



SAMPLE PAPER

International Olympiad Foundation

EXCELLENCE IN EDUCATION

International Olympiad Foundation

14+

OLYMPIADS

MCQ

FORMAT

0

NEGATIVE MARKS

OLYMPIAD

Science Olympiad

International Olympiad Foundation (IOF) · www.iof.education

CLASS / GRADE

Class 8

SUBJECT

IFSO

DURATION

60 Min

MAX MARKS

50

GENERAL INSTRUCTIONS

- All questions are Multiple Choice Questions (MCQs) with options A, B, C, D, E
- Each correct answer carries 1 mark. No negative marking for wrong answers.
- Rough work should be done separately. Do not write on question paper.

PAPER HIGHLIGHTS

- **Multiple Choice Questions (MCQ)**
Five options per question (A, B, C, D, E). Select the single most appropriate answer.
- **No Negative Marking**
1 mark per correct answer. Zero deductions — attempt every question.
- **Conducted by IOF**
International Olympiad Foundation — fostering excellence among students across India.

SUBJECTS

- Cyber English Entrepreneurship Mathematics Commerce Economics GK & Current Affairs Science Western Music
Sanskrit Indian Music Hindi Reasoning & Aptitude Spell Talent

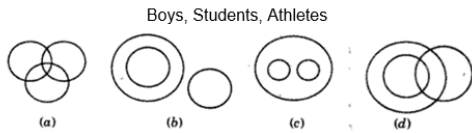
ALL IOF OLYMPIAD PROGRAMMES

| | | | | | | |
|---|---|---|--|---|--|---|
| IFCO International Foundation Cyber Olympiad | IFEOL International Foundation English Olympiad | IFEnO International Foundation Entrepreneurship Olympiad | IFMO International Foundation Mathematics Olympiad | ICS Institute of Company Secretaries of India Commerce Olympiad | IFEcO International Foundation Economics Olympiad | IFGCO International Foundation General Knowledge & Current Affairs Olympiad |
| IFSO International Foundation Science Olympiad | IFWMuO International Foundation Western Music Olympiad | IFSaO International Foundation Sanskrit Olympiad | IFIMuO International Foundation Indian Music Olympiad | IFHO International Foundation Hindi Olympiad | IFRAO International Foundation Reasoning & Aptitude Olympiad | IFSTO International Foundation Spell Talent Olympiad |

Q1. A girl leaves from her home. She first walks 30 meters in North-West direction and then 30 meters in South-West direction, Next, she walks 30 metres in South –East direction. Finally, she turns towards her house. In which direction is she moving? [+1]
[-0]

- A. North-East
- B. North-West
- C. South-East
- D. South-West
- E. None of these

Q2. Which is the most suitable Venn diagram among the following which represents relationship among [+1]
[-0]



- A. (a)
- B. (b)
- C. (c)
- D. (d)
- E. None of these

Q3. Some boys are sitting in a row. P is sitting fourteenth from the left and Q is seventh from the right. If there are four boys between P and Q, how many boys are there in the row? [+1]
[-0]

- A. 25
- B. 23
- C. 21
- D. 19
- E. None of these

Q4. If 23rd February of 2008 was Saturday, what will be the day on 3rd November of the same year? [+1]
[-0]

- A. Sunday
- B. Tuesday
- C. Wednesday
- D. Monday
- E. None of these

Q5. Radha is the niece of Alok, Alok's mother is Priya, Seema is Priya's mother. Seema's husband is Hari. Rita is the mother-in-law of Hari. How is Alok related to Hari? [+1]
[-0]

- A. Son
- B. Grand Son
- C. Nephew
- D. Great Grandson's
- E. None of these

Q6. Choose the correct option to continue the series.

[+1]
[-0]

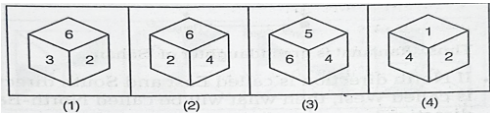


- A. 1
- B. 2
- C. 3
- D. 4
- E. 5

Q7. The four different positions of the dice are given below.

