



# SAMPLE PAPER

◆ International Olympiad Foundation ◆

**EXCELLENCE IN EDUCATION**  
International Olympiad Foundation

<b>14+</b> OLYMPIADS	<b>MCQ</b> FORMAT	<b>0</b> NEGATIVE MARKS
-------------------------	----------------------	----------------------------

**OLYMPIAD**

## Reasoning & Aptitude Olympiad

International Olympiad Foundation (IOF) · [www.iof.education](http://www.iof.education)

CLASS / GRADE	SUBJECT	DURATION	MAX MARKS
<b>Class 11</b>	<b>IFRAO</b>	<b>60 Min</b>	<b>50</b>

**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 ◆

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

**Q1.** A comparison of marks scored by Gauri, Aaban, Seerat and Alvina in an examination is as follows.

[+1]  
[-0]

- I. Gauri has scored 15 marks less than Aaban.
- II. Gauri has scored 20 marks more than Seerat.
- III. Alvina has scored 10 marks less than Seerat.

To decide who has scored the highest marks, identify the statement from those given in the alternatives in respect of sufficiency of data.

- A. Data given in I and II are sufficient.
- B. Data given in I and III are sufficient.
- C. Data given in II and III are sufficient.
- D. Data given in I, II and III are sufficient.
- E. None of these

**Q2.** In a certain code language "Kolkata is cultural hub of India" is coded as "a2463b" and "Mumbai is financial hub of India" is coded as "c3472b". Then in the same language "India is hub of democracy" may be coded as

[+1]  
[-0]

- A. a2439
- B. b43c7
- C. b3249
- D. 32b47
- E. None of these

**Q3.** In a family of four members there is father, mother, son and daughter. When sorted according to decreasing order of their ages, the order is father, mother, son and daughter. The difference between the age of father and mother is 5 years. The difference between total age of male members and female members is 15 years. Also the total age of children is 20 years, then the age of the son is

[+1]  
[-0]

- A. 10 years
- B. 15 Years
- C. 20 Years
- D. 25 Years
- E. None of these

**Q4.** In a certain code 'COUNTRY' is written as 'ZSUOVPD'. How is 'TEACHER' written in the same code?

[+1]  
[-0]

- A. SUTIFED
- B. REHCAET
- C. QDGBDST
- D. SFIDBFU
- E. None of these

**Q5.** One morning at 8am Mohit and Rohit were standing in a Lawn with their back towards each other at the distance of 100m. Mohit's shadow fell exactly towards his left hand side. After 15 min, Rohit turns 135° anti-clockwise. Which direction Rohit is facing now?

[+1]  
[-0]

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

**Q6.** In the following question, there are statements followed by conclusions. Choose the conclusion(s) which must logically follow(s) from the given statements.

[+1]  
[-0]

Statements: P. Some grandmothers are mothers.  
Q. Some mothers are daughters.  
R. All the daughters are married women.  
Conclusions: I. Some married women are mothers.  
II. Some daughters are grandmothers.  
III. No daughter is grandmother.  
IV. Some mothers are grandmothers.

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

**Q7.** A man goes on trek from the bottom to the top of a mountain. He starts at 6am of 15th October, 2017 from the bottom and reaches the top at 6pm of the same day. On 16th October, 2017 he starts from the top at 6am and goes back following exactly the same route and reaches the bottom at 6pm.

[+1]  
[-0]

Based on the above situation, the following possibilities are to be analysed.

I. It is not possible to find a point on the route which he will cross at the same time each day.  
II. It is possible to find a point on the route which he will cross at the same time each day provided only if he travels on each day with equal uniform speed.  
III. It is always possible to find a point on the route which he will cross at the same time each day irrespective of his speed of travel.

- A. Only I is true
- B. Only II is true
- C. Only III is true
- D. Both I and II are true
- E. None of these

**Q8.** Given below is a statement followed by two assumptions.

[+1]  
[-0]

**Statement :**  
The population below poverty line has increased in urban area during the last year.  
**Assumptions :**  
I. The population below poverty line has decreased in rural area.  
II. The population below poverty line has not increased during the current year.

Which of the assumptions is implicit in the statement?

