



**MSAT – 2025**  
(MAHARISHI SCHOLARSHIP CUM ADMISSION TEST)  
**Class – 05<sup>th</sup> going to 6<sup>th</sup>**  
**SAMPLE PAPER**

**FIITJEE**  
CHENNAI CENTRE

**Disclaimer:** This is a sample paper provided for practice purposes only. The level of difficulty, type of questions, and total number of questions may vary in the actual examination.

Time: 3 Hour

Maximum Marks: 155

**General Instructions:**

- Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.
- You are not allowed to leave the examination hall before the end of test.
- Do not keep the OMR sheet exposed to others.
- Shade the correct answers only in the OMR sheet given. Do not write or mark answers or symbols (Like ✓, •, X ...) anywhere in the questions paper.
- This booklet is your Question Paper.
- This Question Paper booklet contains 5 Sections. All Section contains **Part – A** only

Section	Subject	Types of Questions	Number of Questions	Marking Scheme
I	MAT	Single Answer Questions	20	+1,0
II	MATHS	Single Answer Questions	15	+3,-1
III	PHYSICS	Single Answer Questions	10	+3,-1
IV	CHEMISTRY	Single Answer Questions	10	+3,-1
V	BIOLOGY	Single Answer Questions	10	+3,-1

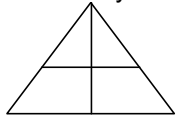
**USEFUL DATA**

PHYSICS		CHEMISTRY	
Acceleration due to gravity	: $g = 10 \text{ m/s}^2$	Gas Constant	$R = 8.314 \text{ J K}^{-1} \text{ mol}^{-1}$ $= 0.0821 \text{ Lit atm K}^{-1} \text{ mol}^{-1}$
Planck constant	: $h = 6.6 \times 10^{-34} \text{ J-s}$		$= 1.987 \approx 2 \text{ Cal K}^{-1} \text{ mol}^{-1}$
Charge of electron	: $e = 1.6 \times 10^{-19} \text{ C}$		$= 6.023 \times 10^{23}$
Mass of electron	: $m_e = 9.1 \times 10^{-31} \text{ kg}$	Avogadro's Number $N_a$	$= 6.625 \times 10^{-34} \text{ J.s}$
Permittivity of free space	: $\epsilon_0 = 8.85 \times 10^{-12} \text{ C}^2 / \text{N-m}^2$	Planck's constant $h$	$= 6.625 \times 10^{-27} \text{ erg.s}$
Density of water	: $\rho_{\text{water}} = 10^3 \text{ kg/m}^3$	1 Faraday	$= 96500 \text{ coulomb}$
Atmospheric pressure	: $P_a = 10^5 \text{ N/m}^2$	1 calorie	$= 4.2 \text{ joule}$
Gas constant	: $R = 8.314 \text{ J K}^{-1} \text{ mol}^{-1}$	1 amu	$= 1.66 \times 10^{-27} \text{ kg}$
		1 eV	$= 1.6 \times 10^{-19} \text{ J}$
Atomic No:	H = 1, He = 2, Li = 3, Be = 4, B = 5, C = 6, N = 7, O = 8, F = 9, Ne = 10, Na = 11, Mg = 12, Si = 14, Al = 13, P = 15, S = 16, Cl = 17, Ar = 18, K = 19, Ca = 20, Cr = 24, Mn = 25, Fe = 26, Co = 27, Ni = 28, Cu = 29, Zn = 30, As = 33, Br = 35, Ag = 47, Sn = 50, I = 53, Xe = 54, Ba = 56, Pb = 82, U = 92.		
Atomic masses:	H = 1, He = 4, Li = 7, Be = 9, B = 11, C = 12, N = 14, O = 16, F = 19, Na = 23, Mg = 24, Si = 28, Al = 27, P = 31, S = 32, Cl = 35.5, K = 39, Ca = 40, Cr = 52, Mn = 55, Fe = 56, Co = 59, Ni = 58.7, Cu = 63.5, Zn = 65.4, As = 75, Br = 80, Ag = 108, Sn = 118.7, I = 127, Xe = 131, Ba = 137, Pb = 207, U = 238.		

