CLASS 6

MODULUS ACADEMY

IIT | NEET | PRE-FOUNDATION

Dream　　　*Believe*　　　*Achieve*

Intelli-Mind Sample Paper

MAXIMUM TIME : 2 Hrs. || **MAXIMUM MARKS : 240**

GENERAL INSTRUCTIONS *for* This Test

➢ **The question paper consists of 3 sections (Section-A** contains **Science,** **Section-B** contains **Mathematics**, **Section-C** contains **Reasoning**).

➢ This Question Paper contains a total of 60 quesstions.

➢ All questions are **single correct type questions**. Each of these questions has four choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct.

➢ Indicate the correct answer for each question by filling appropriate bubble in your answer sheet.

➢ For each question, you will be awarded **4 marks** if you have darkened only the bubble corresponding to the correct answer and **zero mark** if no bubble are darkened. In all other cases, **minus one (–1) mark** will be awarded

➢ Also read **instructions** written on the **OMR sheet.**

➢ Please fill the OMR answer sheet accordingly and carefully.

➢ Blank spaces and blank pages are provided in this booklet for your rough work. No additional sheets will be provided for rough work.

➢ Use of Calculator, Log Table, Slide Rule and Mobile is not allowed.

प्रश्न-पत्र के लिए सामान्य निर्देशः

➢ प्रश्न पत्र के **तीन भाग (भाग–A : Science, भाग–B : Mathematics तथा भाग–C : Reasoning)** है। कृपया अपने उत्तर को उत्तर पुस्तिका **(OMR)** में क्रमानुसार व ध्यानपूर्वक भरें।

➢ सुनिश्चित करें कि प्रश्न पत्र में प्रत्येक खण्ड व पेज में सभी प्रश्न है। यदि आपको प्रश्न पत्र में कोई त्रुटि जैसे कोई प्रश्न या पेज नहीं मिलता है, तो निरीक्षक से सम्पर्क करें।

➢ प्रत्येक भाग में 20 प्रश्न है, अतः इस प्रश्न पत्र में कुल 60 प्रश्न है।

➢ सभी प्रश्न **एकल सही विकल्प प्रकार** के प्रश्न है। प्रत्येक प्रश्न के चार विकल्प (A), (B), (C) तथा (D) दिये गये है जिनमें से केवल एक सही है।

➢ प्रत्येक सही उतर के लिए आपको **4 अंक** मिलेंगे अगर आपने सही उत्तर से संबंधित बुलबुले को काला किया है और **शून्य अंक** मिलेगा यदि कोई बुलबुला काला नहीं किया है। अन्यथा **ऋणात्मक एक (–1) अंक** मिलेगा।

➢ रफ कार्य के लिए इस पुस्तिका में रिक्त स्थान तथा रिक्त पेज उपलब्ध कराये गये हैं। अतः रफ कार्य के लिए अतिरिक्त पुस्तिका नहीं दी जायेगी।

➢ आपको प्रत्येक सही उतर के लिए उतर पुस्तिका में उसी प्रश्न संख्या के सामने उपयुक्त बुलबुले को काला करना है।

➢ कैलकुलेटर, लॉग तालिका, स्लाइड रूल, तथा मोबाईल के उपयोग की अनुमति नहीं है।

PART-I : SCIENCE

[SINGLE CORRECT CHOICE TYPE]

1. When sunlight falls on a red rose, it appears red because

   (A) It is a red rose

   (B) Rose absorbs red colour of the light and reflects remaining colours

   (C) Rose reflects red colour and absorbs the remaining colours of the light.

   (D) The wavelength of red light increases after being reflected from rose while the wavelengths of remaining colours remain same.

2. A car travels a distance from A to B at a speed of 40 km/h and returns to A at a speed of 30 km/h. What is the average speed for the whole journey ?

   (A) 10 km/h   (B) 34.3 km/h   (C) 1200 km/h   (D) 70 km/h

3. A circular disk with a stick moving about its axis through the centre is shown in the figure. Which of the following type of motion is described by the stick ?
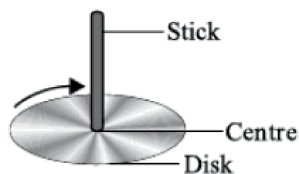

   (A) Rotatory motion   (B) Periodic motion   (C) Rectilinear motion   (D) Circular motion

4. Bouncing back of light from shining surfaces is called

   (A) Reflection   (B) Refraction   (C) Bending   (D) Dispersion

5. Two lamps X and Y are connected in series. The lamp X glows less bright than Y. Then

   (A) Then resistance of X is greater than the resistance of Y.