- A. only I is implicit
- B. only II is implicit
- C. either I or II is implicit
- D. neither I nor II is implicit
- E. None of these

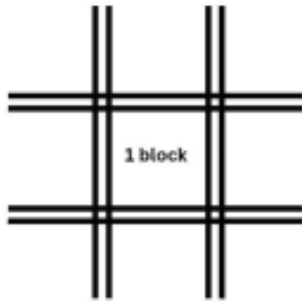
**Q9.** A watch is showing right time at 9pm. This watch gains 10minutes in every 24 hours. What will be the time shown next day by the watch when the correct time is 2am?

[+1]  
[-0]

- A. 02:00:24 am
- B. 02:00:48 am
- C. 02:02:05 am
- D. 02:02:30 am
- E. None of these

**Q10.** In a city, all the roads are either parallel to the East-west or North- south direction. Every  $\frac{1}{8}$ th of a kilometre from each road there is a crossing and the square area covered between four crossing is called a block. Starting from a crossing, if I travel four blocks North, take left and then travel three blocks west, I reach another crossing. What is the distance between these two crossings?

[+1]  
[-0]



- A. 5km
- B. 7km
- C.  $\frac{7}{8}$  km
- D.  $\frac{5}{8}$  km
- E. None of these

**Q11-** Read the given information and answer the question that follows.

[+1]  
[-0]

- 12.** Ratan, Anil, Pinku and Gaurav are brothers of Rakhi, Sangeeta, Pooja and Saroj not necessarily in that order. Each boy has one sister and the names of brothers and sisters do not begin with the same letter. Pinku and Gaurav are not Saroj's or Sangeeta's brothers, Saroj is not Ratan's sister.

**Q11:** Who is Pooja's brother? [ +1] [-0]

- A. Ratan
- B. Anil
- C. Pinku
- D. Gaurav
- E. None of these

**Q12:** Which of the following are brother and sister? [ +1] [-0]

- A. Ratan and Pooja
- B. Anil and Saroj
- C. Pinku and Sangeeta
- D. Gaurav and Rakhi
- E. None of these

**Q13.** Six persons are playing a card game. Suresh is facing Raghubir who is to the left of Ajay and to the right of Pramod. Ajay is to the left of Dhiraj. Yogendra is to the left of Pramod. If Dhiraj exchanges his seat with Yogendra and Pramod exchanges with Raghubir, who will be sitting to the left of Dhiraj?

[+1]  
[-0]

- A. Yogendra
- B. Raghubir
- C. Suresh
- D. Ajay
- E. None of these

**Q14-** Read the given information and answer the question that follows.

[+1]  
[-0]

17.

Seven persons – Ajay, Ashok, Anwar, Aamir, Anand, Aakash, Arun live on seven different floors of an apartment block (Ground floor is parking and they live on first floor, second floor and so on till seventh floor) each of them belongs to a different city among Jalandhar, Patiala, Uchana, Ferozepur, Ludhiana, Ambala and Bathinda, not necessarily in the same order.

The following information is known about them.

Ajay lives on an even numbered floor, but it is not the second floor. Only two persons live below the floor on which the person who belongs to Ferozepur lives. Exactly two persons live between the floors on which the person who belongs to Ferozepur and Arun live. Anwar does not belong to Ferozepur, but live below Ajay's floor. The person, who belongs to Ambala, lives just above the floor on which the person who belongs to Patiala live, none of them is Arun. There are only two floors above the floor on which Ashok lives. Anwar lives immediately above the floor on which the person who belongs to Ludhiana lives. There are only two floors between the floors on which Anand and the person who belongs to Jalandhar lives. Aamir belong to Bathinda.

**Q14:** Who lives just below the floor on which Arun lives?

[+1] [-0]

- A. Ajay
- B. The person who belongs to Ambala
- C. Anand
- D. The person who belongs to Patiala
- E. None of these

**Q15:** Who lives on the first floor?

[+1] [-0]

- A. Aakash - Ludhiana
- B. Anwar
- C. The person who belongs to Patiala
- D. Aamir
- E. The person who belongs to Bathinda

**Q16:** Who belongs to Uchana?

[+1] [-0]

- A. Arun
- B. Ashok
- C. Ajay
- D. Anwar
- E. None of these

**Q17:** Three of the following four are alike in a certain way based on the given information and so form a group. Find the one which does not belong to the group.