Name : \_\_\_\_\_  
Registration Number : \_\_\_\_\_

**MAT****Section – I****Part – A**  
**Single Answer Questions**

1. If farmer 'C' has two sons A and B as well as one daughter D. How is 'D' related to A ?  
(A) Sister (B) Sister –in – law (C) Uncle (D) Brother
2. If Aravind is taller than Lakshmi, but shorter than Aahil, Aahil is shorter than Atul then who is tallest ?  
(A) Ajay (B) Tara (C) Sharad (D) Atul
3. How many triangle are there in a following figure ?



- (A) 6 (B) 7 (C) 9 (D) 12
4. If '+' mean "divided by", '-' means "multiplied by", 'x' means "minus" and '÷' means "plus" then  $8 + 6 - 2 \div 4 \times 4 = ?$   
(A) 12 (B)  $\frac{8}{3}$  (C)  $\frac{-52}{9}$  (D)  $1\frac{1}{2}$
  5. If the day before yesterday day was Thursday. What day will fall on the day after tomorrow /  
(A) Friday (B) Saturday (C) Sunday (D) Monday
  6. Choose the correct alternative from the give one that will complete the given series ?  
96, 48, 24, 12, ?  
(A) 6 (B) 4 (C) 8 (D) 12

**Directions (Q.No.7- 9) The following questions are based on the following alphabet series?**

A B C D E F G H I J L M N O P Q R S T U V W X Y Z

7. Which letter will be sixth to the right of seventh letter from the left end of the alphabet?  
(A) F (B) N (C) M (D) W
8. Which letter is midway between 21<sup>st</sup> letter from right and 18<sup>th</sup> letter from left ?  
(A) L (B) M  
(C) I (D) None of these
9. If all the alphabet is written in the reverse order, which will be the eight letter to the right of 'O' ?  
(A) F (B) V (C) G (D) W

**Directions (Q.No.10 – 12) Read the following information given below and Answer the Question based on it.**  
Eight friends P, T, V, R, M, D, K and W are sitting around a circular table facing the centre v is second to the left of T. T is fourth to the right of M. D and P are not sitting next to T. D is third to the right of P. W is not sitting next to P. P is sitting next left of K

10. Who is second left of K?  
(A) D (B) R (C) T (D) P
11. How many peoples sit between D and R ?  
(A) 2 (B) 3  
(C) 4 (D) Cannot be determined
12. Who sits exactly opposite of M?  
(A) T (B) R (C) P (D) V

**Directions (Q.No.13 – 15) Read the following information given below and answer the questions base on it. In a certain code language numbers are coded as follows**

Digit	2	9	0	3	4	7	1	6	5
Code	P	Q	H	N	L	W	X	V	F

13. What will be the code for 9569302041  
 (A) QFVQNNHPLX (B) QFVQHNHPLX  
 (C) QFVQNHPLX (D) QFVQNHLPX
14. What will be the code for '304569205'  
 (A) NHLFVQPHF (B) NHLVFQPHF (C) NHLQPFHFV (D) None of these
15. What will be the code for [29156+13456]  
 (A) LPVXP (B) LVPXP (C) VPLXP (D) PXLVP
16. Find the missing number in the given figure ?  

2	16	4
3	54	6
3	?	5

 (A) 54 (B) 45 (C) 30 (D) 75
17. After arranging the given words according to dictionary order, which word will come at 'fifth' position?  
 (1) History (2) Historian (3) Hobnob (4) Historical (5) Hobnail  
 (A) Historian (B) Hobnob (C) Historical (D) Hobnail
18. How many 5s are there in the following number sequence which are immediately preceded by 7 and immediately followed by '6'?  
 755945764598756764325678  
 (A) One (B) Two (C) Three (D) Four
19. In the following question select the odd word from the given alternatives?  
 (A) Almonds (B) Cashew nut (C) Walnut (D) Potato
20. Find the next number in the given series ?  
 3, 6, 10, 15, 21, ?  
 (A) 25 (B) 32 (C) 28 (D) 15