[+1]
[-0]

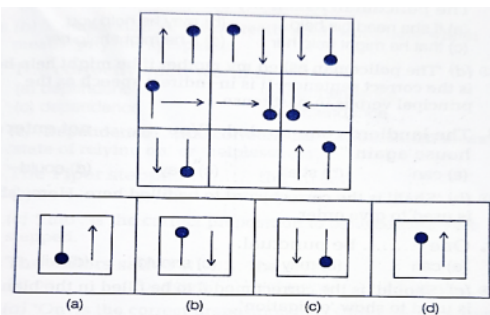
Which number is on the face opposite to 6?



- A. 1
- B. 2
- C. 3
- D. 4
- E. None of these

Q8. Which of the answer figures completes the given matrix figure?

[+1]
[-0]



- A. (a)
- B. (b)
- C. (c)
- D. (d)
- E. None of these

Q9. Choose the odd one out.

[+1]
[-0]

RUX , GJM , YBE , ZCF , NPS

- A. RUX
- B. GJM
- C. YBE
- D. ZCF
- E. NPS

- Q10.** In a certain code, '975' means 'Throw away garbage', '528' means 'Give away smoking' and '213' means 'Smoking is harmful', which digit in that code means 'Give'?
- [+1]
[-0]
- A. 5
B. 2
C. 8
D. 3
E. None of these
- Q11.** If KGVCB is the code for MIXED, then ZPCYB is the code for which word?
- [+1]
[-0]
- A. TREAD
B. BREAD
C. FRAED
D. BRAED
E. None of these
- Q12.** The missing letters are given in the proper sequence as one of the option. Choose the correct option.
- [+1]
[-0]
- ab_bbc_c_ab_ab_b
- A. ccaac
B. cbabc
C. cacac
D. bccab
E. None of these
- Q13.** Choose the correct option to continue the series.
- [+1]
[-0]
- 6 24 60 120 ?
- A. 200
B. 210
C. 150
D. 184
E. None of these
- Q14.** Choose the odd one out. (from the given options)
- [+1]
[-0]
- A. Malaria : Protozoa
B. Yeast : Fungi
C. Typhoid : Bacteria
D. Polio : Virus
E. None of these

Q15. Select the lettered pair that has the same relationship as the original pair of words.

[+1]
[-0]

Threat : Insecurity

- A. Challenge : Fight
- B. Thunder : Lightning
- C. Clouds : Rain
- D. Disease : Death
- E. None of these

Q16. In transverse waves, particles of the medium vibrate about their mean position

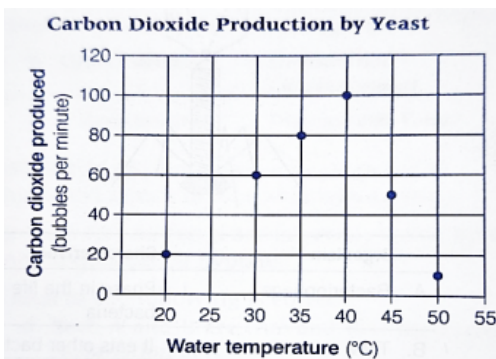
[+1]
[-0]

- A. along the direction of propagation of wave.
- B. perpendicular to the direction of propagation of wave.
- C. sometimes along and sometimes normal to the propagation of wave
- D. All of these
- E. None of these

Q17. Students carried out an experiment to find out the number of carbon dioxide bubbles produced by yeast at different temperatures. They plotted their results in the form of graph as shown below.

[+1]
[-0]

Which of these corresponds to the amount of carbon dioxide bubbles that are most likely to be produced at 25°C ? (Scroll down to view complete question)



- A. 120 bubbles
- B. 20 bubbles
- C. 40 bubbles
- D. 80 bubbles
- E. None of these

Q18. Assertion (A) : Vinegar prevents the spoilage of fruits and vegetables.

[+1]
[-0]

Reason (R) : Food spoiling bacteria cannot live in such an environment.

Which of the following is correct?