[+1] [-0]

- A. Arun - Jalandhar
- B. Aamir - Bathinda
- C. Anand - Patiala
- D. Aakash – Ludhiana
- E. None of these

**Q18.** In a code BH=16, DO=60 and TA = 20, then what is the code for BAT?

[+1]  
[-0]

- A. 20
- B. 30
- C. 40
- D. 60
- E. None of these

**Q19.** P is the son of Q while Q and R are the sisters to one another. T is the mother of R. If S is the son of T, which of the following statements is correct?

[+1]  
[-0]

- A. T is the brother of Q
- B. S is the cousin of P
- C. Q and S are sisters
- D. S is the maternal uncle of P
- E. R is the grandfather of P

**Q20.** Choose the pair in which the words bear the same relationship to each other as the words of the given pair bear.

[+1]  
[-0]

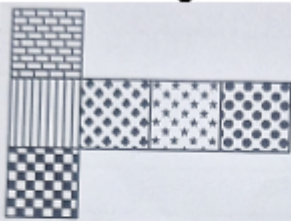
Interrupt : Speak

- A. Shout : Yell
- B. Intrude : Enter
- C. Concede : Defend
- D. Interfere : Assist
- E. None of these

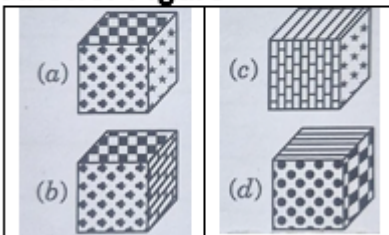
**Q21.** When the given net is folded into a cube, which is the only cube that can be formed?

[+1]  
[-0]

**Question Figure**



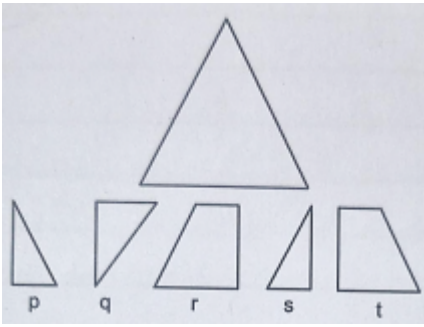
**Answer Figure**



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

**Q22.** Identify which among the pieces given below will not be required to complete the triangular pattern shown below.

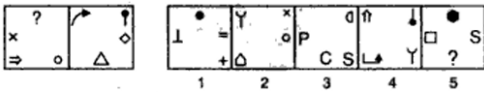
[+1]  
[-0]



- A. q
- B. r
- C. s
- D. t
- E. None of these

**Q23.** Select a figure from amongst the Answer figures which is similar to the problem figures.

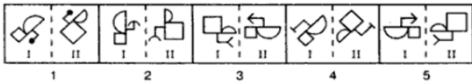
[+1]  
[-0]



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

**Q24.** Select a pair which does not have the same relation as the other pairs have.

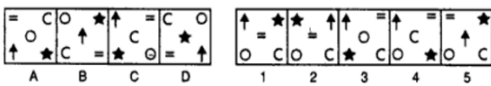
[+1]  
[-0]



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

**Q25.** Choose the correct option to continue the series.

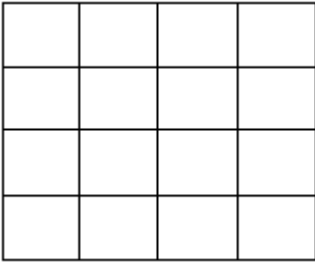
[+1]  
[-0]



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

**Q26.** If X is number of square and Y is the number of rectangles in the following figure. What is the value of Y/X ?

[+1]  
[-0]



A.  $\frac{18}{7}$

B.  $\frac{10}{3}$

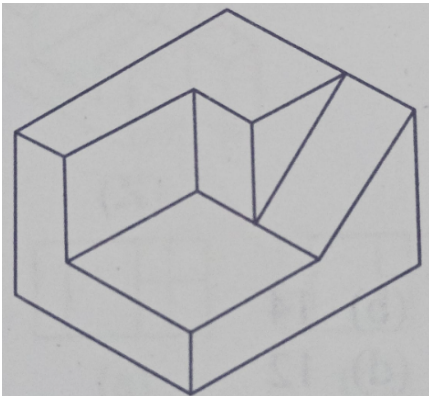
C.  $\frac{11}{7}$

D.  $\frac{7}{3}$

E. None of these

**Q27.** Find out the total number of surfaces of the object given below .

[+1]  
[-0]



