

FIITJEE SAMPLE PAPER

(FIITJEE Talent Reward Exam-2020)

for students presently in
Class 6 (Paper 1)



Time: 3 Hours (9:30 am – 12:30 pm)

Code 6000

Maximum Marks: 240

Instructions:

Caution: Class, Paper, Code as given above MUST be correctly marked on the answer OMR sheet before attempting the paper. Wrong Class, Paper or Code will give wrong results.

- You are advised to devote 35 Minutes on Section-I, 35 Minutes on Section-II, 50 Minutes on Section-III, 30 Minutes on Section-IV and 30 Minutes on Section-V.
- This Question paper consists of 5 sections. Marking scheme is given in table below:

Section	Subject	Question no.	Marking Scheme for each question	
			correct answer	wrong answer
SECTION – I	APTITUDE	1 to 12	+3	0
		13 to 18	+4	0
SECTION – II	PHYSICS (PART-A)	19 to 22	+2	0
	CHEMISTRY (PART-B)	23 to 26	+2	0
	MATHEMATICS (PART-C)	27 to 31	+2	0
	BIOLOGY (PART-D)	32 to 36	+2	0
SECTION – III	PHYSICS (PART-A)	37 to 48	+1.5	0
	CHEMISTRY (PART-B)	49 to 60	+1.5	0
	MATHEMATICS (PART-C)	61 to 72	+1.5	0
	BIOLOGY (PART-D)	73 to 84	+1.5	0
SECTION – IV	PHYSICS (PART-A)	85 to 87	+3	0
	CHEMISTRY (PART-B)	88 to 90	+3	0
	MATHEMATICS (PART-C)	91 to 93	+3	0
	BIOLOGY (PART-D)	94 to 96	+3	0
SECTION – V	MATHEMATICS (PART-A)	97 to 102	+3	0
	MATHEMATICS (PART-B)	103 to 108	+3	0

- Answers have to be marked on the OMR sheet. The Question Paper contains blank spaces for your rough work. No additional sheets will be provided for rough work.
- Blank papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.
- Before attempting paper write your OMR Answer Sheet No., Registration Number, Name and Test Centre in the space provided at the bottom of this sheet.
- See method of marking of bubbles at the back of cover page for question no. 103 to 108.

Note: Please check this Question Paper contains all 108 questions in serial order. If not so, exchange for the correct Question Paper.

OMR Answer Sheet No. : _____

Registration Number : _____

Name of the Candidate : _____

Test Centre : _____

For questions **103 to 108**

Numerical based questions single digit answer 0 to 9

Example 1:

If answer is 6.

Correct method:

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Example 2:

If answer is 2.

Correct method:

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

SAMPLE PAPER

Recommended Time: 35 Minutes for Section – I**Section – I****APTITUDE TEST**

This section contains 18 Multiple Choice Questions number 1 to 18. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

Directions (Q. 1 to 2): In each of the following questions, a number series is given with one term missing. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

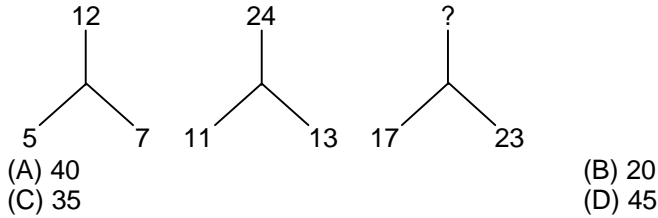
1. 6, 10, 15, 21, 28, ?
(A) 26 (B) 36
(C) 24 (D) 35
2. 11, 13, 17, 19, 23, 29, 31, ?
(A) 24 (B) 33
(C) 35 (D) 37

Directions (Q. 3 to 4): Three of the following four are like in a certain way and so form a group. Which is the one that does not belong to that group?

