

#TAYAARI HI JEET HAI



SCORE

Sri Chaitanya **Outstanding Achiever Reward Examination**

6th OCTOBER 2024

For Class **5th, 6th, 7th, 8th, 9th & 10th**

PREVIOUS YEAR PAPER

CLASS 8th



Sri Chaitanya

PHYSICS**SECTION 1 (Maximum Marks: 30)**

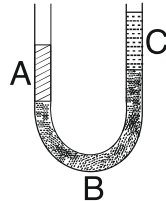
- This section contains **TEN** questions.
- Each question has **FOUR** options (A), (B), (C) and (D). **ONLY ONE** of these four options is correct.
- For each question, darken the bubble corresponding to the correct option in the OMR.
- For each question, marks will be awarded in one of the following categories:

| | | |
|----------------|---|---|
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| Zero Marks | : | 0, if none of the bubble is darkened |
| Negative Marks | : | -1, in all other cases |

Instructions: (Take $g = 10\text{m/s}^2$, wherever required)

1. A bat can hear sound of frequencies upto 100 kHz. If speed of sound in air is 345 m/s then find the minimum wavelength of sound which it can hear?
A) 1.45 mm B) 3.45 mm C) 345 mm D) 145 mm
2. The speed of sound in humid air is more than dry air because of –
A) Less density than dry air B) More density than dry air
C) High temperature than dry air D) High pressure than dry air
3. Choose the correct statement about friction
A) Friction opposes motion
B) Friction opposes relative motion or tendency of relative motion
C) Friction opposes relative motion. If there is no relative motion, no friction acts
D) All are correct
4. A block of mass 10kg rests on a rough horizontal surface of earth. An increasing horizontal force starts to act on the block. It was observed that the block starts to move when the magnitude of force is 20N. Find the coefficient of friction between the block and ground. ($g = 10\text{m/s}^2$)
A) 0.2 B) 0.4 C) 0.3 D) 0.1
5. A block of mass 2 kg is at rest on a rough horizontal surface. It is acted upon by a constant horizontal force of 10N. Find the friction force acting on the block if it covers 18m during first 3 seconds of its motion.
A) 4N B) 3N C) 1N D) 2N

6. In a uniform U-tube, 3 liquids A, B and C of densities $2d$, d and $\frac{3d}{4}$ respectively remains in equilibrium as shown in figure. If length of liquid A and C is h and $2h$, then find the difference between the levels of liquid B in both arms. (Arms are parallel to each other)



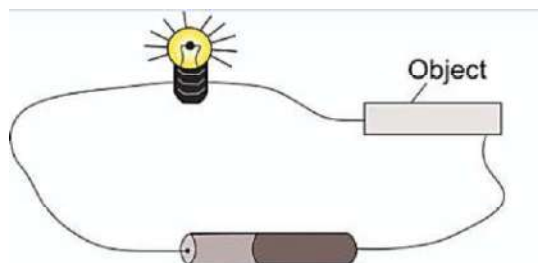
- A) h B) $h/2$ C) $h/4$ D) No difference
7. A point sound source 'S' produces a sound of constant intensity and frequency. Person A stands at distance $3r$ from S where as another person B stands at distance $4r$ from A along the perpendicular direction of line joining S and A. Find the ratio of intensity of sound heard by A and B. (Assuming sounds spreads radially in all direction)
- A) 4 : 3 B) 16 : 9 C) 25 : 9 D) 9 : 25
8. A particle is projected vertically upward with speed 40 m/s from the surface of earth. Neglecting the air resistance, find the average speed of the particle for entire journey ($g = 10\text{m/s}^2$)
- A) 0 m/s B) 40 m/s C) 60 m/s D) 20 m/s
9. How many planets in our solar system comes under the category of "the gas planet"?
- A) 3 B) 4 C) 2 D) 5
10. A particle moves along a circular path of radius R . Find the magnitude of average velocity of the particle for half circle if it covers first quarter circle with speed V and next quarter circle with speed $2V$
- A) $\frac{3V}{2}$ B) $\frac{8V}{3\pi}$ C) $\frac{4V}{3\pi}$ D) $\frac{2V}{3\pi}$