A. 9

B. 10

C. 12

D. 11

E. None of these

**Q28-31.** In the figure given below.

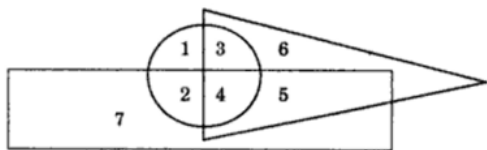
[+1]  
[-0]

The circle represents young persons

The triangle represents uneducated persons

The rectangle represents employed persons

Study the figure and answer the question.



**Q28:** Which region represents young, uneducated and employed persons? [+1] [-0]

- A. 6
- B. 5
- C. 4
- D. 3
- E. 2

**Q29:** The region which represents educated, employed young persons, is denoted by [+1] [-0]

- A. 2
- B. 3
- C. 4
- D. 5
- E. 6

**Q30:** Which region represents young, educated and unemployed persons? [+1] [-0]

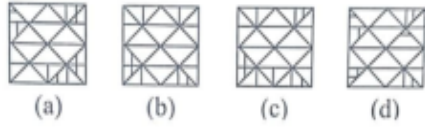
- A. 7
- B. 4
- C. 1
- D. 5
- E. None of these

**Q31:** Which region represents young, uneducated and unemployed persons? [+1] [-0]

- A. 1
- B. 2
- C. 6
- D. 3
- E. None of these

**Q32.** Choose the correct mirror image of the given figure(X) from the given options.

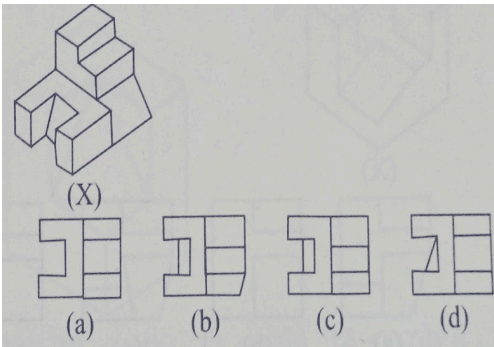
[+1]  
[-0]



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

**Q33.** The 3-D problem figure shows the view of an object. Identify its correct top, from the given options.

[+1]  
[-0]

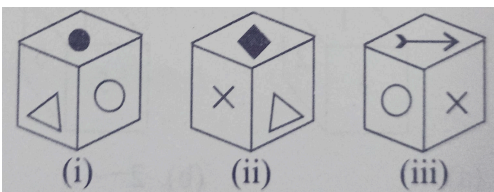


- A. (a)
- B. (b)
- C. (c)
- D. (d)
- E. None of these

**Q34.** Three different positions of the cube are shown in figure (i), (ii) and (iii) shown below:

[+1]  
[-0]

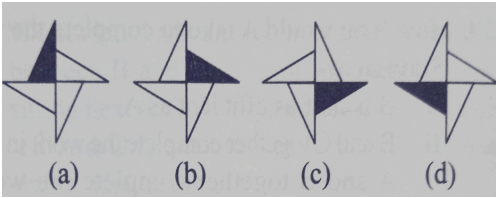
Which symbol is opposite Arrow?



