



SAMPLE PAPER

International Olympiad Foundation



EXCELLENCE IN EDUCATION

International Olympiad Foundation

14+

OLYMPIADS

MCQ

FORMAT

0

NEGATIVE MARKS

OLYMPIAD

Mathematics Olympiad

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

CLASS / GRADE

Class 7

SUBJECT

IFMO

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. Choose the correct option.

[+1]
[-0]

Which of the following is the same as Ode, Ballad, Lyric?

- A. Prose
- B. Epic
- C. Sonnet
- D. Precia
- E. None of these

Q2. Select the lettered pair that has the same relationship as the original pair of words.

[+1]
[-0]

Script : Drama

- A. Article : Magazine
- B. Chapter : Book
- C. Lyrics : Note
- D. Score : Symphony
- E. None of these

Q3. Choose the correct option.

[+1]
[-0]

Magnalium is to Aluminium as Brass is to _____

- A. Lead
- B. Magnesium
- C. Iron
- D. Copper
- E. None of these

Q4. Choose the odd one out.

[+1]
[-0]

Tarapur , Rawatbhata , Kalpakkam , Paradeep , Narora

- A. Tarapur
- B. Rawatbhata
- C. Kalpakkam
- D. Paradeep
- E. Narora

Q5. Choose the pair in which the words are differently related.

[+1]
[-0]

- A. Scalpel : Surgeon
- B. Chisel : Soldier
- C. Awl : Cobbler
- D. Knife : Chef
- E. None of these

Q6. Choose the correct option to continue the series.

[+1]
[-0]

2, 15, 41, 80, ?

- A. 111
- B. 120
- C. 121
- D. 132
- E. None of these

Q7. The missing letters are given in the proper sequence as one of the option. Choose the correct option.

[+1]
[-0]

abb_baa_a_bab_ab

- A. abba
- B. abab
- C. ccac
- D. aabb
- E. None of these

Q8. If POND is coded as RSTL, how is HEAR written in the same code?

[+1]
[-0]

- A. GHIJ
- B. GHIZ
- C. JIGZ
- D. JCLZ
- E. None of these

Q9. Pointing to a lady, a man said, "The son of her only brother is the brother of my wife". How is the lady related to the man?

[+1]
[-0]

- A. Mother's sister
- B. Grandmother
- C. Mother-in-law
- D. Sister of father-in-law
- E. None of these

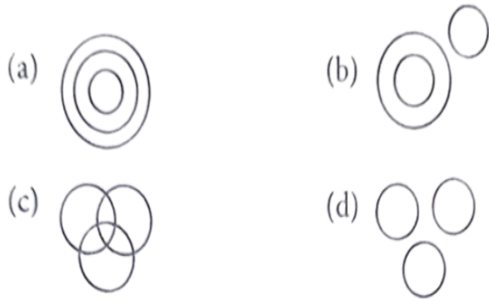
Q10. Kishan walked 40m towards East, took a right turn and walked 50m. Then he took a left turn and walked 40m. In which direction is he now from the starting point?

[+1]
[-0]

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

Q11. Which of the following Venn diagrams correctly represents quadrilateral, rectangle and square?

[+1]
[-0]

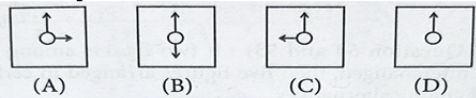


- A. (a)
- B. (b)
- C. (c)
- D. (d)
- E. None of these

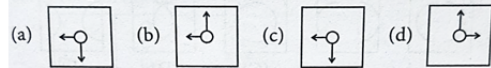
Q12. Choose the correct option which can continue the sequence in the problem figures.

[+1]
[-0]

Problem Figure



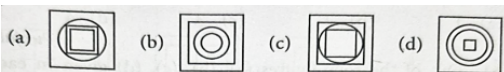
Answer Figures



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

Q13. Choose the correct option which is different from three others.

