

International Foundation Science Olympiad(IFSO)

CLASS 9

WORKSHEET – 1

SECTION-A (Logical Reasoning)

1. Find the correct alternative

Betel is related to chew in the same way as football is related to _____

- a) play
- b) run
- c) roll
- d) kick

2. Choose the word which is different from the other three.

- a) Aquarium
- b) House
- c) Kennel
- d) Stable

3. There is a certain relation between two given words on one side of ': : ' and one word is given on another side of ': : ' while another word is to be found from the given alternatives having the same relations with this word as the given pair has. Select the best alternative.

Election : Manifesto : : Meeting : ?

- a) Report
- b) Preface
- c) Agenda
- d) Circular

4. In the following question, one term in the number series is wrong. Find out the wrong term.

196, 169, 144, 121, 101

- a) 101
- b) 121
- c) 169
- d) 196

5. Choose the missing term out of given alternatives.

ABD, DGK, HMS, MTB, SBL, ?

- a) ZAB
- b) ZKU
- c) XKW
- d) ZKW

6. In a certain code 134 means 'good and tasty', 478 means 'see good pictures' 728 means 'pictures are faint'. Which of the following digit stands for pictures?

- a) 4
- b) 7
- c) 8
- d) 2

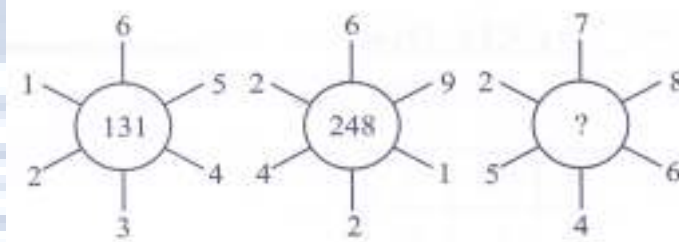
7. If SIMPLE is coded as AGTNOX, SAND is coded as AURW then what is the code for MIDDLE?

- a) TGWWOX
- b) TWGGOX
- c) TGOOWX
- d) TGOWWX

8. In a row of boys, Sanjay is 5th from the left and Ranjan is 6th from the right. When they exchange their position, then Sanjay becomes 13th from the left. What will be Ranjan's position from the right?

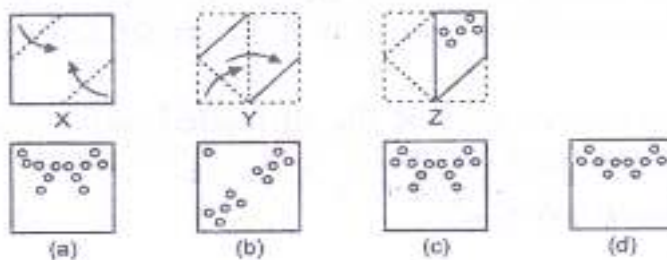
a) 11th
b) 12th
c) 14th
d) 16th

9. In the following question a set of figures carrying certain characters is given. The characters in each set follow a similar pattern. What is the missing character in each case?