## MATHS

## Section – II

### Part – A Single Answer Questions

1. What is the L.C.M of two co-prime numbers?  
 (A) Their sum (B) Their difference (C) Their product (D) Their quotient
2. What is the greatest common factor of 20 and 6 ?  
 (A) 5 (B) 3 (C) 2 (D) 4
3. What is the difference between multiplicative inverse of two mixed fractional numbers  $1\frac{1}{2}$  and  $3\frac{3}{4}$ ?  
 (A)  $\frac{2}{5}$  (B)  $\frac{5}{2}$  (C)  $\frac{4}{5}$  (D)  $\frac{5}{4}$

4. The value of  $4\frac{1}{2} \times 4\frac{1}{3} - 8\frac{1}{3} \div 5\frac{2}{3}$  is equal to  
(A)  $18\frac{1}{34}$  (B)  $18\frac{2}{34}$  (C)  $18\frac{3}{34}$  (D)  $18\frac{4}{34}$
5. The sum of 10 numbers is 550. Find their average numbers  
(A) 56 (B) 55 (C) 57 (D) 60
6.  $\frac{3}{8}$  is what part of  $\frac{1}{12}$ ?  
(A)  $\frac{3}{7}$  (B)  $\frac{1}{12}$  (C)  $\frac{4}{3}$  (D)  $\frac{9}{2}$
7. By how much is three-fifth of 350 greater than four-seventh of 210?  
(A) 95 (B) 110 (C) 120 (D) 90
8. Round 3.567 to the nearest hundredth "decimal"  
(A) 3.56 (B) 3.57 (C) 3.58 (D) 3.50
9.  $7\frac{1}{2} \times 2\frac{1}{3} + 3\frac{1}{5} \div 6\frac{2}{3}$  is equal to  
(A)  $16\frac{20}{31}$  (B)  $17\frac{31}{47}$  (C)  $17\frac{49}{50}$  (D)  $17\frac{17}{50}$
10. The reciprocal of  $1\frac{1}{2}$  is  
(A)  $\frac{3}{4}$  (B)  $\frac{3}{2}$  (C)  $\frac{2}{3}$  (D)  $\frac{4}{3}$
11. What is the difference between L.C.M and HCF of two numbers 10 and 15?  
(A) 20 (B) 30 (C) 25 (D) 15
12. What is the other fraction is equivalent to 0.75?  
(A)  $\frac{1}{2}$  (B)  $\frac{3}{4}$  (C)  $\frac{2}{3}$  (D)  $\frac{4}{5}$
13. Convert the fraction  $\frac{5}{8}$  to a decimal  
(A) 0.625 (B) 0.75 (C) 0.8 (D) 0.85
14. If sum of two fractions is  $\frac{23}{24}$ . If one of the fractions is  $\frac{7}{12}$ , what is the other fractions?  
(A)  $\frac{1}{8}$  (B)  $\frac{5}{8}$  (C)  $\frac{3}{8}$  (D)  $\frac{1}{3}$
15. What is the results of  $[6 \times (3 + 2)] \div 5 + 7$   
(A) 10 (B) 11 (C) 12 (D) 13

**PHYSICS****Section – III****Part – A  
Single Answer Questions**

1. Choose odd one out  
(A) km (B) m (C) cm (D) kg
2. Which of the following is a non-contact force  
(A) Friction (B) Muscular force (C) Magnetic force (D) Spring force
3. A rod attached to the centre of the wheel is called as  
(A) Lever (B) Pulley (C) Wedge (D) Axle
4. This is necessary to get something moving  
(A) Resistance (B) Force (C) Wedge (D) Screw
5. Tidal energy is a  
(A) Renewable energy (B) Non-renewable energy  
(C) Both (D) None
6. A force can change the \_\_\_\_\_ of an object.  
(A) Mass (B) Density (C) Direction of motion (D) none of these
7. Solar energy is an example of a \_\_\_\_\_ source of energy.  
(A) Non-renewable (B) Fossil fuel (C) Renewable (D) muscular
8. Which energy is used by plants to make food ?  
(A) Light (B) muscular (C) chemical (D) none of these
9. We use \_\_\_\_\_ to play cricket.  
(A) Muscular energy (B) chemical energy (C) both (a) and (b) (D) none of these
10. Solar cookers, solar heater and solar panel use energy of the \_\_\_\_\_.  
(A) Earth (B) Sun (C) electricity (D) none of these