CHEMISTRY**SECTION 1 (Maximum Marks: 30)**

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11. On passing excess CO_2 through lime water, the white precipitate disappears due to the formation of :
- A) CaCO_3 B) $\text{Ca}(\text{HCO}_3)_2$
C) CaO D) $\text{Ca}(\text{OH})_2$
12. The color change of turmeric in alkaline medium is:
- A) No change B) Green
C) Pink D) Reddish – brown
13. Which of the following is added in the natural rubber in order to make it more stiff:
- A) Oxygen B) Sodium
C) Sulphur D) Protein
14. A petroleum product used as a fuel to light lamp & lanterns:
- A) Petrol B) Diesel
C) Paraffin wax D) Kerosene
15. Which of the given metals will react with base/alkali to give hydrogen gas:
- A) Zinc B) Aluminium
C) Tin D) All of these
16. Which of these element is used in fertilizers to enhance growth of plants:
- A) Sulphur B) Phosphorous
C) Arsenic D) Chlorine
17. Correct formula for blue vitriol is:
- A) $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ B) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
C) $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ D) $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$
18. The main constituents of acid rains are:
- A) Fluorine and chlorine gas B) oxygen and nitrogen gas
C) noble gases D) nitrogen dioxide and sulfur dioxide

19. If a solution of sodium bicarbonate is heated, which of the following is a possible product
- A) NH_4Cl B) Na_2CO_3
C) NaNO_3 D) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
20. A student made the following experimental setup by using the copper wire. He repeated this experiment with



- i. Aluminium foil
- ii. Iron nail
- iii. Coal
- iv. Graphite

In which cases the bulb will blow

- A) i, ii and iii B) i and iv
C) iii and iv D) i, ii and iv

29. InVitro Fertilization (IVF) refers to fusion of gametes in
- A) oviduct
 - B) Uterus
 - C) Test tube
 - D) Vagina
30. The ideal months for harvesting kharif crop are
- A) June/July
 - B) August/September
 - C) October /November
 - D) November/December

MATHS**SECTION 1 (Maximum Marks: 60)**

- This section contains **TWENTY** questions.
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31. In order to slay a dragon, Lord Shivesh has to cut off all of its heads. As soon as he has cut off 3 heads, a new one grows back immediately. After Lord Shivesh has cut off 13 heads the dragon is dead. How many heads did the dragon have initially?
A) 8 B) 9 C) 10 D) 11
32. If each interior angle of a polygon is 144° then the number of side in it is:
A) 5 B) 10 C) 6 D) 9
33. The present age of a man is twice that of his son. Eight year hence, their ages will be in the ratio 7 : 4. Then sum of their present ages will be
A) 24 B) 88 C) 72 D) 80
34. Let $a + b = 11$ and $a^2 + b^2 = 65$ then the value of $a^3 + b^3 = ?$
A) 405 B) 406 C) 407 D) 408
35. Every three minutes a bus is leaving the airport to drive to the city centre. A car leaves the airport at the same time as a bus and travels the same route as the bus to the city centre. Every bus takes 60 minutes for the journey from the airport to the city centre, the car only 35 minutes.
How many buses does the car overtake on its way to the city centre? The bus that starts at the same time as the car does not count.
A) 8 B) 9 C) 10 D) 11
36. For two consecutive years a sum of money lent out at compound interest amounts to ₹2,400 and ₹ 2,760 respectively. The rate of interest is:
A) 5% B) 15% C) 18% D) 10%
37. A footpath of uniform width runs all around the inside of a rectangular field 38 m long and 32 m wide. If the path occupies 600m^2 , then its width is
A) 5 B) 15 C) 2.5 D) 10
38. Each wheel of a car is of diameter 80cm. How many complete revolutions does each wheel make in 10 minutes when the car is travelling at a speed of 66 km/h?
(Take π as $\frac{22}{7}$)
A) 4325 B) 4350 C) 4375 D) None of these

39. A motor boat, whose speed is 9km/h in still water, goes 12km downstream and comes back in a total time of 3 hours. Find the speed of the stream.

- A) 2 km/h B) 3 km/h C) 4 km/h D) 5 km/h

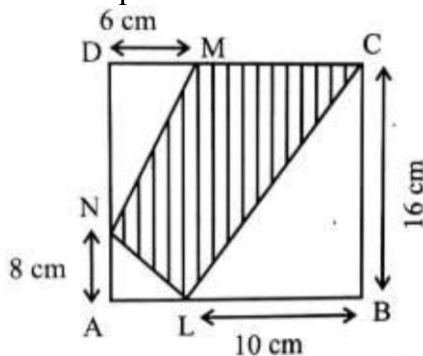
40. If a, b, c & d are in proportion then $\frac{a^3c + ac^3}{b^3d + bd^3} =$