- A. Both A and R are true and R is the correct explanation of A.
- B. Both A and R are true, but R is not the correct explanation of A.
- C. A is true, but R is false
- D. A is false, but R is true
- E. None of these

Q19. Rama wants to study the effect of heating of different fibres. For this, she collected the following natural and synthetic fibres.

[+1]
[-0]

I. Nylon II. Wool III. Cotton IV. Silk V. Polyester

She burnt them one by one with a matchstick. After the experiment, she observed that.

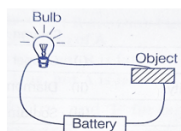
1. II and III burn to form a residue.
2. I and V melt on burning.
3. II and IV burn with smell of burning hair.

The true statement are

- A. 1 and 2
- B. 2 and 3
- C. 1 and 3
- D. 1, 2 and 3
- E. None of these

Q20. Dilip made the following experimental set up by using a copper wire.

[+1]
[-0]



He repeated this experiment with

- I. Aluminium foil
- II. Iron nail
- III. Coal
- IV. Graphite

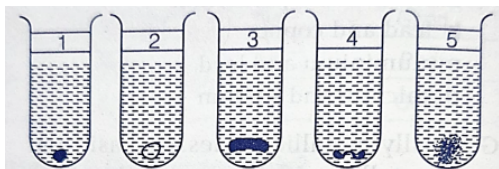
In which cases, the bulb will glow?

- A. I and II
- B. III and IV
- C. I, II and IV
- D. II and III
- E. None of these

Q21. Reena took five metals, i.e sodium, magnesium, gold, iron and copper in five different test tubes and labelled them as 1, 2, 3, 4 and 5 and added equal amount of water in each test tube.

[+1]
[-0]

She observed that in case of test tube 3, hydrogen gas is evolved only when it is boiled. The metal taken by her in this test tube was



- A. sodium
- B. magnesium
- C. gold
- D. copper
- E. None of these

Q22. Consider the following statements

[+1]
[-0]

- I. Metal X can displace Y from its salt solution but not hydrogen from water or dilute acid.
- II. Metals Z and A both release hydrogen with dilute acids.
- III. Metal Z releases hydrogen with nitric acid but metal A does not.
- IV. Metal A is not able to displace metal Z from its salt solution.

On the basis of above observations, the order of reactivity of these metals is

- A. $Z > A > X > Y$
- B. $A > Z > X > Y$
- C. $Z > A > Y > X$
- D. $A > Z > Y > X$
- E. None of these

Q23. When petroleum is subjected to fractional distillation, a fraction X, lies in between the petrol and diesel oil is obtained. This fraction is used

[+1]
[-0]

- I. as a fuel for stoves and lamps.
- II. in paints and motor fuel.
- III. in jet fuel

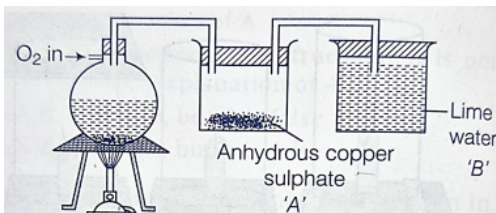
The correct use (s) is/are

- A. I and II
- B. I and III
- C. II and III
- D. Only I
- E. None of these

Q24. Mary made the following set up to identify the product of combustion of substance X, which is made up of only carbon and hydrogen.

[+1]
[-0]

She observed that on heating X, the substance of A turns blue and of B turns milky. The products as identified by Mary on the basis of her observations are

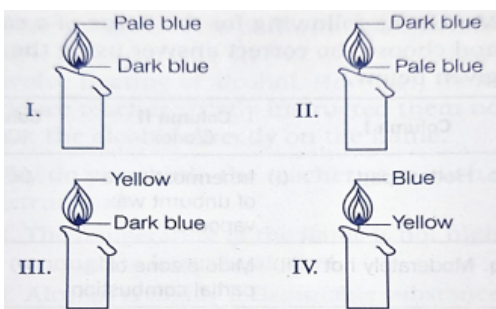


- A. CO and CO₂
- B. CO₂ and H₂O vapours
- C. CO and H₂O vapours
- D. liquid H₂O and H₂O vapours
- E. None of these

Q25. Consider the following diagrams.

