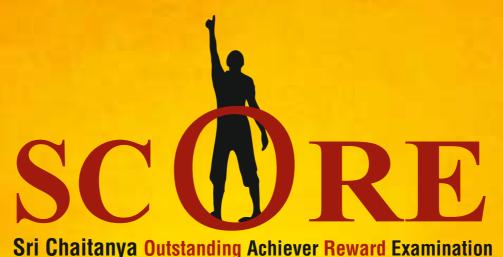
# \*TAYAARI HI JEET HAI



\_\_\_\_\_

6th OCTOBER 2024

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

## **PREVIOUS YEAR PAPER**

CLASS 7<sup>th</sup>



### **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.
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Negative Marks : -1, in all other cases

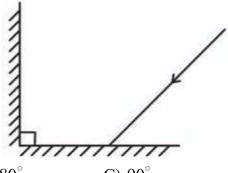
**Instructions:** (Take  $g = 10 \text{ m/s}^2$ , wherever required)

- 1. Image formed by a plane mirror
  - A) is always real

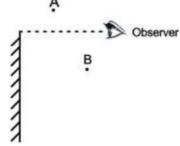
B) is always virtual

C) can be both real and virtual

- D) none of these
- 2. A ray of light strikes two mutually perpendicular mirrors as shown in the figure. Find the total deviation of ray of light after reflection from both the mirrors.

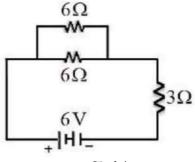


- A)  $0^{\circ}$
- B) 180°
- C) 90°
- D) 45°
- 3. Two objects A and B are placed in front of a plane mirror. An observer stands in front of the mirror as shown in figure. Choose the correct statement:



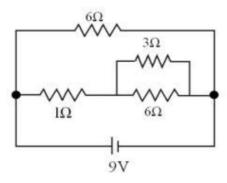
- A) Two images are formed & observer can see both images
- B) Two images are formed but observer can see only 1 image
- C) Two images are formed but observer cannot see any image
- D) Only 1 image is formed and observer can see the image

- A particle moves on a circular path of radius 'R'. If the particle covers  $60^{\circ}$  angle on 4. the circular path, then find its displacement.
  - A) 0
- C)  $\frac{4R}{5}$
- D) R
- A car has a upper speed limit of 72 km/hr and it can accelerate at  $2 \text{ m/s}^2$ . It crosses a 5. point P while moving with speed 10 m/s. Find the minimum time in which the car can reach a point Q which is 600m away from P (Along the direction of motion).
  - A) 31.25 sec
- B) 20 sec
- C) 37.5 sec
- D) 25 sec
- An object is in front of a plane mirror at some distance. If the mirror is moved towards 6. the object by 2 cm and object is moved towards the mirror by 1 cm then find the distance by which image moves
  - A) 5 cm
- B) 1 cm
- C) 3 cm
- D) 4 cm
- What is the amount of current flowing through the  $3\Omega$  resistance in the given circuit? 7.



- A) 1.5A
- B) 2A
- C) 1A

- D) 3A
- 8. A combination of resistors is connected to a battery as shown in diagram. Find potential difference across ' $1\Omega$ ' resistor.



- A) 6V
- B) 3V
- C) 9V
- D) 1V
- 9. A train travelling at a speed of 54km/hr has to stop at a station 500m away from it. How much retardation is required for the same?
  - A)  $2.25 \text{ m/s}^2$
- B)  $225 \text{ m/s}^2$
- C)  $0.225 \,\mathrm{m/s}^2$  D)  $22.5 \,\mathrm{m/s}^2$

10. A car travelling at a speed of 50 m/s stops when the signal turns red, calculate the distance travelled by the car before stopping if reaction time of the driver is 0.05 s and the brakes provide a retardation of  $50 \text{ m/s}^2$ .

A) 25m

B) 27.5m

C) 25.5m

D) 30m

CODE - A **CLASS - VII** 

#### **CHEMISTRY**

<b>SECTION 1</b>	(Maximum	Marks	30)
SECTION I	(IVIAAIIIIUIII	Mai No.	JUI

• This section contains **TEN** questions.