- A) $\frac{(a+c)^2}{(b+d)^2}$ B) $\frac{(a+c)^4}{(b+d)^4}$ C) $\frac{(a+d)^4}{(b+c)^4}$ D) None of these

41. If $x+1$ & $x-2$ are factors of $f(x) = x^3 + 3x^2 + ax + b$ then the value of $a+b = ?$

- A) 14 B) -14 C) 10 D) None of these

42. In the given figure, ABCD is a square then the area of shaded region is



- A) 192cm^2 B) 168cm^2 C) 148cm^2 D) 128cm^2

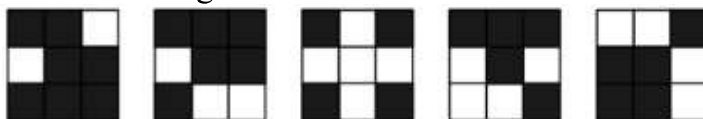
43. Number of positive integral solution of $3x + 8y = 103$

- A) 12 B) 2 C) 3 D) 4

44. If α and β are the roots of the equation $x^2 - ax + b = 0$ and $A_n = \alpha^n + \beta^n$, then which of the following is true

- A) $A_{n+1} = aA_n + bA_{n-1}$ B) $A_{n+1} = bA_n + aA_{n-1}$
 C) $A_{n+1} = aA_n - bA_{n-1}$ D) $A_{n+1} = bA_n - aA_{n-1}$

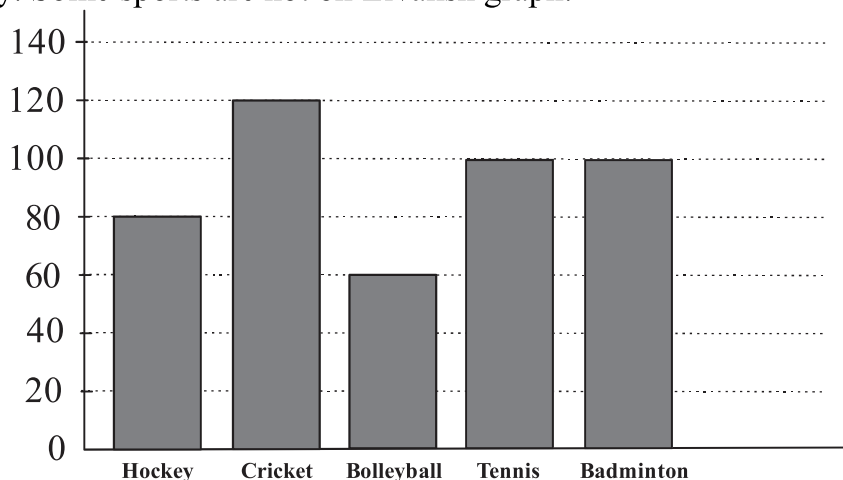
45. A cube of side length 3 consists of 15 black and 12 white unit cubes. In the diagram five of the six faces of the big cube can be seen.



Which of the regions shown below is the 6th face of the big cube?

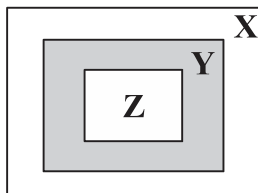
- A) B) C) D)

46. Eivaksh asked 500 people at her school their favourite sport and graphed the results of her survey. Some sports are not on Eivaksh graph.



How many people chose sports other than those on Eivaksh's graph?

- A) 30 people B) 40 people C) 20 people D) 50 people
47. The given figure is made up of 3 squares. The ratio of the area of square X to that of square Z is 4 : 1. The ratio of the shaded area to the total unshaded area in 6 : 7. What is the ratio of the area of square X to the area of shaded Y.



- A) 37 : 52 B) 14 : 15 C) 52 : 37 D) 57 : 32
48. The value of $\frac{1}{\sqrt{1} + \sqrt{2}} + \frac{1}{\sqrt{2} + \sqrt{3}} + \dots + \frac{1}{\sqrt{99} + \sqrt{100}} =$
- A) 3 B) 6 C) 9 D) 12
49. A quadrilateral can always be constructed if its
- A) Three sides and one angle is known
 B) Four sides are known
 C) Two side and two angles are known
 D) None of these
50. Two runners are training at the same time on a 720 m long, round running track. They run with constant speed in opposite directions. The first runner needs four minutes for one lap, the second five minutes. How many meters does the second runner run in between two consecutive meetings of the two runners?
- A) 320 B) 350 C) 340 D) 330