3. (A) Hard disk (B) 4 GB RAM
(C) 32GB storage (D) Satellite
4. (A) 7, 11, 13 (B) 5, 19, 23
(C) 3, 17, 31 (D) 2, 4, 6
5. Amit rank 6th from the top and 14th from bottom. How many people are there in the arrangement?
(A) 18 (B) 19
(C) 20 (D) 21

Space for Rough Work

6. Find the missing number that comes in the place of question mark (?).

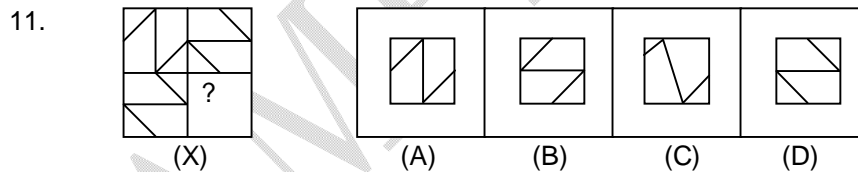
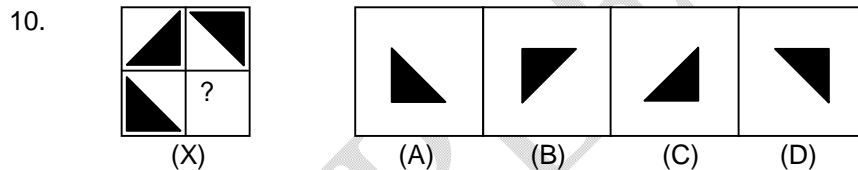


7. If '+' means 'x', '-' means '+', 'x' means '+' and '÷' means '-', then $16 - 2 + 2 \times 2 \div 4 = ?$
 (A) 24
(B) 4
(C) 14
(D) 22

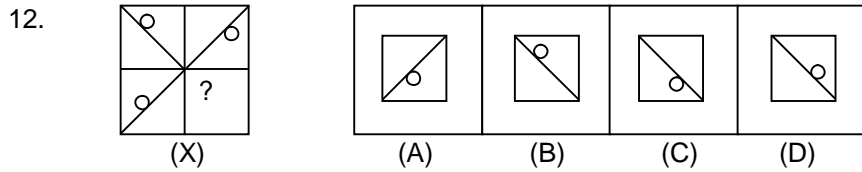
Directions (Q. 8 to 9): In each of the following questions arrange the given words in the sequence in which they occur in the dictionary and then choose the correct sequence.

8. 1. Become 2. Burst 3. Blow 4. Breeze 5. Buzz
 (A) 1, 3, 4, 2, 5
 (B) 1, 2, 3, 4, 5
 (C) 5, 4, 3, 2, 1
 (D) 1, 3, 5, 2, 4
9. 1. Rapid 2. Ready 3. Read 4. Race 5. Right
 (A) 4, 2, 1, 3, 5
 (B) 4, 1, 3, 2, 5
 (C) 5, 3, 1, 2, 4
 (D) 2, 4, 5, 1, 3

Directions (Q. 10 to 12): In each of the following questions, select a figure from amongst the four alternatives, which when placed in the blank space of figure (X) would complete the figure.



Space for Rough Work



13. Find the missing number in the following number series:
 405, 135, 45, 15, ?
 (A) 10 (B) 20
 (C) 5 (D) 15

Directions (Q. 14 to 15): The number-group in each question below is to be codified according to the following letter codes:

Number	5	1	3	0	2	4	8	7	6	9
Code	X	L	M	P	D	B	E	F	K	J

You have to find out which of the answers (A), (B), (C) or (D) has the correct coded form of the given number-group.

14. 430675
 (A) BMKPFX (B) BMPKFX
 (C) BMPKXF (D) BMPFKX
15. 790853
 (A) FJPEXM (B) FPJEXM
 (C) FJPEMX (D) FPJEMX

16. In a coded language the given alphabets are written in special codes.

A	B	C	D	E	S	U	V	M	N
7	9	1	3	4	2	0	6	5	8

The code 973578 will be

- (A) BADMAN (B) BACMAN
 (C) DUEMAN (D) MANSDE

Directions (Q. 17 to 18): On the basis of the following arrangement give answer of question
7 8 9 7 6 5 4 2 8 9 7 2 4 5 9 2 9 7 6 4 7

17. How many 7s are preceded by 9 and followed by 6:
 (A) 2 (B) 3
 (C) 4 (D) 5
18. Which figure has equal frequency?
 (A) 2, 5, 8 (B) 2, 4, 5
 (C) 8, 7, 5 (D) 8, 6, 5

Space for Rough Work

Recommended Time: 35 Minutes for Section – II

Section – II

PHYSICS – (PART – A)

*This part contains 4 Multiple Choice Questions number 19 to 22. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