[+1]
[-0]

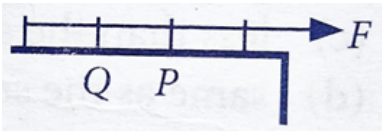
Which of the diagram shows a non-luminous flame?



- A. II
- B. I
- C. III
- D. IV
- E. None of these

Q26. A force 'F' is applied on one end of a rope of length 'a'. P and Q are two points of length 'b' from nearest end. The ratio of tensions in string at P and Q is

[+1]
[-0]



- A. $\frac{b}{(a-b)}$ B. $\frac{(a-b)}{b}$
C. $\frac{(a-2b)}{b}$ D. $\frac{b}{(a-2b)}$

- A. A
B. B
C. C
D. D
E. None of these

Q27. A person speaking with a loud voice starts to talk softly. Which characteristic of the sound wave did the person reduce?

[+1]
[-0]

- A. Wavelength
B. Amplitude
C. Time period
D. Frequency
E. None of these

Q28. If the focal length of object lens is increased, then magnifying power of

[+1]
[-0]

- A. microscope will increase but that of telescope will decrease.
B. microscope and telescope both will increase.
C. microscope and telescope both will decrease.
D. microscope will decrease but that of telescope will increase.
E. None of these

Q29. In a solar cooker, the phenomenon of greenhouse effect raises the temperature inside the solar cooker much higher than the temperature of the surroundings. Greenhouse effect in solar cookers is caused by

[+1]
[-0]

- A. a double glass lid covering the inner box.
B. a reflective mirror fitted to the outer lid.
C. the outer box cover of the solar cooker.
D. the inner cooking box painted in black
E. None of these

Q30. Match the column I with column II

[+1]
[-0]

| | Column I | | Column II |
|---|----------------|---|---------------------------|
| P | Ostrich egg | 1 | Carry signal to transport |
| Q | Mycoplasma | 2 | Single cell of 60mm |
| R | Red blood cell | 3 | Carry oxygen to start |
| S | Hen egg | 4 | Smallest cell |
| T | Nerve cell | 5 | Biggest cell |

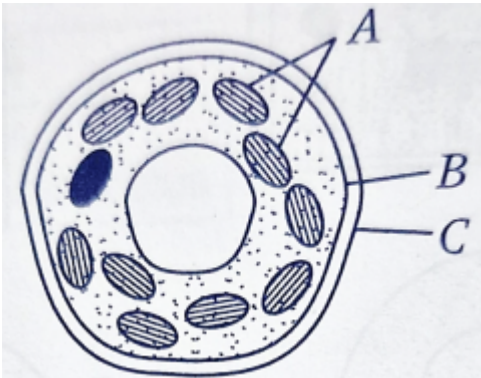
| | P | Q | R | S | T |
|---|---|---|---|---|---|
| a | 5 | 4 | 3 | 2 | 1 |
| b | 2 | 3 | 5 | 4 | 1 |
| c | 5 | 2 | 3 | 4 | 1 |
| d | 1 | 2 | 3 | 4 | 5 |

- A. a
- B. b
- C. c
- D. d
- E. None of these

Q31. The diagram given below shows a plant cell as seen under a microscope.

[+1]
[-0]

Which of the labelled part contains the magnesium (Mg) based pigment?



- A. A
- B. B
- C. C
- D. All of these
- E. None of these

Q32. Why do our cells have to undergo cell division ?

[+1]
[-0]

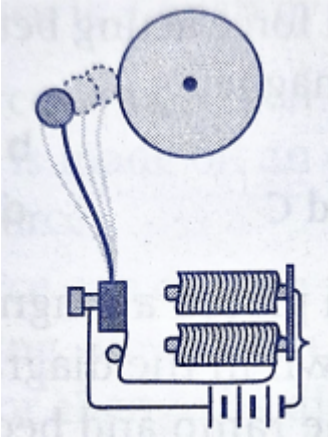
- P. To help us grow bigger in size.
- Q. To replace cells that die.
- R. To help repair damaged parts of our bodies.
- S. To use up the food that is found in the cells.

