



Santosh Academia Talent Examination
(2024-25)
CLASS-VIII (STUDYING)
SAMPLE PAPER

Max. Marks: 120

Time: 1 Hour

IMPORTANT INSTRUCTIONS:

GENERAL

1. This booklet is your Question Paper. Ensure that question paper belongs to the Class in which you are currently studying. If not, contact the invigilator for change of question paper.
2. The Test ID is printed on the left-hand top corner of this sheet. If not, contact the invigilator for change of question paper.
3. Use the Optical Mark Recognition (OMR) sheet provided separately for answering the questions. DO NOT FILL till you are told to do so.
4. The test paper SET CODE is printed on the Right-hand top corner of the question paper. Ensure that you fill this in OMR as that on the question paper booklet.
5. Blank spaces are provided within this booklet for rough work. No additional rough sheet will be provided.
6. You are ALLOWED to take away the Question Paper at the end of the examination.

QUESTION PAPER FORMAT

7. This Paper contains **30** questions in total.

*Section-I: Question Number 1 to 3 belongs to **Physics**.*

*Section-II: Question Number 4 to 6 belongs to **Chemistry**.*

*Section-III: Question Number 7 to 10 belongs to **Biology**.*

*Section-IV: Question Number 11 to 20 belongs to **Mathematics**.*

*Section-V: Question Number 21 to 30 belongs to **Mental Ability**.*

MARKING SCHEME:

8. Each question carries 4 marks. For each correct response, the candidate will get 4 marks.
9. There is no negative marking for incorrect response or unmarked questions.



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Head Office: Santosh University, No 1, Santosh Nagar, Pratap Vihar, Ghaziabad
Branch Office: J-10, Aniket Arcade, RDC Ghaziabad. ☎ +91 931174 41940, +91 93114 41879



SECTION-I PHYSICS

- Which one of the following statements is true?
 - The weight of a substance in air is always less than its weight in water
 - The mass of a substance is equal to the mass of an equal volume of water
 - The weight of a substance in water is always greater than its weight in some other liquid
 - The weight of substance in water is always less than its weight in air
- If two masses A and B have their masses in the ratio 1 : 4 and their volumes are equal, then the densities have the ratio
 - 1 : 4
 - 4 : 1
 - 2 : 1
 - 3 : 1
- A piece of nail sinks in water but a boat floats in it because
 - There is no upthrust acting on the nail
 - A nail is heavier than a boat
 - A nail has a pointed end
 - Upthrust acting on the nail is less than its weight

SECTION-II CHEMISTRY

- The metal which can replace calcium from its salt is :
 - Al
 - Zn
 - Fe
 - K
- An element used in computers, T.V etc. due to its semiconductor properties is :
 - Nitrogen
 - Silicon
 - Bromine
 - Carbon
- Haematite is an ore of :
 - Zn
 - Fe
 - Cu
 - Al

SECTION-III BIOLOGY

- One of the following does not possess nuclear membrane in its cells. Identify it
 - Chlamydomonas*
 - Blue-green algae
 - Riccia*
 - Cycas*
- What causes dough to rise when yeast is added to it?
 - An increase in temperature
 - An increase in the amount of substance
 - An increase in the amount of ethanol
 - The release of carbon dioxide gas
- Which characteristic cannot be used to differentiate bacteria?
 - Shape
 - Nutrition
 - Size
 - Habitat
- The practice of keeping the field free for a season to replenish the lost nutrients is
 - Monocropping
 - Crop rotation
 - Multiple cropping
 - Field fallow