19. Convert 10.4 km in metre.
(A) 10400 (B) 104
(C) 1040 (D) 140
20. If a car is moving at a speed of 20 km/hour then the distance travelled by car in 1 hour is
(A) 2 km (B) 20 km
(C) 200 m (D) 40 km
21. A boy is running on a circular track with speed 10 km/hour. The displacement of the boy after one complete round is
(A) 10 km (B) 20 km
(C) 4 km (D) 0 km
22. We can see our image in mirror due to
(A) Reflection of light (B) Dispersion
(C) Total internal Reflection (D) Air
-

Space for Rough Work

CHEMISTRY – (PART – B)

This part contains 4 Multiple Choice Questions number 23 to 26. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

23. Spinning is
 (A) Arranging two sets of yarns together (B) Making yarn from fibres
 (C) Making fabric from yarn (D) None of these

24. Which among the following do not have fibres in their seeds?
 (A) Mango (B) Jute
 (C) Cotton (D) None of these

25. Match the following

Column-I	Column-II
(A) Alluvial soil	(p) Mattresses
(B) Black soil	(q) Jute cultivation
(C) Guinned cotton	(r) Cotton cultivation
(D) Flax fibres	(s) Ropes and bags
(E) Jute fibres	(t) Linen

- (A) A → r, B → s, C → t, D → q, E → p (B) A → q, B → r, C → t, D → s, E → p
 (C) A → q, B → r, C → p, D → t, E → s (D) A → r, B → q, C → s, D → p, E → t

26. Identify the malleable substance among the following:
 (A) Wood (B) Stone
 (C) Glass (D) Aluminium

Space for Rough Work

MATHEMATICS – (PART – C)

This part contains 5 Multiple Choice Questions number 27 to 31. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

27. The cost of 15 pens is Rs 360. What is the cost of 8 such pens?
(A) Rs 400 (B) Rs 180
(C) Rs 192 (D) can not be determined
28. Two angles of a triangle are 72° and 38° . Find the third angle.
(A) 103° (B) 70°
(C) 90° (D) 54°
29. In a triangle how many right angles is/are possible?
(A) 2 (B) 1
(C) 3 (D) 4
30. Number of edges in a cube is
(A) 12 (B) 8
(C) 6 (D) 10
31. $\frac{14}{119} = \frac{?}{17}$ choose the correct option
(A) 2 (B) 6
(C) 3 (D) 5

Space for Rough Work

BIOLOGY – (PART – D)

This part contains 5 Multiple Choice Questions number 32 to 36. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

32. An animal having hollow and light bones is:
(A) Fish (B) Bird
(C) Snake (D) Cockroach
33. Diseases caused due to the deficiency of vitamins are known as:
(A) Chronic diseases (B) Genetic diseases
(C) Deficiency diseases (D) Transmitted diseases
34. The framework of the body formed by the bones and cartilages is called:
(A) Skeleton (B) Skull
(C) Bone (D) Muscle
35. How many bones usually a human body has?
(A) 230 (B) 198
(C) 260 (D) 206
36. Which of the following works with calcium to build strong bones?
(A) Vitamin D (B) Vitamin C
(C) Phosphorus (D) Iron

Space for Rough Work

Recommended Time: 50 Minutes for Section – III**Section – III****PHYSICS – (PART – A)**

This part contains 12 Multiple Choice Questions number 37 to 48. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

37. Speed of light is maximum in
(A) Vacuum (B) Water
(C) Solid (D) Oil
38. An object is placed at a distance of 2.5 metre from a plane mirror. The image will be formed at a distance from plane mirror is
(A) 5.2 m (B) 2 m
(C) 2.5 m (D) 1 m
39. Light travels in a _____
(A) Straight line (B) Parabola
(C) Zigzag (D) Triangular
40. White light is made up of _____
(A) six colours (B) three colours
(C) seven colours (D) four colours
41. An object covers a distance of 400 km in 8 hours. The speed of the object is
(A) 40 km/hour (B) 30 km/hour
(C) 35 km/hour (D) 50 km/hour
42. Which of the following is a transparent object.
(A) Book (B) Wooden table
(C) Glass (D) Tree

