



Question Paper

# MAINS ALOHA GAT 2016-17

Class: **9th**

Max Marks: **200**

Total Number of Printed Pages: **7**

Total No. of Questions: **14**

Time Allowed: **2 hr 50 min**

## SECTION 1-SCIENCE

### LONG ANSWER TYPE

1. What do you understand by the term free fall? Derive an expression for acceleration due to gravity?

Or

Derive the formula :  $S = ut + at^2$  where the symbols have usual meaning.

2. "Prevention is better than cure". Elaborate this statement keeping in view the communicable diseases?

Or

What is evaporation? What are the various factors affecting evaporation?

[10 x 2 = 20 marks]

### 3. SHORT ANSWER TYPE (Do any three)

- Why are lysosomes known as suicidal bags?
- How is Ozone layer useful to us?
- A racing car has a uniform acceleration of  $4\text{ms}^{-2}$ . What distance will it cover in 10 s after start?
- What do you mean by buoyancy?
- What are the limitations of Rutherford's model of atom?

[6 x 3 = 18 marks]

## 4. VERY SHORT ANSWER TYPE

- (i) When do we say that work is done.
- (ii) Number of valence electrons in Cl<sup>-</sup> ion are \_\_\_\_\_.
- (iii) What is Latent heat?
- (iv) Define atomic mass unit.
- (v) Devil fish is a common name of \_\_\_\_\_.
- (vi) What is meant by a pure substance?
- (vii) Why sound waves are called mechanical waves?
- (viii) Give two application of Archimedes principle.
- (ix) The property of a body that causes it to rest any change in its motion is called \_\_\_\_\_.
- (x) Define 1 watt of power .
- (xi) In the atmosphere, the layer above the troposphere is \_\_\_\_\_.

[2 x 11 = 22 marks]

## SECTION 2a-SOCIAL STUDIES

### LONG ANSWER TYPE

5. Describe the circumstances that lead J&K state come into being?

OR

What is drought? Describe how it can be prevented?

6. Comment the role of Dr. B.R. Ambedkar in the making of Indian constitution?

OR

What are the main characteristics of Climate in Kashmir Valley?

[10x2=20 marks]

### 7. SHORT ANSWER TYPE ( Do any three)

- a. What is known as Bloody Sunday?
- b. Why did Jacobians change their pattern of dress?
- c. What is the significance of Kerawas in Kashmir Valley?
- d. Why do we need a constitution?
- e. What is meant by double coincidence of wants?

[6 x 3 = 18 marks]

## SECTION 2b-CURRENT AFFAIRS

8. Write a short note on the following: (any two)

- a. Disaster Management in J&K
- b. Recent Indo-China border conflict
- c. One country one tax
- d. Swach Bharat Abhayan

[5 x 2 = 10 marks]

9. **MCQ/Objective Type Questions:**

- i. Which country's parliament passed the bill to stop investing in fossil fuels?  
a) Germany      b) Ireland      c) Holland      d) Thailand
- ii. Which state introduces third gender category in board exams?  
a) Bihar      b) Punjab      c) Odisha      d) Delhi
- iii. Which of the following contains toxins that may kill children?  
a) Lemon      b) Date      c) litchi      d) Custard apple
- iv. Which of the Gulf Country recorded the lowest ever temperature in the history?  
a) Kuwait      b) Qatar      c) Oman      d) UAE
- v. US President Donald Trump bans how many countries from entering US on security issues?  
a) Six      b) Seven      c) Eight      d) Eleven
- vi. Which State constructs underwater metro tunnel?  
a) Chennai      b) Mumbai      c) Kolkata      d) Kerala
- vii. Which company has recently planned to invest in banking and financial sector?  
a) Paytm      b) Snapdeal      c) Flipkart      d) Free charge

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- viii. India's tallest Air Traffic Control (ATC) tower will be operational at which airport?
- Srinagar International Airport
  - Jay Prakash Narayan International Airport
  - Indira Gandhi International Airport
  - Sardar Vallabhbhai Patel International Airport
- ix. He was the Chief Guest at 26-01-2017 Indian Republic Day ceremony?
- Crown Prince of Abu Dhabi, Sheikh Muhammad bin Zayed
  - Tayyip Rajeb Erdogan, President of Turkey
  - President of UK
  - None of these
- x. Which SAARC Country opted out of the Indian SAS Project?
- xi. In which state is the India's longest tunnel?
- xii. Which political party took the maximum seats in recent UP elections?