- A. Circle
- B. Triangle
- C. Dot
- D. Cross
- E. None of these

**Q35.** Choose the odd one out.

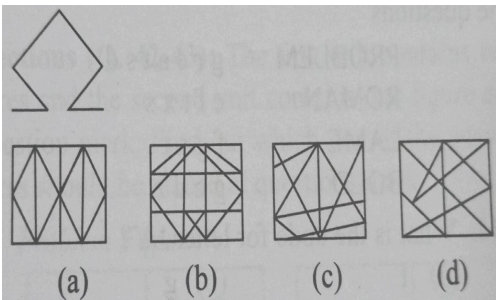
[+1]  
[-0]



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

**Q36.** Choose the correct option in which the problem figure is embedded .

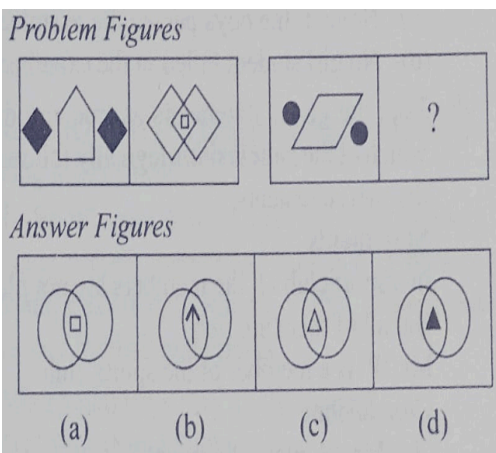
[+1]  
[-0]



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

**Q37.** Choose the correct option which will complete the second pair in the same way as first pair?

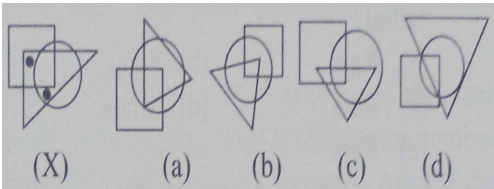
[+1]  
[-0]



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

**Q38.** In the given question, select the one option which satisfies the same conditions of placement of the dot(s) as in figure(X).

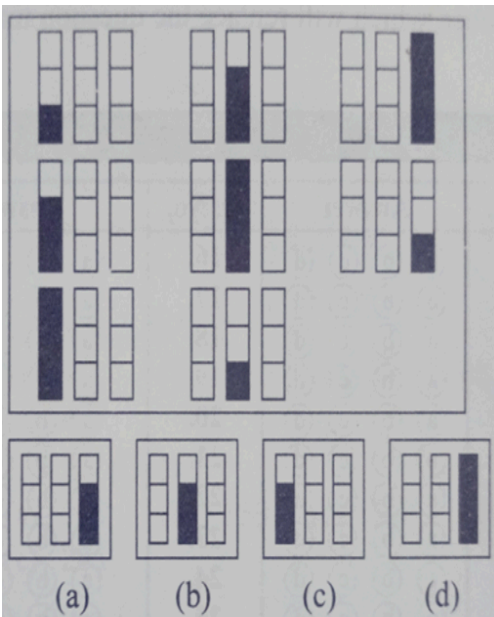
[+1]  
[-0]



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

**Q39.** Choose the correct option to complete the pattern given in a box.

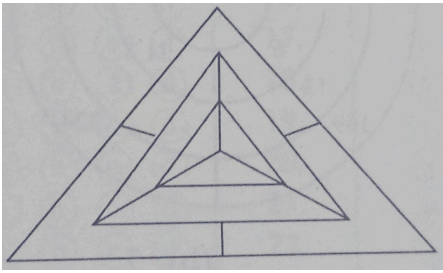
[+1]  
[-0]



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

**Q40.** In the given figure, there are nine sections. What is the minimum number of colours required to colour the entire figure if no adjacent faces are to have the same colour?

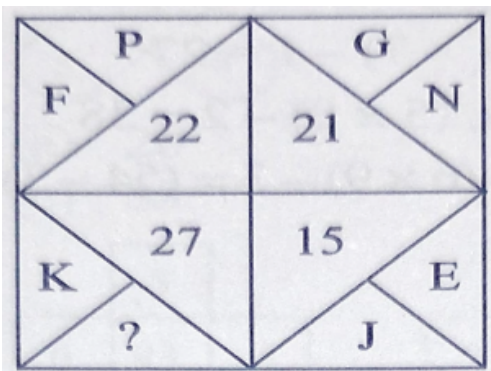
[+1]  
[-0]



- A. 2
- B. 3
- C. 4
- D. 9
- E. 6

**Q41.** Find the missing character from among the given choices.

[+1]  
[-0]



- A. M
- B. P
- C. Q
- D. S
- E. None of these

**Q42.** From the given choices, insert the missing (?) character.

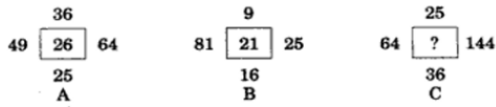
[+1]  
[-0]

1	2	81
0	2	16
3	1	256
1	-6	?