[+1]
[-0]

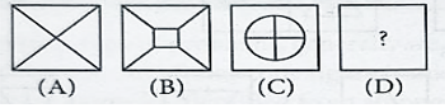


- A. (a)
- B. (b)
- C. (c)
- D. (d)
- E. None of these

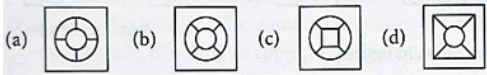
Q14. Select the figure that has the same relationship as the original pair of figures.

[+1]
[-0]

Problem Figure



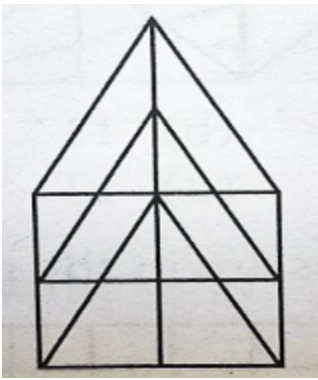
Answer Figures



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

Q15. How many triangles are there in the given figure?

[+1]
[-0]



- A. 21
- B. 18
- C. 16
- D. 20
- E. None of these

Q16. The singing band is raising funds by selling candy bars for ₹ 1.00 each. The band can buy box A of 40 candy bars for ₹ 23.20 or box B of 250 candy bars for ₹ 152.50. Which of candy bars will give them a larger profit?

[+1]
[-0]

- A. Box A
- B. Box B
- C. Box A and Box will give equal profit
- D. Can't be determined
- E. None of these

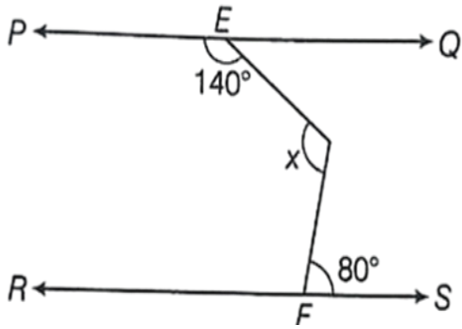
Q17. There are some toys to be distributed to a group of children. Let one toy will be given to one child, then one child will be left. If two children will be given a toy to share, then one toy will be left extra, then the number of toys and children are, respectively.

[+1]
[-0]

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

Q18. In the given figure, PQ and RS are parallel lines. Find the value of angle x?

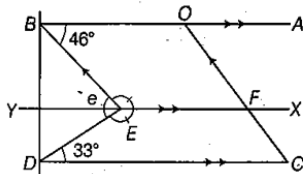
[+1]
[-0]



- A. 120°
- B. 140°
- C. 160°
- D. 100°
- E. None of these

Q19. In the given figure, if $AB \parallel CD \parallel XY$ and $OC \parallel EB$, $\angle ABE = 46^\circ$ and $\angle EDC = 33^\circ$, then find $\angle e$ and $\angle OCD$,

[+1]
[-0]



- A. $\angle e = 99^\circ, \angle OCD = 33^\circ$
- B. $\angle e = 101^\circ, \angle OCD = 33^\circ$
- C. $\angle e = 89^\circ, \angle OCD = 46^\circ$
- D. $\angle e = 79^\circ, \angle OCD = 46^\circ$

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

Q20. Choose the correct option.

[+1]
[-0]

Mr. Tiwari had a piece of land which he distributed among his three children. He gave $\frac{1}{3}$ to his eldest son and $\frac{2}{5}$ of the remaining to his daughter and the left amount of land to his youngest child. How much did his youngest child get, if Mr Tiwari had 25000 sqm. of land?

- A. 5000 sqm.
- B. 10000 sqm
- C. 15000 sqm
- D. 2000 sqm
- E. None of these

Q21. Guideline daily amounts: Nutritional needs vary depending on the sex, size, age and activity levels, so the following chart is the given recommended daily amounts for a healthy and balanced diet for maintaining rather losing or gaining weight. What percent amount of energy (kcal) in woman is less than in man? (Scroll to view complete question)

[+1]
[-0]

Guideline Daily Amounts

	Man	Woman
Energy (Kcal)	2500	2000
Protein (g)	55	45
Carbohydrates (g)	300	230
Sugar (g)	120	90
Fat (g)	95	70
Saturates (g)	30	20
Fiber (g)	24	24
Salt	6	6

- A. 15%
- B. 18%
- C. 20%
- D. 22%
- E. None of these

Q22. Guideline daily amounts: Nutritional needs vary depending on the sex, size, age and activity levels, so the following chart is the given recommended daily amounts for a healthy and balanced diet for maintaining rather losing or gaining weight.