a) 342
b) 332
c) 343
d) 334

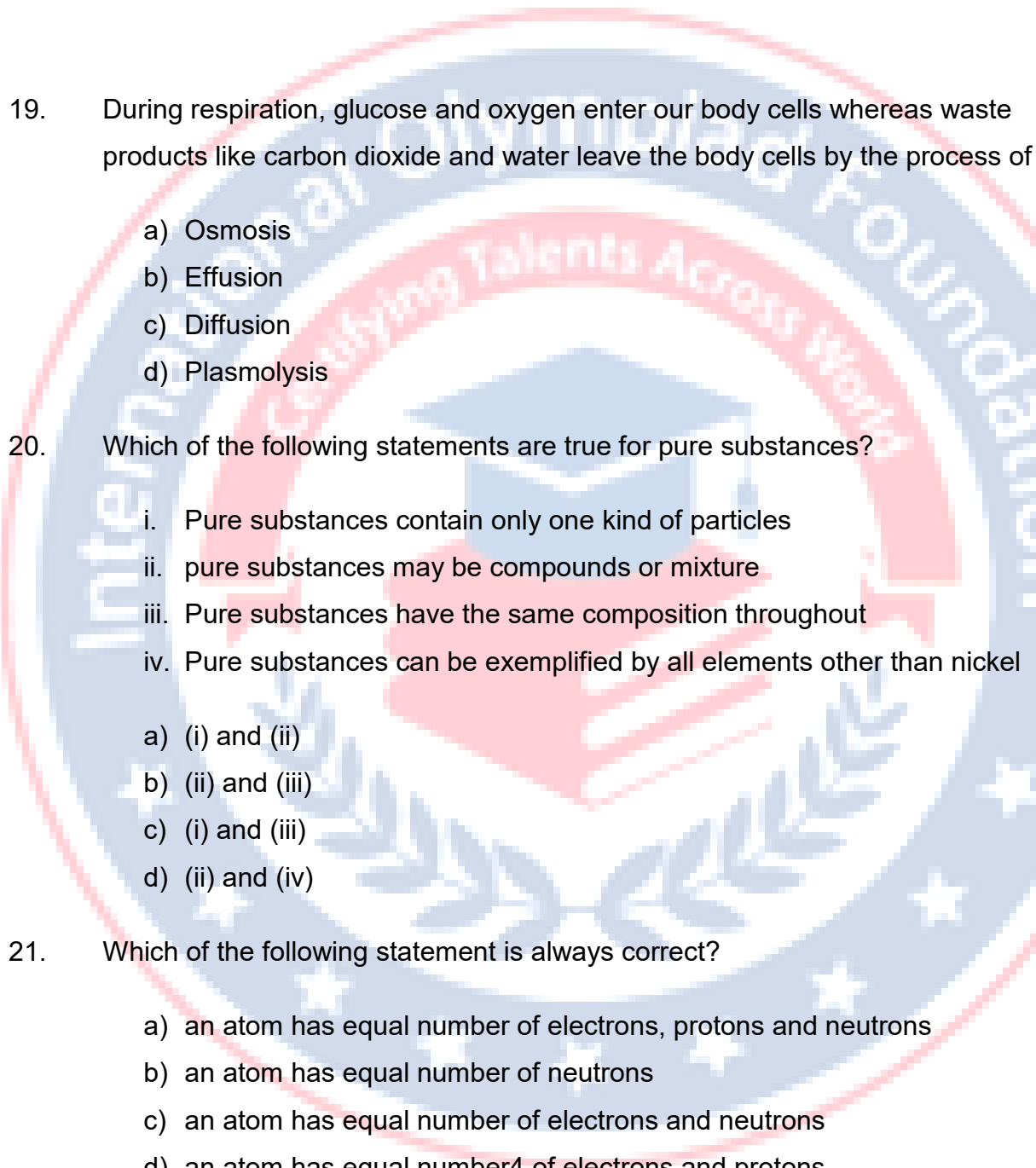
10. In the following questions, a set of three figures X,Y,Z have been given. Showing a sequence in which a paper is folded and finally cut from a particular section. Below these figures a set of answer figures marked (a, b, c, d) showing the design which the paper actually acquires when it is unfolded are given. You have to select the answer figure which most closely resembles the unfolded piece of paper.