Space for Rough Work

43. Two cars are moving on the same road. First car covers a distance in 4 hours and second covers the same distance in 3 hours. Which is moving faster?
(A) First car (B) Second car
(C) Both are moving with same speed (D) Can not say
44. Which of the following is a unit of distance
(A) Newton (B) Second
(C) Hour (D) Kilometer
45. Which among the following is largest
(A) 1 cm (B) 1 km
(C) 1 m (D) 1 mile
46. A boy moves 5 km in east and 3.5 km in north. What is the total distance covered by the boy.
(A) 5 km (B) 3.5 km
(C) 8.5 km (D) 10 km
47. Which of the following alphabet will show lateral inversion when seen through mirror?
(A) B (B) F
(C) E (D) O
48. Two cars are moving towards each other with speeds 10 km/hour and 15 km/hour respectively. Calculate the time taken by them in meeting if they are separated by a distance of 100 km.
(A) 10 hours (B) 4 hours
(C) 5 hours (D) 15 hours

Space for Rough Work

CHEMISTRY – (PART – B)

This part contains 12 Multiple Choice Questions number 49 to 60. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

49. Which one of the substance can float on water?
(A) Wood (B) Iron
(C) Aluminium (D) Gold
50. Which of the following is/are used as insulator(s)?
(A) Wood (B) Plastics
(C) Paper (D) All of these
51. Which process is described below?
$$\text{Solid} \xrightleftharpoons[\text{Cool}]{\text{Heat}} \text{Vapour}$$

(A) Evaporation (B) Boiling
(C) Sublimation (D) All of these
52. The process of increasing the rate of sedimentation is called
(A) Loading (B) Sieving
(C) Decantation (D) None of these
53. Transpiration is a process in which plants
(A) receive water from soil
(B) absorb water vapour from air.
(C) prepare food from water.
(D) release water vapour.
54. The process used to separate heterogenous mixtures of solids and liquids is called
(A) Distillation (B) Crystallization
(C) Filtration (D) Churning
55. When iron blade is fixed to the wooden handle it is fitted
(A) By heating then cooling (B) By cooling then heating
(C) By cooling (D) By freezing

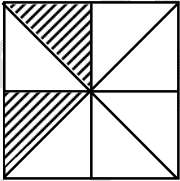
Space for Rough Work

56. How much earth's surface is covered with water
(A) About 3/4th
(B) About 2/3rd
(C) About 1/3rd
(D) None of these
57. _____ is a natural, non-desirable and non-reversible change
(A) Making of rotis
(B) Drying of wet clothes
(C) Rusting of iron
(D) Crystallization of sugar
58. Which of the following is true?
(A) Cloud formation occurs only at higher temperatures.
(B) Conversion of water into ice, water into vapours and vapours into water, all are chemical processes.
(C) Rains feed almost all other sources of water.
(D) Distribution of water is similar in all cold countries.
59. Looms are used for _____.
(A) Ginning
(B) Retting
(C) Weaving
(D) Knitting
60. Which process requires cooling?
(A) Condensation
(B) Freezing
(C) Both (A) & (B)
(D) Evaporation

Space for Rough Work

MATHEMATICS – (PART – C)

This part contains 12 Multiple Choice Questions number 61 to 72. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

61. Given that $A = (5 \times 3) \times 3$, $B = 6 \times (3 \times 2)$ then $A - B$ is
 (A) 9 (B) -9
 (C) 36 (D) 45
62. Sum of all the angles of a parallelogram is
 (A) 180° (B) 540°
 (C) 360° (D) none of these
63. Shaded portion represents _____ of a whole
 (A) $\frac{2}{8}$ (B) $\frac{1}{8}$
 (C) $\frac{3}{8}$ (D) $\frac{3}{4}$
- 
64. 12 registers cost Rs 720. Find the cost of 5 such registers.
 (A) Rs 600 (B) Rs 100
 (C) Rs 400 (D) Rs 300
65. In a parallelogram, if all the sides are equal then the parallelogram is known as
 (A) Trapezium (B) Rectangle
 (C) Rhombus (D) kite
66. Thrice of a number when increased by 6 gives 24. The number is
 (A) 6 (B) 7
 (C) 8 (D) 11
67. Two complementary angles are in the ratio 2 : 3. Find the larger angle between them.
 (A) 60° (B) 54°
 (C) 66° (D) 48°