[+1]
[-0]

What is the ratio of total requirement of sugar, fat and saturates in man to the sugar, fat and saturates in woman? (Scroll to view complete question)

Guideline Daily Amounts

	Man	Woman
Energy (Kcal)	2500	2000
Protein (g)	55	45
Carbohydrates (g)	300	230
Sugar (g)	120	90
Fat (g)	95	70
Saturates (g)	30	20
Fiber (g)	24	24
Salt	6	6

- A. 49:36
- B. 7:6
- C. 59:42
- D. 72:91
- E. None of these

Q23. State 'T' for true and 'F' for false.

[+1]
[-0]

- I. Expression with two unlike terms is called a monomial.
- II. The sum of two unlike terms is a like term with coefficient equal to the sum of coefficients of the two unlike terms.
- III. The value of $3y^2 - 5y + 3$, when $y=1$ is $+1$.
- IV. The expression for the sum of angles of an 'n' sided figure is $(2n-4) \times 90^\circ$

	I	II	III	IV
a	T	T	F	F
b	T	F	T	F
c	F	T	F	T
d	F	F	T	T

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

Q24. If thrice of each of the two angles of an isosceles triangles is 4 times the third angle, then what is the measure of the angles?

[+1]
[-0]

- A. 54° , 54° , 72°
- B. 36° , 36° , 48°
- C. 40° , 40° , 100°
- D. 35° , 35° , 110°
- E. None of these

Q25. What is the unit digit in the product $(3547)^{153} \times (251)^{72}$?

[+1]
[-0]

- A. 7
- B. 9
- C. 1
- D. 3
- E. None of these

Q26. If the number $481x673$ is completely divisible by 9, then the smallest whole number in place of x will be

[+1]
[-0]

- A. 2
- B. 5
- C. 6
- D. 7
- E. None of these

Q27. Choose the correct option.

[+1]
[-0]

If $47.2506 = 4A + \frac{7}{B} + 2C + \frac{5}{D} + 6E$, then the value of $5A + 3B + 6C + D + 3E$ is

- A. 53.6003
- B. 53.603
- C. 153.6003
- D. 213.0003
- E. None of these

Q28. The price of commodity X increases by 40 paise every year, while the price of commodity Y increases by 15 paise every year. If in 2001, the price of commodity X was Rs 4.20 and that of Y was Rs 6.30, in which year commodity X will cost 40 paise more than the commodity Y?

[+1]
[-0]

- A. 2010
- B. 2011
- C. 2012
- D. 2013
- E. None of these

Q29. Simplify

[+1]
[-0]

$$\frac{0.2 \times 0.2 + 0.02 \times 0.02 - 0.4 \times 0.02}{0.36}$$

- A. 0.009
- B. 0.09
- C. 0.9
- D. 9
- E. None of these

Q30. Simplify.

[+1]
[-0]

$$b - [b - (a+b) - \{[b - (b - (a-b))]\} + 2a]$$

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

Q31. Choose the correct option.

[+1]
[-0]

$\frac{4}{15}$ of $\frac{5}{7}$ of a number is greater than $\frac{4}{9}$ of $\frac{2}{5}$ of the same number by 8. What is half of that number?

- A. 318
- B. 315
- C. 316
- D. 317
- E. None of these

Q32. Find the value of P in the following.

[+1]
[-0]

$$1\frac{2}{3} \div \frac{2}{7} \times \frac{P}{7} = 1\frac{1}{4} \times \frac{2}{3} \div \frac{1}{6}$$

- A. 0.006
- B. $\frac{1}{6}$
- C. 0.6
- D. 6
- E. None of these

Q33. 7 is added to a certain number, the sum is multiplied by 5, the product is divided by 9 and 3 is subtracted from the quotient. The remainder left is 12. What is the number?