SECTION-B (Day to Day Science)

11. What can you say about the motion of body if its speed-time graph is a straight line parallel to the time axis?
 - a) Speed of the body is zero
 - b) Speed of the body is increasing at a constant rate
 - c) Speed of the body is uniform i.e., constant
 - d) None of these
12. A motor cycle and a car are moving on a horizontal road with the same velocity. If they are brought to rest by the application of brakes, which provide equal retardation, then
 - a) Motor cycle will stop at shorter distance
 - b) Car will stop at a shorter distance
 - c) Both will stop at the same distance
 - d) Nothing can be predicted
13. A player stops a football weighing 0.5 kg which comes flying towards him with a velocity of 10 m/s. If the impact lasts for $\frac{1}{50}$ th second and the ball bounces back with a velocity of 15 m/s, then the average force involved is
 - a) 625 N
 - b) 525 N
 - c) 425 N
 - d) 325 N
14. The fundamental force which holds the planets in their orbits around the sun is

- a) Gravitational pull of earth
 - b) Nuclear force of attraction
 - c) Electrostatic force of attraction
 - d) Gravitational force of attraction
15. A rectangular wooden block has length, breadth and height of 50 cm, 25 cm and 10 cm, respectively. This wooden block is kept on ground in three different ways, turn by turn . Which of the following is the correct statement about the pressure exerted by this block on the ground ?
- a) The maximum pressure is exerted when the length and breadth form the base
 - b) The maximum pressure is exerted when the length and height form the base.
 - c) The maximum pressure is exerted when the breadth and height form the base.
 - d) None of these
16. A child pull a toy car by applying force of 15 N at an angle of 60° . Find the work done in pulling the toy by a distance of 20 metres.
- a) 150 J
 - b) 120 J
 - c) 130 J
 - d) 140 J
17. An electric bulb of 60 w is used for 6 h per day. Calculate the 'units of energy consumed in one day by the bulb.
- a) 0.60 'units'
 - b) 0.36 'units'
 - c) 0.45 'units'
 - d) 0.24 'units'
18. Which of the following statement best describes frequency?

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- a) The distance travelled by a wave per second
b) The distance between one crest of a wave and the next one
c) The number of complete vibrations per second
d) The maximum disturbance caused by a wave
19. During respiration, glucose and oxygen enter our body cells whereas waste products like carbon dioxide and water leave the body cells by the process of
- a) Osmosis
b) Effusion
c) Diffusion
d) Plasmolysis
20. Which of the following statements are true for pure substances?
- i. Pure substances contain only one kind of particles
ii. pure substances may be compounds or mixture
iii. Pure substances have the same composition throughout
iv. Pure substances can be exemplified by all elements other than nickel
- a) (i) and (ii)
b) (ii) and (iii)
c) (i) and (iii)
d) (ii) and (iv)
21. Which of the following statement is always correct?
- a) an atom has equal number of electrons, protons and neutrons
b) an atom has equal number of neutrons
c) an atom has equal number of electrons and neutrons
d) an atom has equal number⁴ of electrons and protons.
22. Cytoplasm is
- a) Unit mass of protoplasm
b) Protoplasm excluding plasma membrane

- c) protoplasm excluding plasma membrane and cell organelles
- d) Protoplasm excluding plasma membrane and nucleus.

23. Which cell organelle plays a crucial role in detoxifying many poisons and drugs in a cell?
- a) Lysosomes
 - b) Smooth endoplasmic reticulum
 - c) Vacuoles
 - d) Golgi apparatus
24. Which of the following components of xylem is living
- a) Vessels
 - b) Tracheids
 - c) Xylem parenchyma
 - d) Xylem sclerenchyma
25. Which one of the diseases is not infectious?
- a) Leprosy
 - b) Leukemia
 - c) Measles
 - d) Typhoid

ANSWER IFSO CLASS 9 – WORKSHEET - 1

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|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|
| 1 | D | 2 | B | 3 | C | 4 | A | 5 | D | 6 | C | 7 | A | 8 | C | 9 | B | 10 | A |
| 11 | C | 12 | C | 13 | A | 14 | D | 15 | C | 16 | A | 17 | B | 18 | C | 19 | C | 20 | C |

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|----|---|----|---|----|---|----|---|----|---|--|--|--|--|--|--|--|--|--|--|
| 21 | D | 22 | D | 23 | B | 24 | C | 25 | B | | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|--|--|--|--|--|--|--|--|--|--|