   (B) The resistance of X is lesser than the resistance of Y.

   (C) The resistance of X is equal to the resistance of Y.

   (D) There is no relation between the resistances of X and Y

6. How many terminals are there in a dry cell?

   (A) One   (B) Two   (C) Three   (D) Four

7. A small plotting compass is placed between two strong magnets. The tip of the arrow represents the N-pole of the cmpass. What is the polartiy of the end P of the right hand side magnet ?
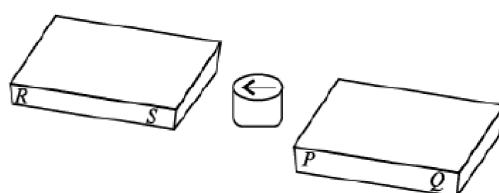
   (A) South   (B) North   (C) East   (D) West

8. An object that sinks in water :-

   (A) Wax (B) Crystals (C) any oil (D) none of these

9. A liquid that mixes well in water is :

   (A) Vinegar (B) oil (C) wax (D) none of these

10. The yarn is wound on big reels which are called :

   (A) bailing (B) bobbins (C) retting (D) none of these

11. The ratio of nitrogen to oxygen in the air is :

   (A) 1 : 4 (B) 4 : 1 (C) 3 : 1 (D) 1 : 2

12. _____ air is used to inflate tyres of vehicles.

   (A) Compressed (B) Heavy (C) Condensed (D) Liquid

13. A mixture of iodine and sand can be separated by :

   (A) Decantation (B) Centrifugation (C) Filtration (D) Sublimation

14. The grains which are fall vertically down on the ground –

   (A) Heavier (B) lighter (C) stronger (D) None of these

15. Green plants shows which of the following process :

   (A) Photosynthesis (B) Chemosynthesis (C) both (A) & (B) (D) None of the above

16. The intake of nutrient in the body is called as :

   (A) Migration (B) Cooling (C) Nutrition (D) Hibernation

17. What is the first step in the process of plant growth ?

   (A) Seed fermentation (B) Seed desiccation (C) Seed germination (D) Seed dormancy

18. During breathing which gas we inhale

   (A) Oxygen (B) Methane (C) Nitrogen (D) Hydrogen

19. Starch can be tested by using

   (A) Iodine solution (B) Caustic soda (C) Copper sulphate (D) Fehling's solution

20. 'X' is a plant which is an autotroph as well as a heterotroph. What could 'X' be –

   (A) Pitcher plant (B) Algae (C) Cuscuta (D) Fungi

Q.21 How much is 50 less than by 1 million?

    (A) 9950   (B) 99950   (C) 999950   (D) 9999950

Q.22 How many numbers of 3-digit are formed by using the digits 0, 1, and 2?

    (A) 5   (B) 6   (C) 10   (D) 4

Q.23 55 kg 200 g of sugar is distributed among 12 persons. The quantity of sugar received by each person is_____.

    (A) 4 kg 200 g   (B) 4 kg 400 g   (C) 4 kg 600 g   (D) 4 kg 800 g

Q.24 The largest number using each of digits 5, 7, 8, 9 is

    (A) 9875   (B) 5879   (C) 8759   (D) 7589

Q.25 Which one of the following is the best estimation of 5663×2234?

    (A) 5000×2000 (B) 5700×2200 (C) 5660×2230 (D) 5660×2300

Q.26 Given two whole number a and b, which of the following may not always be whole numbers.

    (A) $a + b$ (B) $a - b$ (C) $a \times b$ (D) $2a + b$

Q.27 The population of a village is 1500. If 489 are men and 472 are women, find the number of children.

    (A) 549   (B) 439   (C) 559   (D) 539

Q.28 How many whole numbers are smaller than 9?

    (A) 1   (B) 2   (C) 3   (D) 9

Q.29 Which of the following does not give whole number?