- A. 325
- B. 425
- C. 525
- D. 625
- E. None of these

**Q43.** Choose the correct option to replace the '?' .

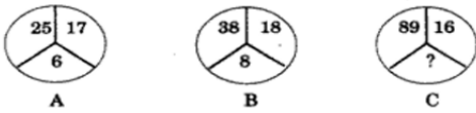
[+1]  
[-0]



- A. 19
- B. 23
- C. 25
- D. 31
- E. None of these

**Q44.** Choose the correct option to replace the '?' .

[+1]  
[-0]



- A. 13
- B. 15
- C. 17
- D. 19
- E. None of these

**Q45.** In the given matrix, characters follow a certain trend row wise or column wise. Accordingly find a missing character.

[+1]  
[-0]

18	24	32
12	14	16
3	?	4
72	112	128

- A. 2
- B. 3
- C. 4
- D. 5
- E. None of these

**Q46.** In the given matrix, characters follow a certain rule row-wise or column-wise. Accordingly find a missing character.

[+1]  
[-0]

6	9	15
8	12	20
4	6	?

- A. 5
- B. 10
- C. 15
- D. 21
- E. None of these

**Q47.** In the given matrix, characters follow a certain rule row wise or column-wise. Accordingly find a missing character.

[+1]  
[-0]

3	2	2
6	20	4
12	25	64
6	10	?

- A. 6
- B. 8
- C. 12
- D. 10
- E. None of these

**Q48.** If  $-$  stands for  $\div$ ,  $+$  stands for  $\times$ ,  $\div$  stands for  $-$  and  $\times$  stands for  $+$ , which of the following equations is correct?

[+1]  
[-0]

- A.  $40 - 10 + 5 \div 4 \times 5 = 21$
- B.  $40 + 10 - 4 \times 5 \div 3 = 80$
- C.  $40 \div 10 - 4 \times 5 + 3 = 32$
- D.  $8 - 4 \times 40 \div 2 + 15 = 30$
- E. None of these

**Q49.** Find the missing number in the given figure.

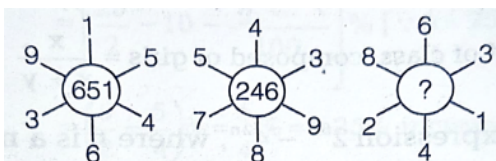
[+1]  
[-0]

<b>7</b>	<b>9</b>	<b>11</b>
<b>2</b>	<b>3</b>	<b>2</b>
<b>53</b>	<b>87</b>	<b>?</b>

- A. 125
- B. 100
- C. 129
- D. 64
- E. None of these

**Q50.** Which number will replace the question mark?

[+1]  
[-0]



- A. 262
- B. 622
- C. 631
- D. 824
- E. None of these



CLASS / GRADE

Class 11

SUBJECT

IFRAO

TOTAL QUESTIONS

50

MAX MARKS

50

## ANSWER SHEET — 50 QUESTIONS

Q01 - Q10	ANSWER	Q11 - Q20	ANSWER	Q21 - Q30	ANSWER	Q31 - Q40	ANSWER	Q41 - Q50	ANSWER
Q01	D	Q11	D	Q21	D	Q31	D	Q41	B
Q02	C	Q12	B	Q22	A	Q32	E	Q42	D
Q03	B	Q13	C	Q23	C	Q33	C	Q43	D
Q04	D	Q14	B	Q24	D	Q34	B	Q44	B
Q05	A	Q15	A	Q25	B	Q35	C	Q45	B
Q06	D	Q16	D	Q26	B	Q36	B	Q46	B
Q07	B	Q17	C	Q27	D	Q37	C	Q47	B
Q08	D	Q18	C	Q28	C	Q38	C	Q48	A
Q09	C	Q19	D	Q29	A	Q39	A	Q49	A
Q10	D	Q20	B	Q30	C	Q40	B	Q50	B

## ◆ ALL IOF OLYMPIAD PROGRAMMES ◆

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