- A. P and Q
- B. Q, R and S
- C. P, Q and R
- D. P, Q, R and S
- E. None of these

Q33. When the circuit shown in the figure is completed, the hammer strikes the gong.

[+1]
[-0]

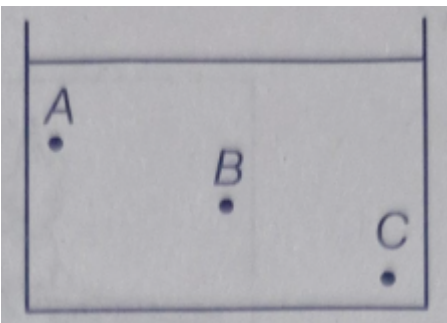
Which of the following force is responsible for the movement of hammer?



- A. Gravitational force
- B. Magnetic force
- C. Electrostatic force
- D. Frictional force
- E. None of these

Q34. Figure below shows a container filled with water. Which of the following statement is correct about pressure of water?

[+1]
[-0]

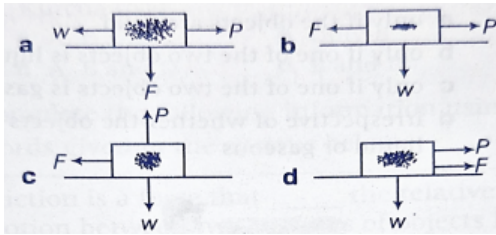


- A. Pressure at A > Pressure at B > Pressure at C
- B. Pressure at A = Pressure at B = Pressure at C
- C. Pressure at A < Pressure at B > Pressure at C
- D. Pressure at A < Pressure at B < Pressure at C
- E. None of these

Q35. An object of weight w is pulled along a rough, horizontal surface by a force P . The force of friction is F .

[+1]
[-0]

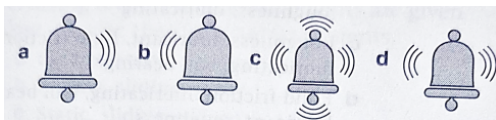
Which diagram correctly shows the direction of these forces on the object?



- A. a
- B. b
- C. c
- D. d
- E. None of these

Q36. Which of the following option shows the correct way of propagation of sound vibrations?

[+1]
[-0]



- A. a
- B. b
- C. c
- D. d
- E. None of these

Q37. State 'T' for true and 'F' for false.

[+1]
[-0]

- P. Infrasonic waves are used to kill bacteria in liquids.
- Q. Ultrasonic waves are produced by the vibration of the earth's surface during the earthquake.
- R. Noise pollution may cause partial hearing impairment.
- S. The sound having frequency less than 20 Hz are called infrasound.

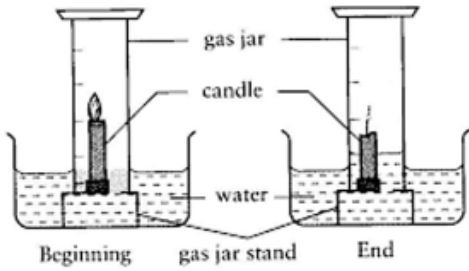
| | P | Q | R | S |
|---|---|---|---|---|
| a | T | T | F | F |
| b | F | T | T | F |
| c | T | F | F | T |
| d | F | F | T | T |

- A. a
- B. b
- C. c
- D. d
- E. None of these

Q38. A lit candle on a cork was floated in a tub of water and a glass jar was placed upside-down on it. The drawings below show the setup for the experiment and the result of the experiment.

[+1]
[-0]

What could be concluded from this result?



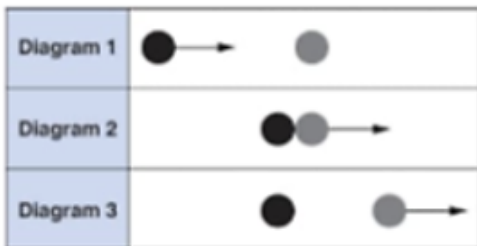
- A. the most important gas in air is oxygen
- B. the burning candle went out because the wick ran out.
- C. the burning candle went out because it got wet.
- D. the burning candle changed the volume of the air in the jar.
- E. None of these

Q39. Druv was playing a game with 2 marbles which were the same size but different colours. He noticed that when he rolled a marble and it hit a second stationary one, the first marble would stop and the second would begin moving.