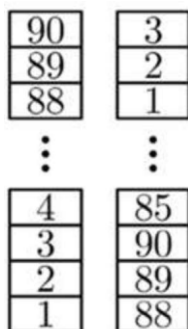
| |
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| IQ |
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SECTION 1 (Maximum Marks: 60)

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51. What quantity of water should be added to reduce 6 litres of 50% acidic liquid to 20% acidic liquid?
 A) 8 litres B) 9 litres C) 12 litres D) 9.5 litres
52. A dishonest fruit vendor professes to sell his goods at a profit of 10% but he uses a weight of 16 gram for 20 gram. Find his gain per cent.
 A) 14% B) 24% C) 35% D) 37.5%
53. A can complete a work in 35 days and B can do the same work in 28 days. If A after doing 10 days, leaves the work, find in how many days B will do the remaining work?
 A) 25 days B) 20 days C) 27 days D) 24 days
54. After playing 200 games of chess, Beth's winning rate is exactly 49%. What is the minimum number of games she has to still play to increase her winning rate to 50%?
 A) 1 B) 2 C) 3 D) 4
55. A tower consists of blocks that are labelled from bottom to top with the numbers from 1 to 90. Chidvilas uses these blocks to build a new tower. For each step he takes the top three blocks from the old tower and places them on the new tower without changing their order (see diagram). How many blocks are there in the new tower between the blocks with the numbers 39 and 40?



- A) 1 B) 2 C) 3 D) 4

56. A candidate scores 35% and fails by 40 marks, while another candidate who scores 60% marks, gets 35 marks more than the minimum required marks to pass the examination. Find the maximum marks for the examination.
- A) 300 B) 200 C) 350 D) 450

57. At what times are the hands of a clock at right angles between 7 am and 8 am?

A) $54\frac{6}{11}$ min past 7, $21\frac{9}{11}$ min past 7

B) $52\frac{5}{11}$ min past 7, $21\frac{8}{11}$ min past 7

C) $56\frac{6}{11}$ min past 7, $21\frac{8}{11}$ min past 7

D) None of these

58. **Statements:** Some leaves are baskets.
 Some baskets are flowers.
 Some flowers are lakes.

Conclusions: I. Some lakes are baskets.
 II. Some flowers are lakes.
 III. No lake is basket.

A) Only I follows

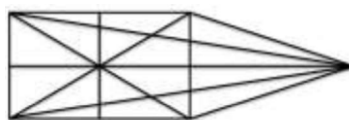
B) Only II follows

C) Only III follows

D) Only either I or III follows

59. Raman is performing yoga with his head down and legs up. His face is towards the west. In which direction, will his left hand be?
- A) North B) North - East
 C) East D) West

60. What is the number of straight lines in the following figure?



A) 10

B) 12

C) 13

D) 17

61. Pointing to Chidvilas in the photograph, Ramaya said, "His mother has only one grandchild whose mother is my sister". How is Ramaya related to Chidvilas?

A) Brother

B) Bother in Law

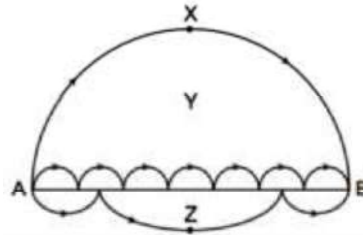
C) Father in Law

D) Data Inadequate

Directions (Questions 62-63): There are eight people A, B, C, D, E, F, G and H sitting around a circular table facing centre. B is sitting second to the left of G who is sitting third to the right of F. Only E is sitting between A and C. C is sitting third to the left of B. Only one person is sitting between E and H.

