method used when the gaseous components of gas + gas mixture have different densities . A mixture of gases like Hydrogen, ammonia and Nitrogen can be separated in the increasing order of rate of diffusion []

- 1) Hydrogen < ammonia < Nitrogen 2) Nitrogen < Hydrogen < ammonia
 3) Nitrogen < ammonia < Hydrogen 4) Cannot be separated

24. Observe the given figures showing a process.



Which type of change has occurred in the iron bar ? []

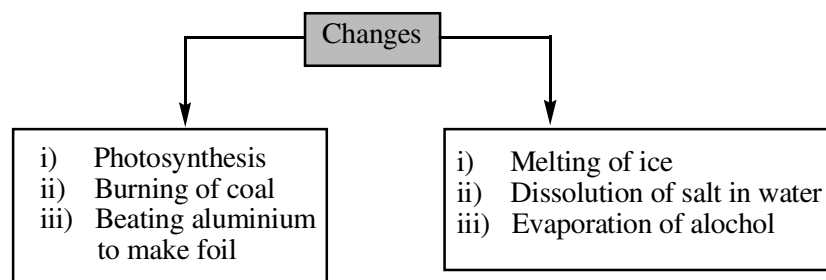
- 1) Irreversible 2) Chemical 3) Reversible 4) Periodic

25. Which of the following liquid and liquid mixtures can be separated by fractional distillation []

- i) Ethyl alcohol and water ii) Acetone and water
 iii) Chloroform and water iv) acetone and methyl alcohol
 1) i and ii only 2) ii and iii only 3) iii and iv only 4) i and iv only

26. Different combinations of gaseous mixtures are given below. []
 i) Hydrogen chloride and ammonia
 ii) Hydrogen chloride and water vapour
 iii) Water vapour and ammonia
 Choose the mixture of gases which cannot be separated by diffusion method
 1) i and ii only 2) ii and iii only 3) i and iii only 4) i, ii, iii
27. Which of the given properties of rubber over metals is preferred for making soles of shoes ?
 i) Rubber is more flexible than metals
 ii) A rubber sole is stronger than a metal sole
 iii) Rubber shoes float on water whereas metal shoes will sink
 iv) Rubber is not as hard as metals, so it can be easily cut into suitable shapes. []
 1) Only i and ii 2) Only ii and iii 3) Only i and iv 4) Only ii and iv
28. A mixture of common salt and water can be separated by evaporation, but if you want to separate a mixture of Iodine and methyl alcohol you should go for distillation because
 i) In evaporation, liquid cannot be collected in pure form []
 ii) Iodine can be sublimable where as salt cannot be sublimable
 iii) In distillation liquid cannot be collected in pure form
 1) i, ii only 2) ii, iii only 3) i, iii only 4) All are correct
29. During separation of solid and liquid mixture, sometimes we prefer filtration than sedimentation method. Because, []
 i) Complete separation of liquid is not possible in sedimentation
 ii) When solid have less density comparing with liquid, sedimentation is not possible
 iii) Filtration is a fast process
 iv) Complete separation of components is possible in filtration
 1) i and ii only 2) ii and iii only 3) iii and iv only 4) All are correct
30. The symbol of silicon is 'Si'. It is derived from its Latin name called []
 1) Silicone 2) Silian 3) Silex 4) Silicosis
31. The metals which can show the valency of Two and Four as variable valency are []
 1) Gold 2) Arsenic 3) Manganese 4) All
32. A metal 'M' forms a carbonate having the formula $M_2(CO_3)_3$. Then find out valency of M and formula of fluoride of M respectively. []
 1) MCl_3 , 3 2) 2, MCl_2 3) MCl_2 , 2 4) 3, MCl_3
33. A student decided to separate powdered calcium carbonate from powdered calcium chloride by shaking the mixture with water and filtering. Is it possible to separate or not ? Which property of the above substances is helpful in separation by using water []
 1) No, because both are soluble in water
 2) No, because both are insoluble in water
 3) Yes, because calcium carbonate is soluble but calcium chloride is insoluble in water
 4) Yes, because calcium carbonate is insoluble but calcium chloride is soluble in water

34. Study the chart given below. []



Based on the given chart, identify the odd example.

- | | |
|-----------------------------------|----------------------|
| 1) Photosynthesis | 2) Digestion of food |
| 3) Beating aluminium to make foil | 4) Burning of coal. |

BIOLOGY

35. Fermentation is used to produce []
 1) Alcohol & Bread 2) Dough & Bread 3) Curd & Wine 4) All the above

36. Identify the reason for scurvy disease []
 1) Deficiency of vitamin - A 2) Deficiency of vitamin - B
 3) Deficiency of vitamin - C 4) Deficiency of vitamin - K

37. Sweet potatoes are the excellent source of carotenoids, which are the form of []
 1) Vitamin - B - complex 2) Vitamin - C
 3) Vitamin - A 4) Vitamin - E

38. Pick the odd one out []
 1) Man 2) Cockroach 3) Goat 4) Sparrow

39. Blue whale is a []
 1) Fish 2) Mammal 3) Reptile 4) Amphibian

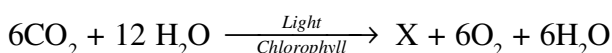
40. Beak of vulture is []
 1) Long & pointed 2) Strong & hooked 3) Long & thin 4) Short & curved

41. Identify the mismatch []
 1) King fisher : Above the pond surface 2) Hydrilla : Bottom of the pond
 3) Maggot : Middle of the pond 4) Kingfisher : Margins of the pond

42. Which of the following is not an aquatic plant []
 1) Nympha 2) Nelumbo 3) Eichornia 4) Rafflesia

43. Which of the following is incorrect regarding the conditions of pond surface []
 1) Availability of light 2) Availability of decaying matter
 3) Availability of air 4) Availability of temperature

44. Read the following



X represents

- | | | | |
|--|--|------------------------------------|-------------------------------------|
| 1) $\text{C}_6\text{H}_{12}\text{O}_3$ | 2) $\text{C}_6\text{H}_{12}\text{O}_6$ | 3) $\text{C}_2\text{H}_5\text{OH}$ | 4) $\text{C}_3\text{H}_6\text{O}_3$ |
|--|--|------------------------------------|-------------------------------------|

45. A plant with tap root system possess []
 1) Parallel venation 2) Reticulate venation
 3) Both parallel & reticulate venations 4) Either parallel or reticulate venation

46. Identify the tissue of the plant which transports water []
1) Phloem 2) Xylem 3) Parenchyma 4) Collenchyma
47. Carpel of a flower represents []
1) Male reproductive system 2) Female reproductive system
3) Petals 4) Sepals
48. Match the following []
1) Polyester A) Smooth
2) Wool B) Protein
3) Cotton C) Natural fibre
4) Silk D) Artificial fibre
E) Carbohydrate
1) 1 - C, 2 - D, 3 - E, 4 - A 2) 1 - D, 2 - C, 3 - B, 4 - A
3) 1 - D, 2 - C, 3 - E, 4 - A 4) 1 - C, 2 - E, 3 - A, 4 - D
49. Golden fibre is []
1) Jute yarn 2) Wool 3) Cotton 4) Silk
50. Which of the following district is famous for carpet industry []
1) Narayanpet 2) Warangal 3) Siricilla 4) Kothakota