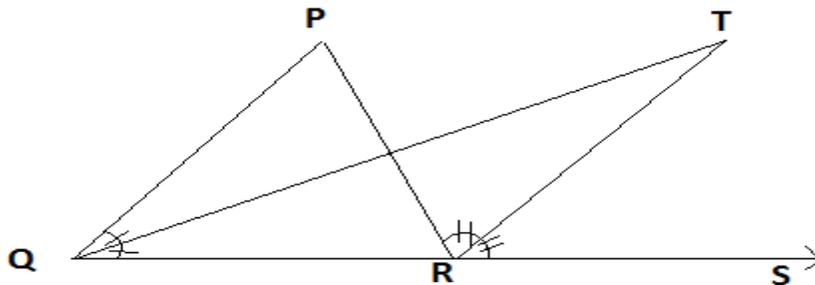
[12x1=12 marks]

### SECTION 3-MATHEMATICS

10. Construct a  $\triangle XYZ$ , in which  $\angle Y = 30^\circ$ ,  $\angle Z = 90^\circ$  and  $XY+YZ+ZX=11\text{cm}$

OR

In the given figure the side QR of  $\triangle PQR$  is produced to a point S. If the bisectors of  $\angle PQR$  and  $\angle PRS$  meet at point T, then prove that  $\angle QTR = \frac{1}{2}\angle QPR$ .



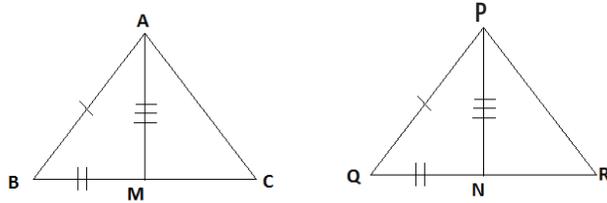
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11. ABCD is a rectangle and P, Q, R and S are mid points of the sides AB, BC, CD & DA respectively. Show that the quadrilateral PQRS is a rhombus.

OR

Two sides AB & BC and median AM of one  $\triangle ABC$  are respectively equal to sides PQ & PR and median PN of  $\triangle PQR$ . Show that

- i)  $\triangle ABM \cong \triangle PQN$
- ii)  $\triangle ABC \cong \triangle PQR$



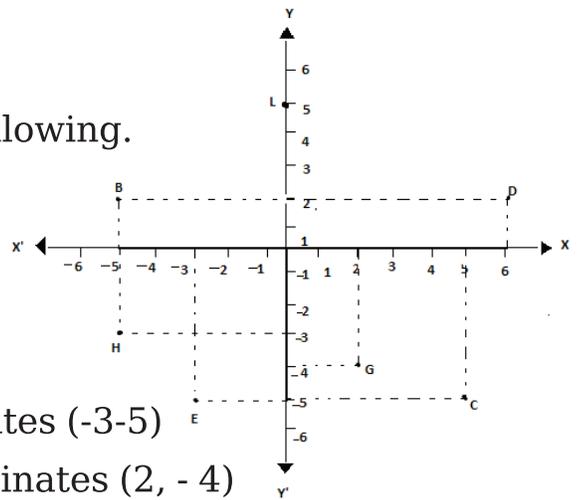
[10x2=20 marks]

12. Attempt any three questions:

- a. Show how  $\sqrt{5}$  can be represented on the number line.
- b. Factorize the following
  - i)  $3x^2 - x - 4$
  - ii)  $27y^3 + 125z^3$

c. See the given figure and write the following.

- (i) The co-ordinates of B
- (ii) The co-ordinates of C
- (iii) The abscissa of the point D
- (iv) The ordinate of the point H
- (v) The point identified the co-ordinates (-3-5)
- (vi) The point identified by the co-ordinates (2, -4)



- d. The following observations have been arranged in ascending order. If the median of the observations is 63, find the value of X.  
29, 32, 48, 50, X, X+2, 72, 78, 84, 95
- e. Prove that if the chords of congruent circles subtend equal angles at their centers, then the chords are equal.

[6x3=18 marks]



- (x) If two medians of a triangle are equal. Then the triangle must be
- Right angled but isosceles
  - Right angled but not isosceles
  - Equilateral
  - Isosceles but not right angled
- (xi) Angles in the same segment of a circle are:
- Right angle
  - unequal
  - equal
  - obtuse

[11x2=22 marks]

### SECTION 4-GENERAL ESSAY

14. **Write an essay on any one of the following (200-250 words)**

- Muhammad (SAW) the seal of Prophethood
- Muhammad (SAW) at Makkah
- Newton's experiment with Nature
- Allama Iqbal<sup>RA</sup>

[20 marks]