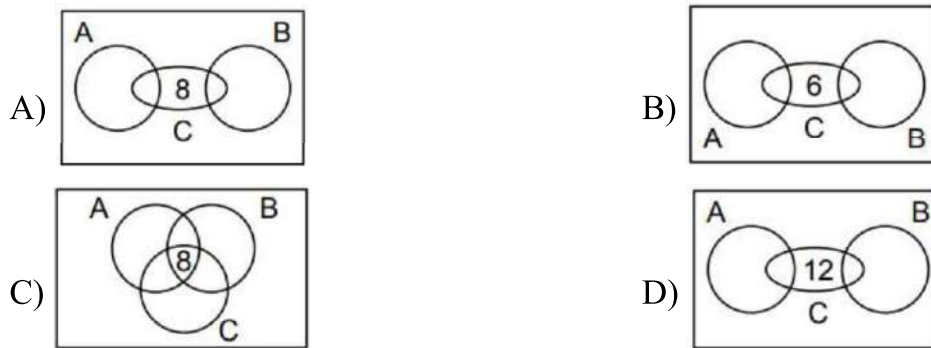
62. Which of the following is correct?
A) D is sitting third to the left of H B) F is sitting third to the left of G
C) C is sitting third to the left of D D) H is sitting second to the right of C
63. Based on the given information, which of the following is the correct position?
A) A and C are sitting next to each other B) F and G are sitting next to each other
C) H and F are sitting next to each other D) D is sitting next to H
64. A person needs to find the fastest two horses from 16 horses. Only a race of 4 horses can be conducted at a time. What is the minimum number of races to be conducted to determine the fastest two? (Assume that horses will not get tired at all, and time cannot be measured).
A) 6 B) 7 C) 8 D) 15
65. In the following sequence, one number is wrong. Find the wrong number.
9, 23, 51, 106, 219, 443
A) 23 B) 51 C) 106 D) 219
66. A wall clock is placed in a room. It chimes 8 times at 8^o clock. A person 'X' present outside the room listens the 8 beats of chimes in 8 seconds. Assume that each chime of the wall clock takes equal time. To listen 11 chimes at 11 o'clock, how much time will be required by person 'X'
A) 11 seconds B) 11.43 seconds C) 12 seconds D) 12.43 seconds
67. In a class 45% students study Mathematics, 55% study Physics, 40% study Chemistry, 30% study Mathematics and Physics, 15% study Physics and Chemistry, 25% study Mathematics and Chemistry and 10% study all three subjects. What percentage do not read any subject?
A) 10% B) 15% C) 25% D) 20%

68. There are three paths from A to B each consists of one or more semi-circles of unknown radii. The paths AXB , AYB , AZB are called I, II and III respectively. Which of the following is true?



- A) The longest path is I
 B) The longest path is II
 C) The smallest path is III
 D) Path III is mean of the paths I and II (as per the distance)
69. Details of a survey conducted among 200 students of a school on a particular day is as follows:

40% of the students came by bicycle, 50% of the students came by walk and the remaining came by bus. 30% of the students who came by bicycle and 40% of the students who came by walk play cricket. 40% of the students who come by bus do not play cricket. If we represent students who came by walk as A , students who came by bicycle by B and students who play cricket by C , then choose the diagram which shows the survey result.



70. 21 students were standing in a row. Chidvilas wants to join among them. Teacher asked Chidvilas to stand behind Harsh who was standing at 10th position from back. Looking at the height of the students, teacher interchanged the positions of the students standing 14th from back with the student standing at 12th from front. Now how many students are standing between Chidvilas and Harsh?
- A) 0 B) 1 C) 2 D) 3

SPACE FOR ROUGH WORK



Sri Chaitanya

Class 8th

Answer Key

Code A

| Q. NO. | CODE-A | Q. NO. | CODE-A | Q. NO. | CODE-A | Q. NO. | CODE-A |
|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | B | 11 | B | 21 | A | 31 | B |
| 2 | A | 12 | D | 22 | D | 32 | B |
| 3 | B | 13 | C | 23 | D | 33 | C |
| 4 | A | 14 | D | 24 | D | 34 | C |
| 5 | D | 15 | D | 25 | A | 35 | A |
| 6 | B | 16 | B | 26 | B | 36 | B |
| 7 | C | 17 | C | 27 | A | 37 | A |
| 8 | D | 18 | D | 28 | B | 38 | C |
| 9 | B | 19 | B | 29 | C | 39 | B |
| 10 | B | 20 | D | 30 | C | 40 | B |

| Q. NO. | CODE-A | Q. NO. | CODE-A | Q. NO. | CODE-A |
|--------|--------|--------|--------|--------|--------|
| 41 | B | 51 | B | 61 | D |
| 42 | D | 52 | D | 62 | B |
| 43 | D | 53 | B | 63 | C |
| 44 | C | 54 | D | 64 | B |
| 45 | A | 55 | D | 65 | C |
| 46 | B | 56 | A | 66 | B |
| 47 | B | 57 | A | 67 | D |
| 48 | C | 58 | B | 68 | D |
| 49 | D | 59 | A | 69 | D |
| 50 | A | 60 | B | 70 | D |