[+1]
[-0]

He drew three diagrams to show what happened.

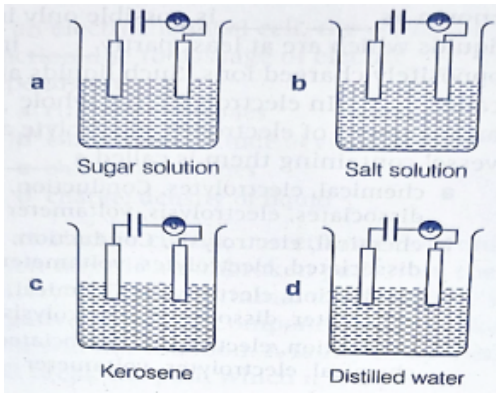
If the grey marble was much bigger, predict what would happen.



- A. Both marbles would move to the left.
- B. The marbles would stick together and slide along as one.
- C. The dark marble would bounce back and the grey marble would move slowly.
- D. The marbles would move to the right but the dark one would move faster.
- E. None of these

Q40. In which of the following will the bulb light up?

[+1]
[-0]



- A. a
- B. b
- C. c
- D. d
- E. All of these

Q41. Consider the following statements about the substance A.

[+1]
[-0]

- I. It is lighter than air.
- II. Its main constituent is methane.
- III. It is generally found near petroleum under the ground.

On the basis of above facts, substance A could be

- A. water gas
- B. natural gas
- C. coal gas
- D. LPG
- E. None of these

Q42. There are two ponds R and S in a village. Both ponds have plants and animals living in them. There are many plants at the bottom of pond R but only a few plants growing at the bottom of pond S. Which of the following could be possible reason(s) for this?

[+1]
[-0]

- I. Pond R has fewer predators.
- II. Pond R has fewer floating plants.
- III. The water in pond R is less muddy.

- A. Only III
- B. I and III
- C. II and III
- D. I,II and III
- E. None of these

Q43. It is observed that a substance X gives slippery feeling to the hands. The substance Y reacts with substance X to form a salt.

[+1]
[-0]

Accordingly, which of the following items can X and Y be?

| | Items X | Items Y |
|---|--------------------------------|-----------------|
| a | NaOH | NH ₃ |
| b | HCl | KOH |
| c | KOH | HBr |
| d | H ₂ SO ₄ | NH ₃ |

- A. a
- B. b
- C. c
- D. d
- E. All of these

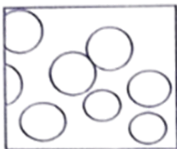
Q44. An element A is soft and can be cut with a knife. This is very reactive to air and cannot be kept open in air. It reacts vigorously with water. Identify the element from the following.

[+1]
[-0]

- A. Calcium
- B. Sodium
- C. Phosphorous
- D. Magnesium
- E. None of these

Q45. Bacteria have been grouped into four different types based on their shapes. Identify the different types and select the correct statement regarding them.

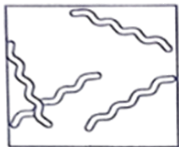
[+1]
[-0]



P



Q



R



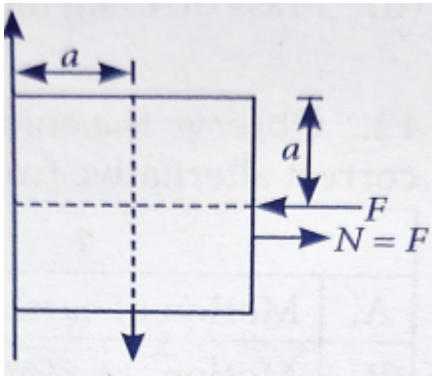
S

- A. *Vibrio cholerae* is an example of type S, which causes cholera.
- B. *Lactobacillus* is an example of type P, which helps in curdling of milk.
- C. Type R bacteria are rod shaped and are called as bacilli bacteria.
- D. Type Q bacteria are comma - shaped and are called as cocci bacteria.
- E. None of these

Q46. A block of mass m is at rest under the action of force F against a wall as shown in figure.