SECTION-IV MATHEMATICS

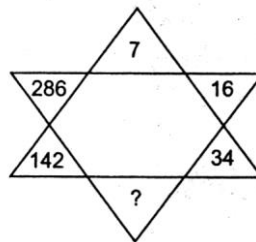
11. An odd number when multiplied by itself gives 2401. Find the number.
 (a) 41 (b) 39 (c) 49 (d) 51
12. $\sqrt[3]{\frac{-a^6 \times b^3 \times c^{21}}{c^9 \times a^{12}}} = \underline{\hspace{2cm}}$.
 (a) $\frac{-bc^3}{a^2}$ (b) $\frac{-bc^4}{a^3}$ (c) $\frac{-ab^4}{c^2}$ (d) $\frac{-bc^4}{a^2}$
13. If $a = 2b$ and $b = 4c$, then $\sqrt[3]{\frac{a^2}{16bc}} = \underline{\hspace{2cm}}$.
 (a) 1 (b) 2 (c) 3 (d) 4
14. If $\sqrt{x} + \frac{58}{\sqrt{x}} = 31$, then which of the following can be the value of x ?
 (a) 529 (b) 931 (c) 729 (d) 841
15. $\sqrt[3]{1+3+5+7+\dots+53} = \underline{\hspace{2cm}}$.
 (a) 11 (b) 13 (c) 7 (d) 9
16. If n leaves a remainder 1 when divided by 2, then n^3 leaves a remainder of _____, when divided by 2.
 (a) 1 (b) 2 (c) 0 (d) 3
17. The least number to be subtracted from 220 so that it becomes a perfect cube is
 (a) 4 (b) 10 (c) 16 (d) 20
18. The square root of $(xy + xz - yz)^2 - 4xyz(x - y)$ is
 (a) $xy + yz - 2xyz$ (b) $(x + y - 2xy)$ (c) $(xy + 3 - y)$ (d) $(xy + yz - zx)$
19. The square root of $x^{m^2-n^2} \cdot x^{n^2+2mn} \cdot x^{n^2}$ is
 (a) x^{m+n} (b) $x^{(m+n)^2}$ (c) $x^{(m+n)/2}$ (d) $x^{\frac{1}{2}(m+n)^2}$
20. The square root of $y^2 + \frac{1}{y^2} + 2$ is
 (a) $y + \frac{1}{y}$ (b) $y - \frac{1}{y}$
 (c) $y^2 + \frac{1}{y^2}$ (d) $y^2 - \frac{1}{y^2}$



SECTION-V MENTAL ABILITY

Directions (21 to 22) : In the following question, there is a relationship between the number/letter/figures on the left of the sign (: :). The same relationship exists to the right of the sign (: :) of which one is missing. Find the missing term from the alternatives.

21. MAD : JXA :: RUN : ?
 (a) OSQ (b) PRJ (c) UXQ (d) ORK
22. TAME : OVHZ :: LUDO :
 (a) QZIT (b) GQAM (c) GPYJ (d) GOYJ
23. Look at the following figure. Find the pattern for writing a number in the small triangles and find the missing number?

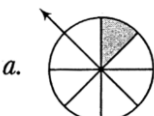




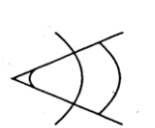




- (a) 38 (b) 66 (c) 68 (d) 70

Directions (24 to 25) : In the following questions, find the correct alternative which bears the same relationship given along with it.

24. SANJU :: SNU :: NIVEDITA :: NVDT : SNEHAL :: ?.
 (a) SNH (b) SEA (c) SHA (d) SEH
25. 42 : 56 :: 110 : ?
 (a) 132 (b) 136 (c) 140 (d) 18
26. A postman was returning to the post-office which was in front of him to the North. When the post-office was 100 m away from him, he turned to the left and moved 50 m to deliver the last letter at the Shanti Villa. Then he moved in the same direction for 40 m, turned to his right and moved 100 m. How many metres was he away from the post-office?
 (a) 40 m (b) 150 m (c) 90 m (d) 100 m

Directions (27 to 28) : In the following questions, find the odd one out from the given alternatives.

27. (a)  (b)  (c)  (d) 
28. (a)  (b)  (c)  (d) 



29. In the following number series, how many times an odd number is followed by two consecutive even numbers?

4 2 3 2 5 4 2 5 3 2 6 4 3 5 7 2 8 6 7 9 4 5 4 2 9 6 1 3 2

- (a) 4 (b) More than 4 (c) 2 (d) 3]

30. If following alphabets are arranged in the reverse order, which letter will be the 8th letter to the left of the 7th letter counting from the right end?

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

- (a) P (b) O (c) 7 (d) 5





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ROUGH WORK



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