[+1]
[-0]

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

Q34. The ratio between the present ages of P and Q is 6:7. If Q is 4 years older than P, what will be the ratio of the ages of P and Q after 4 years?

[+1]
[-0]

- A. 3 : 4
- B. 3 : 5
- C. 4 : 3
- D. Date Inadequate
- E. None of these

Q35. Simplify and choose the correct option.

[+1]
[-0]

$$\left(\frac{4^{-3/2} x^{2/3} y^{-7/4}}{2^{3/2} x^{-1/3} y^{3/4}} \right)^{2/3}$$

A. $8x^2y^5$

B. 1

C. $\frac{x^2 y^{-5}}{8}$

D. $\frac{(x^2 y^{-5})^{1/3}}{8}$

A. A

B. B

C. C

D. D

E. None of these

Q36. Choose the correct option.

[+1]
[-0]

Max's monthly salary was ₹5445q. He saved 30% of it and gave $\frac{1}{2}$ of the remainder to his parents. If max used $\frac{2}{4}$ of the amount of money he had left to buy a guitar, then how much money would he have left, if q=8?

A. ₹ 11400.5

B. ₹ 11434.5

C. ₹ 11079.5

D. can't be determined

E. None of these

Q37. Meenakshi scored 97 out of 100 in Mathematics , 94 out of 100 in English and 46 out of 100 in Hindi. In order to have an aggregate of 80% in his overall marks, how much should she score in Science?

[+1]
[-0]

A. 93

B. 73

C. 83

D. 63

E. None of these

Q38. Anisha has a collection of English, French and Spanish books. 34% of them are English, 42% of them are French and there are 72 Spanish books.

[+1]
[-0]

What is the total number of books?

A. 300

B. 600

C. 750

D. 1200

E. None of these

Q39. Anisha has a collection of English, French and Spanish books, 34% of them are English, 42% of them are French and there are 72 Spanish books.

[+1]
[-0]

The number of English books as a percentage of Spanish books are

- A. 120.21%
- B. 125.72%
- C. 139.21%
- D. 141.67%
- E. None of these

Q40. Mr. Ajay divided a sum of ₹20000 among his two sons Anish and Anuj. Anish invested the amount at the rate of 12% for 2 years, whereas Anuj invested the amount at the rate of 8% for 2 years. Both got same interest after 2 years. Find the amount each one of them got.

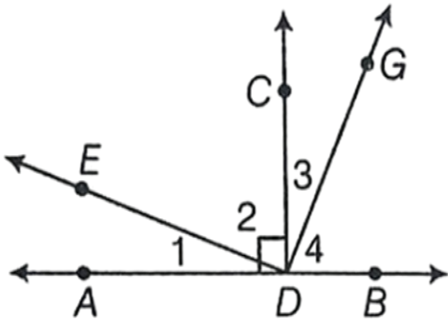
[+1]
[-0]

	Anish	Anuj
a	₹10000	₹10000
b	₹12000	₹8000
c	₹8000	₹12000
d	₹6000	₹14000

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

Q41. If $\angle 1 = 32^\circ$ and $\angle 2$ and $\angle 3$ are complementary then find the measure of $\angle 4$.

[+1]
[-0]



- A. 54°
- B. 32°
- C. 36°
- D. 58°
- E. None of these

Q42. Choose the correct option.

[+1]
[-0]

There were fewer than 50 students in a class. Half of the students scored A+ in a Mathematics test, $\frac{1}{3}$ of them scored A in the same test and another $\frac{1}{5}$ of them scored B+. The rest of the students scored B. How many students scored B in the test?