Space for Rough Work

68. Which of the following statements is/are correct?
(i) whole numbers are closed under addition
(ii) integers are closed under subtraction
(iii) whole numbers are closed under multiplication
(iv) integers are closed under division
(A) (i), (ii) & (iv) (B) (i), (ii) & (iii)
(C) (i), (iii) & (iv) (D) (i), (ii), (iii) & (iv)
69. Roman numerals for 991 is
(A) IXIXI (B) CMXCI
(C) CMIXIX (D) CMIIC
70. If $x = 3$, $y = 1$ then $x^x + x^y + y^y$ is equal to
(A) 30 (B) 31
(C) 28 (D) 11
71. $399 + 476 = 476 + 399$ shows which of the property of whole numbers?
(A) closure property (B) commutative property
(C) associative property (D) none of these
72. 0.023 lies between
(A) 0.2 and 0.3 (B) 0.02 and 0.03
(C) 0.03 and 0.029 (D) 0.026 and 0.024

pace for Rough Work

BIOLOGY – (PART – D)

This part contains **12 Multiple Choice Questions** number **73 to 84**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

73. _____ is the unit of food energy.
(A) Label (B) Kilogram
(C) Calorie (D) Both B & C
74. Citrus fruits are an excellent source of _____.
(A) Calcium (B) Vitamin C
(C) Vitamin B (D) Vitamin A
75. Which of the following nutrients is the energy producer?
(A) Carbohydrates and Proteins (B) Proteins and Fats
(C) Carbohydrates and Fats (D) Proteins and Vitamins
76. Which components of food are called body builder?
(A) Carbohydrates (B) Proteins
(C) Vitamins (D) Minerals
77. Amino acid are the building blocks of:
(A) Vitamin (B) Fats
(C) Protein (D) Carbohydrates
78. In human body, iron is usually found in:
(A) Blood (B) Teeth
(C) Nail (D) Hair
79. Select the food item from the following which is rich in protein:
(A) Gram (B) Rice
(C) Onion (D) Both (B) & (C)

Space for Rough Work

80. Which type of joint lies at the shoulder joint and hip joint?
(A) Pivot joint (B) Angular joint
(C) Ball and socket joint (D) Hinge joint
81. Which of the following vitamin deficiency causes Beriberi?
(A) Vitamin B1 (B) Vitamin B2
(C) Vitamin B6 (D) Vitamin B12
82. Deficiency of Vitamin D gives rise to:
(A) Rheumatism (B) Arthritis
(C) Hernia (D) Rickets
83. The joint in our elbow is an example of:
(A) Hinge joint (B) Ball and socket joint
(C) Pivot joint (D) Gliding joint
84. Gur (Jaggery) is a good source of:
(A) Carbohydrates (B) Fats
(C) Proteins (D) Minerals

Space for Rough Work

Recommended Time: 30 Minutes for Section – IV

Section – IV

PHYSICS – (PART – A)

*This part contains 3 Multiple Choice Questions number 85 to 87. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

85. Convert 18 km/hour in m/sec
(A) 5 m/s (B) 10 m/s
(C) 15 m/s (D) 20 m/s
86. Light year is a unit of
(A) Speed (B) Force
(C) Distance (D) Energy
87. Which of following is an opaque object
(A) Glass (B) Rain water
(C) Prism (D) Wooden block
-

Space for Rough Work

CHEMISTRY – (PART – B)

This part contains 3 Multiple Choice Questions number 88 to 90. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

88. Cotton plant is _____.
- (A) Herb (B) Shrub
(C) Tree (D) All of these
89. Water has maximum density at
- (A) 0°C (B) 4°C
(C) 27°C (D) 100°C
90. We inhale / exhale
- (A) Nitrogen / oxygen (B) Carbon dioxide / oxygen
(C) Oxygen / Carbon-dioxide (D) Argon / Nitrogen

Space for Rough Work

SAMPLE PAPER

MATHEMATICS – (PART – C)

This part contains **3 Multiple Choice Questions** number **91 to 93**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

91. Krishna covers a certain distance in 150 minutes. He covers half of the distance in $\frac{4}{15}$ of the time. Find the time taken to cover the remaining distance.
(A) 110 minutes (B) 120 minutes
(C) 40 minutes (D) 100 minutes
92. In a game, if we hit a balloon, we get 300 points and if we miss the balloon, we lose 100 points. Raj hits 15 balloons and misses 40 balloons. Find his net score.
(A) 500 (B) 400
(C) 300 (D) 200
93. The sum of an angle and one third of its supplementary angle is 90° . Find the angle
(A) 45° (B) 90°
(C) 135° (D) 50°
-

Space for Rough Work

BIOLOGY – (PART – D)

This part contains **3 Multiple Choice Questions** number **94 to 96**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