    (A) $12 \div 4$ (B) $1 \div 8$ (C) $0 \div 2$ (D) none of these

Q.30 If a, b and c are whole numbers such that $a > b$ and $c \neq 0$ and $c > 0$, then _____

    (A) $a \times c < b \times c$ (B) $a \times c > b \times c$ (C) $a \times c = b \times c$ (D) None of these

Q.31 The HCF of two numbers is 11 and their LCM is 7700. If one of the numbers is 275, then the other is

    (A) 279   (B) 283   (C) 308   (D) 318

Q.32 The least number of 5-digits which is exactly divisible by 16, 24, 36 and 54 is

    (A) 10638   (B) 10368   (C) 13068   (D) 10845

Q.33 The prime factorisation of 54 is

    (A) $2 \times 2 \times 3 \times 3$ (B) $2 \times 2 \times 2 \times 3$ (C) $2 \times 3 \times 3 \times 3$ (D) 2×27
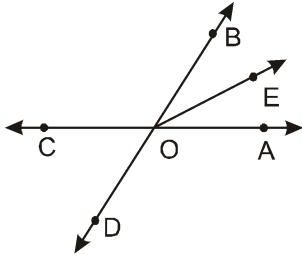
Q.34   LCM of two co-prime numbers is their _____.

   (A) Sum   (B) Difference   (C) product   (D) Quotient

Q.35   The HCF of two numbers is 48. The product of the numbers can be _____.

   (A) 3200   (B) 2400   (C) 48   (D) 4608

Q.36   Which of the following rays are the arms of ∠BOA?

   (A) OB, OE   (B) OE, OA   (C) OB, OA   (D) OC, OA

Q.37   The complete distance around a circle is called the

   (A) Sector   (B) Quadrant   (C) Circumference   (D) Segment

Q.38   Which of the following has no end points ?

   (A) $\overleftrightarrow{AB}$ (B) $\overline{CD}$ (C) $\overrightarrow{BC}$ (D) $\overline{EF}$

Q.39   The number of line segments in the shown figure is

   (A) 30   (B) 20   (C) 15   (D) 24

Q.40   In how many maximum number of points can two distinct lines intersect?

   (A) 3   (B) Infinite   (C) 0   (D) 1

PART-III : REASONING

[SINGLE CORRECT CHOICE TYPE]

SERIESCOMPLETION

Find themissing numbers.

Q.41 1, 4, 9, 16, 25, ?

(A) 35   (B) 49   (C) 36   (D) 64

Q.42 4, 16, 36, ?, 100, 144

(A) 72   (B) 68   (C) 81   (D) 64

Find themissing term

Q.43 V, T, R, ?, N, ?

(A) P,M   (B) O, L   (C) P, L   (D) O, M

Find thewrong term(s).

Q.44 ECA, JHF, OMK, TQP,YWU

(A) ECA   (B) JHF   (C) TQP   (D)YWU

ANALOGY

Q.45 'Smoke' is related to 'pollution' in the sameway as 'War' is related to _____.

(A)Victory   (B)Death   (C)Enemy   (D)Army

Q.46 'Height' is related to 'Length' in the sameway as 'Weight'is related to _____.

(A)Length   (B)Height   (C) Mass   (D)Breadth

Q.47 'Island' is related to 'Ocean' in the same way as 'Star' is related to _____.

(A) Sky   (B)Earth   (C) Sun   (D)Twinkle

Q.48 Inthefollowing question, choose the pair/group of words that show the same relationship as given at the top of every pair/group.

Road :Bus :Driver.

(A)Track :Train : Passenger   (B)Watch : Ship :Diver

(C) Sky :Aeroplane : Pilot   (D) Paper : Letters : Reader

CODING-DECODING

Q.49 If in a certain code MANISH is written as NZMRHS, thenhowwillRANJITAbewritten in the same code?

(A) IZMQRGZ   (B) IZMPRGZ   (C) IZMQRHZ   (D) IZMQRIZ

Q.50 If TEACHER and HIGHLY are written as X W P B R W M and Q S N R D Z respectively, how will you code the word CHARITY ?

(A) B P R N S B Z   (B) B R P M S Z B   (C) B R P M S D Z   (D) B R P M S X Z

Q.51 In a certain code, INACTIVE is written as VITCANIE.HowisCOMPUTERwritten in the same code ?

(A)UTEPMOCR   (B)MOCPETUR   (C) ETUPMOCR   (D) PMOCRETU

Q.52 HIGH = 5645 and DEEM= 12210 howwill you code FEEL ?