- A. 1
- B. 3
- C. 4
- D. 5
- E. None of these

Q43. If the longer side of a rectangle is doubled and the other is reduced to half, the area of the new rectangle goes up by

[+1]
[-0]

- A. 50%
- B. 100%
- C. 0 %
- D. 150%
- E. None of these

Q44. If a wire is bent into the shape of a square, the area of the square is 81sq.cm. When the wire is bent into a semi circular shape, what is the area of the semicircle? ($\pi = \frac{22}{7}$)

[+1]
[-0]

- A. 36cm²
- B. 77cm²
- C. 60cm²
- D. can't be determined
- E. None of these

Q45. 1200 soldiers in a camp had enough food for 28days. After 4 days, some soldiers were transferred to another camp and thus the food lasted for an extra 32days. Then how many soldiers left the campus?

[+1]
[-0]

- A. 320
- B. 486
- C. 490
- D. 300
- E. None of these

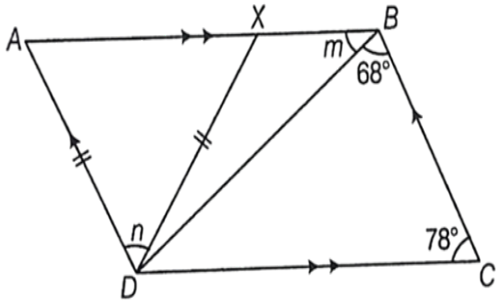
Q46. An insurance policy pays 90% of the first ₹20000 of a certain patient's medical expenses, 80% of the next ₹ 40000 and 40% of the ₹40000 after that. If the patient's total bill is ₹92000, then how much will the policy pay?

[+1]
[-0]

- A. ₹90000
- B. ₹84000
- C. ₹70000
- D. ₹62800
- E. None of these

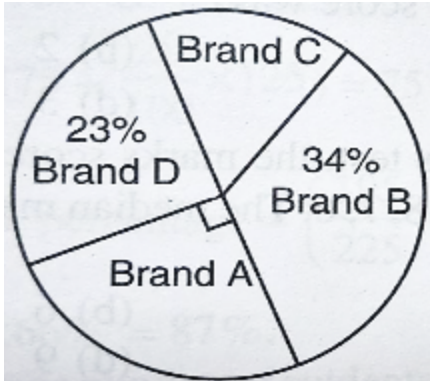
- Q47.** In the given figure, ABCD is a parallelogram such that $AB \parallel CD$ and $AD \parallel BC$ with opposite angles equal. If $DA=DX$, then find the values of $\angle m$ and $\angle n$.

[+1]
[-0]



- A. $m = 24^\circ, n = 34^\circ$
 B. $m = 24^\circ, n = 24^\circ$
 C. $m = 34^\circ, n = 24^\circ$
 D. $m = 34^\circ, n = 34^\circ$
 E. None of these
- Q48.** The pie-chart given below shows the results of a survey on the type of bathing soaps people use. Study the pie chart and answer the question.

[+1]
[-0]



What fraction of the people surveyed used brand C soap.

- A. $\frac{22}{100}$
 B. $\frac{18}{100}$
 C. $\frac{32}{100}$
 D. $\frac{80}{100}$

E. None of these

Q49. Mr. Qureshi sold his scooter to Mr. Anand at a discount of 10%. Mr. Anand sold the same scooter to Mr. Verma at a profit of 20%.

[+1]
[-0]

If Mr. Verma paid ₹ 82440 for the scooter, then how much did Mr. Qureshi pay for the scooter ?

- A. ₹ 74212
- B. ₹ 76333
- C. ₹ 72431
- D. ₹ 70343
- E. None of these

Q50. Mr. Qureshi sold his scooter to Mr. Anand at a discount of 10% Mr. Anand sold the same scooter to Mr. Verma at a profit of 20%.

[+1]
[-0]

If Mr. Anand paid the same amount as Mr. Verma to Mr. Qureshi, then what percentage profit would have been made by Mr. Qureshi?

- A. 20%
- B. 15%
- C. 10%
- D. 8%
- E. None of these



CLASS / GRADE

Class 7

SUBJECT

IFMO

TOTAL QUESTIONS

50

MAX MARKS

50

ANSWER SHEET — 50 QUESTIONS

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

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