[+1]
[-0]

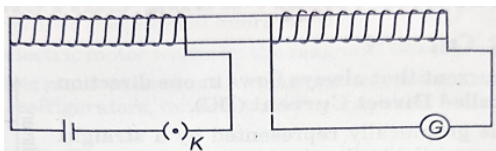
Which of the following statements is incorrect?



- A. $f = mg$ (where f is the frictional force)
- B. $F = N$ (where N is the normal force)
- C. F will not produce torque.
- D. N will produce torque.
- E. None of these

Q47. In the arrangement shown in figure, there are two coils wound on a non-conducting cylindrical rod. Initially the key is not inserted, then the key is inserted and later removed. Then

[+1]
[-0]

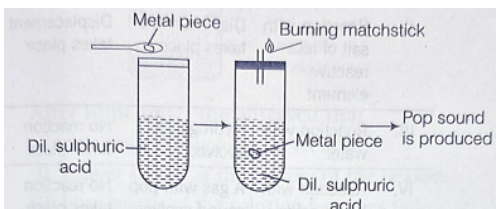


- A. the deflection in the galvanometer remains zero throughout.
- B. there is a momentary deflection in the galvanometer but it dies out shortly and there is no effect when the key is removed.
- C. there are momentary deflections in the galvanometer that die out shortly, the deflections are in the same direction.
- D. there are momentary deflections in the galvanometer that die out shortly, the deflection are in opposite directions.
- E. None of these

Q48. Neeta performed the following experiment by using dilute sulphuric acid, a metal piece and a match stick.

[+1]
[-0]

The reason because of which she heard pop sound is



- A. evolution of oxygen
- B. evolution of hydrogen
- C. evolution of sulphur dioxide
- D. evolution of carbon dioxide
- E. None of these

Q49. In a metallic wire, the free electrons are responsible for the flow of electric current. When the ends of metallic wire are not connected to a battery, then

[+1]
[-0]

- A. electrons move from positive electrode to negative electrode .
- B. electrons move from negative electrode to positive electrode .
- C. electrons move in random directions.
- D. protons move in random direction in such a way that their net movement in a unit volume is zero.
- E. None of these

Q50. Rohit was sitting beside the window when he saw a lightning. He started his stopwatch and found that after 22 seconds of lightning its thunder was heard. Given, speed of light = 3×10^8 m/s and speed of sound = 340m/s. How far are the source of thunder from Rohit?

[+1]
[-0]

- A. 10Km
- B. 7.5Km
- C. 8.5Km
- D. 5Km
- E. None of these



CLASS / GRADE

Class 8

SUBJECT

IFSO

TOTAL QUESTIONS

50

MAX MARKS

50

ANSWER SHEET — 50 QUESTIONS

| Q# | ANS | Q# | ANS | Q# | ANS | Q# | ANS | Q# | ANS |
|----|-----|----|-----|----|-----|----|-----|----|-----|
| 01 | A | 11 | B | 21 | B | 31 | C | 41 | B |
| 02 | A | 12 | B | 22 | C | 32 | C | 42 | C |
| 03 | A | 13 | B | 23 | A | 33 | B | 43 | C |
| 04 | D | 14 | B | 24 | B | 34 | D | 44 | B |
| 05 | D | 15 | C | 25 | A | 35 | D | 45 | B |
| 06 | C | 16 | B | 26 | A | 36 | C | 46 | C |
| 07 | A | 17 | D | 27 | B | 37 | D | 47 | D |
| 08 | A | 18 | A | 28 | D | 38 | D | 48 | B |
| 09 | E | 19 | C | 29 | A | 39 | C | 49 | C |
| 10 | C | 20 | C | 30 | A | 40 | B | 50 | B |

◆ ALL IOF OLYMPIAD PROGRAMMES ◆