94. Fixed joints are found in:
(A) Lower jaw (B) Skull
(C) Hands (D) Hip bone
95. Which one among the following elements/ions is essential in small quantities for development of healthy teeth but causes mottling of the teeth if consumed in higher quantities?
(A) Iron (B) Chloride
(C) Fluoride (D) Potassium
96. The number of thoracic vertebrae in human vertebral column is:
(A) 7 (B) 12
(C) 5 (D) 4
-

Space for Rough Work

SAMPLE PAPER

Recommended Time: 30 Minutes for Section – V

Section – V

MATHEMATICS – (PART – A)

This part contains **6 Multiple Choice Questions** number **97 to 102**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

97. Find the missing digit such that the 161__51 is divisible by 11.

- (A) 3 (B) 4
(C) 5 (D) 0

98. If $x = 2$, $y = 1$ find the value of $(x^2 + 2y + xy)$

- (A) 6 (B) 7
(C) 8 (D) 10

99. If $45 - [28 - \{36 - (13 + x)\}] = 65$, then x is

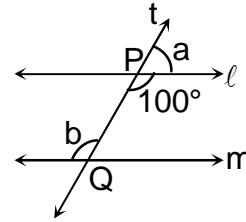
- (A) -25 (B) 25
(C) 20 (D) -20

100. Value of x if $\frac{x}{2} - \frac{x}{3} = 4$, is

- (A) 24 (B) -24
(C) 26 (D) -26

101. In the given figure $\ell \parallel m$. Find the value of $b - a$.

- (A) 10°
(B) 20°
(C) 15°
(D) 25°



102. Value of $4\frac{1}{2} \times 4\frac{1}{3} - 8\frac{1}{3} \div 5\frac{2}{3}$ is

- (A) $\frac{7}{17}$ (B) $1\frac{33}{34}$
(C) 8 (D) $18\frac{1}{34}$

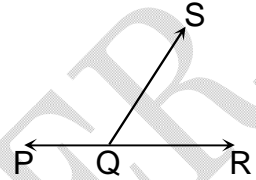
Space for Rough Work

MATHEMATICS – (PART – B)

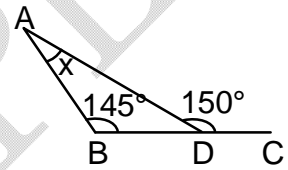
This part contains 6 Numerical Based Questions number 103 to 108. Each question has Single Digit Answer 0 to 9.

103. The value of 50 coins of 50 paise is $5n$. Find n

104. In the given figure, PQR is a straight line and $\angle PQS : \angle SQR = 7 : 5$.
Find $\frac{1}{25} \angle SQR$



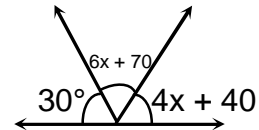
105. In the given figure, find the value of 'x'.



106. The difference between the number of edges and number of faces of a cube is?

107. What is the number of distinct prime factor of the smallest four-digit number?

108. In the given figure, find 'x'.



Space for Rough Work

FIITJEE SAMPLE PAPER – 2020

(FIITJEE Talent Reward Exam-2020)

for students presently in
Class 6 (Paper 1)

ANSWERS

1.	B	2.	D	3.	D	4.	D
5.	B	6.	A	7.	C	8.	A
9.	B	10.	B	11.	A	12.	C
13.	C	14.	B	15.	A	16.	A
17.	A	18.	D	19.	A	20.	B
21.	D	22.	A	23.	B	24.	B
25.	C	26.	D	27.	C	28.	B
29.	B	30.	A	31.	A	32.	B
33.	C	34.	A	35.	D	36.	A
37.	A	38.	C	39.	A	40.	C
41.	D	42.	C	43.	B	44.	D
45.	D	46.	C	47.	D	48.	B
49.	A	50.	D	51.	C	52.	A
53.	D	54.	C	55.	A	56.	A
57.	C	58.	C	59.	C	60.	C
61.	A	62.	C	63.	A	64.	D
65.	C	66.	A	67.	B	68.	B
69.	B	70.	B	71.	B	72.	B
73.	C	74.	B	75.	C	76.	B
77.	C	78.	A	79.	A	80.	C
81.	A	82.	D	83.	A	84.	A
85.	A	86.	C	87.	D	88.	B
89.	B	90.	C	91.	A	92.	A
93.	A	94.	B	95.	C	96.	B
97.	D	98.	C	99.	A	100.	A
101.	B	102.	D	103.	5	104.	3
105.	5	106.	6	107.	2	108.	4