**CHEMISTRY****Section – IV****Part – A  
Single Answer Questions**

1. Tsunami occurs due to underwater  
(A) Earth quakes (B) Cyclones (C) Droughts (D) Warm tropical moisture
2. What is the cause of most earth quakes  
(A) The sudden movement under the surface of the earth  
(B) The release of energy stored within the rocks of the crust  
(C) The seismic activities in an area  
(D) The rapid shaking of the earth's surface
3. Which of the following layers of soil supports plant growth  
(A) Bedrock (B) Topsoil (C) Subsoil (D) None of the above
4. A dark coloured substance formed from the dead remains of plants and animals is called  
(A) Gravel (B) Humus (C) Loan (D) Clacs
5. Fossil fuel formed over a long period of time when heat and pressure were applied to  
(A) Bacteria on top of the mud (B) Carbon filtered through limestone  
(C) Organisms buried in the ground (D) Nitrogen mixed in the water

6. The amount of space each thing takes up is called  
(A) Volume (B) Weight (C) Area (D) All of these
7. A \_\_\_\_\_ takes the shape of the contains in which it is kept  
(A) Liquid (B) Solid (C) Gas (D) None of these
8. The heavy particles that settle down are called  
(A) Sediments (B) Solvent (C) Solute (D) All of these
9. Pick the odd one out  
(A) Love (B) Smell (C) Almonds (D) Thoughts
10. Backing of cake is an example of  
(A) Chemical change (B) Reversible changes  
(C) Irreversible change (D) Both (a) and (c)

**BIOLOGY****Section – IV****Part – A  
Single Answer Questions**

1. How does the roughage help us?  
(A) moving the food easily through our digestive system (B) proper removal of solid waste  
(C) add bulk to fecal matter by absorbing water (D) all of the above mentioned
2. The sweet taste of food can be recognized with the help of taste buds of tongue. Which part of the tongue taste this first –  
(A) tip of the tongue (B) back of the tongue  
(C) lateral part of the tongue (D) center part of the tongue.
3. While we keep the dry food in the mouth after some time it becomes watery it is due to -  
(A) intake of water (B) secretion of Saliva (C) secretion of bile juice (D) all of these
4. Where does the food moves which we swallow it from our mouth?  
(A) to heart (B) to stomach (C) to intestine (D) to lung
5. Food helps us  
(A) to grow (B) to get energy (C) to get strength (D) All of these
6. In which part of the plant new baby plant or seedling will arise -  
(A) leaf (B) seed (C) root (D) stem
7. Nitu found sick; she got severe dehydration; doctor suggested her to get admit in hospital to provide support. Suggest from the option what support does doctor gave to Nitu.  
(A) blood transfusion (B) provided food (C) vitamin injection (D) glucose drips
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9. We can get potato plant from  
(A) Seed (B) eye – bud of tuber (C) Flower (D) leaf
10. When the pods are ripened, the seeds will get disperse to long distance by burst. Which seed is the best example for the above said condition?  
(A) tomato (B) apple (C) banana (D) legumes

**Answer key – Class - 5****MAT**

1.A	2.D	3.A	4.B	5.D
6.A	7.C	8.A	9.C	10.B
11.B	12.A	13.C	14.A	15.A
16.B	17.B	18.A	19.D	20.C

**MATHS**

1.C	2.C	3.A	4.A	5.B
6.D	7.D	8.B	9.C	10.
11.C	12.C	13.B	14.A	15.C

**PHYSICS**

1.D	2.C	3.D	4.B	5.A
6.C	7.C	8.A	9.A	10.B

**CHEMISTRY**

1.A	2.B	3.B	4.B	5.C
6.A	7.A	8.A	9.C	10.D

**BIOLOGY**

1.D	2.A	3.B	4.B	5.D
6.B	7.D	8.D	9.B	10.D