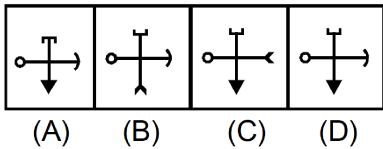(A) 2338   (B) 3449   (C) 3229   (D) 4337

NON-VERBAL SERIES

Directions (Q.1. to Q.14) : Each of the following questions consists of five figure marked 1, 2, 3, 4 & 5. These figures from a series. Find out the one from the answer figures that will continue the series.
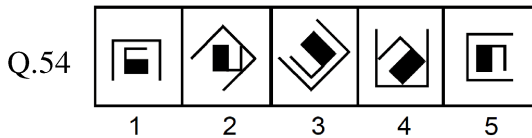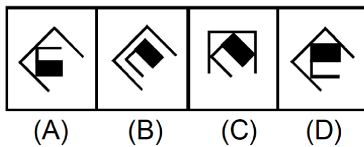
Problem Figure

Q.53

(1)   (2)   (3)   (4)   (5)

Answer Figure

(A)   (B)   (C)   (D)

Problem Figure

Q.54

1   2   3   4   5

Answer Figure

(A)   (B)   (C)   (D)
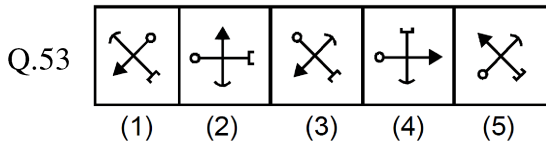
Directions (Q.15 to Q.16) : In each of the following question there is a set of four figure labelled 1, 2, 3 & 4 called the problem set which contains a question mark. Select the figure from the answer sheet which will substitute this question mark so that a series is formed by the figures 1, 2, 3 and 4 taken in order.
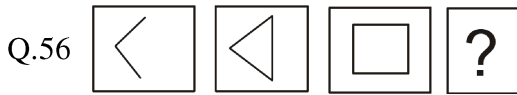
Problem Figure

Q.55

1   2   3   4

Answer Figure

(A)   (B)   (C)   (D)

Problem Figure
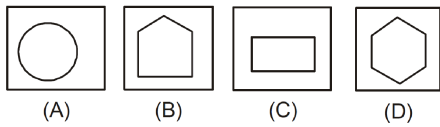
Q.56

Answer Figure

(A)   (B)   (C)   (D)
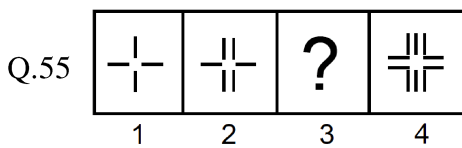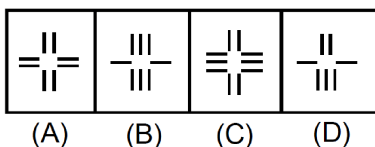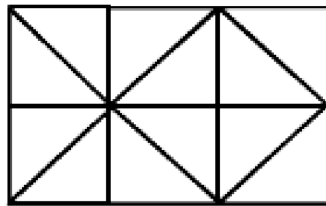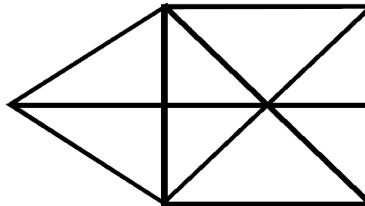
FIGURE PARTITIONAND COUNTING

Q.57   Howmany squares does the figure have ?

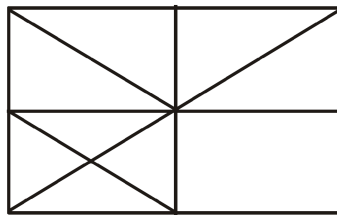(A) 6   (B) 7   (C) 9   (D) 10
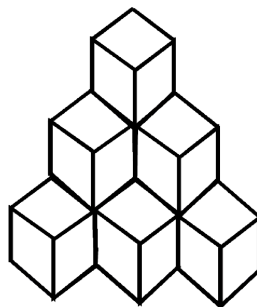
Q.58   Howmanytriangles does the figure have ?

(A) 15   (B) 16   (C) 17   (D) 18

Q.59   In the followingfigure, the numberof triangles are

(A) 8   (B) 12   (C) 15   (D) 16

Q.60   How many cubes are there in the following figure?

(A) 6   (B) 10   (C) 12   (D) 8