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Negative Marks -1, in all other cases

11. A mineral acid used in car batteries & manufacturing of detergents

A)  $H_2CO_3$ 

B)  $H_2SO_4$ 

C) H<sub>3</sub>PO<sub>4</sub>

D) HCOOH

12. The diacidic bases present in milk of magnesia and lime water respectively are:

A)  $Ca(OH)_2$  and  $Mg(OH)_2$ 

B) Mg(OH)<sub>2</sub> and NaOH

C)  $Mg(OH)_2$  and  $Ca(OH)_2$ 

- D) Ca(OH)<sub>2</sub> and NH<sub>4</sub>OH
- Which of the following is/are not the physical change(s): 13.

A) Oxidation of fuels

B) Rancidity of oils

C) Respiration

D) All of these

14. The process of taking out threads from cocoon for use as silk is called

A) Scouring

B) Reeling the silk

C) Rearing silkworm

D) Shearing

15. Which of the following is basic in nature

A) Magnesium oxide

B) Potassium oxide

C) Copper oxide

D) All of these

16. Carbon dioxide when passed through lime water, produces a white shiny solid "X". The substance X is generally found in chalk and marble. Identify substance X & its chemical name:

A) CaO – calcium oxide

B) CaSO<sub>4</sub> – Calcium sulphate

C) Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> - Calcium phosphate D) CaCO<sub>3</sub> - calcium carbonate

17. Which of the following physical change is exothermic (heat energy is evolved)

A) Melting of ice

B) Neutralization of Acid & Base

C) Freezing of water

D) Combination reactions

18. Consider the following chemicals:

H<sub>2</sub>CO<sub>3</sub>, HCl, H<sub>2</sub>SO<sub>4</sub>, HNO<sub>3</sub>, H<sub>3</sub>PO<sub>4</sub>, HI, CH<sub>3</sub>COOH, H<sub>2</sub>C<sub>2</sub>O<sub>4</sub>, NaOH, Mg(OH)<sub>2</sub>, NaCl, CaCl<sub>2</sub>

The ratio of organic acid to mineral acid in the above mentioned chemicals is:

A) 1:3

B) 3:1

(C) 2:3

D) 3:2

19. Fe(iron) +  $O_2$  (oxygen) +  $H_2O$  (water)  $\rightarrow$  rust. The formula of rust is:

A)  $Fe_2O_3 \cdot xH_2O$ 

B)  $Fe_2O_4$ 

C) FeO

D) None of these

20. Depositing a layer of zinc on iron is called

A) galvanization

B) Crystallisation

C) sublimation

D) layering

### **BIOLOGY**

SECTION 1	Maximum	Marke	30)
SECTION	uviaxiiii uiii	mai no.	301

- This section contains **TEN** questions.
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- 21. Chlorophyll is present inside the
  - A) Stroma B) Inter membrane space of plastid
  - C) Hypodermis D) Granna
- 22. The number of incisors, molars, premolars and canines in the buccal cavity is
  - A) 8, 4, 8, 8

B) 8, 4, 8, 4

C) 4, 8, 8, 8

- D) 8, 8, 8, 4
- 23. Arpit observed that a pond with clear water was covered up with a green algae within a week. By which method of reproduction did the algae spread so rapidly?
  - A) Budding

B) Sexual reproduction

C) Fragmentation

- D) Pollination
- 24. Sometimes when we do heavy exercise, anaerobic respiration takes place in our muscle cells. What is produced during this process?
  - A) Alcohol and lactic acid
- B) Alcohol and CO<sub>2</sub>
- C) Lactic acid and CO<sub>2</sub>
- D) Lactic acid only
- 25. Absence sweating, mechanism to conserve water, etc. are adaptive features of animals living in
  - A) Polar regions

B) Tropical regions

C) Desert regions

- D) Equatorial region
- 26. Humans cannot digest cellulose whereas cows can do so because
  - A) Their gut contains certain bacteria capable of digesting cellulose
  - B) They have a many-chambered stomach
  - C) They have efficient grinding molars
  - D) They produce an enzyme cellulase which can digest cellulose

27.	Given below from (i) to (iv) are some (i) Boiled and mashed potato (ii) Glucose solution (iii) A slice of bread (iv) Mustard oil Which of the above will give blue-bla A) (i) and (ii) C) (ii) and (iii)	
28.	Which of the following statements is/(i) Plants are obtained from seeds. (ii) Two plants are always essential. (iii) Fertilisation can occur only after (iv) Only insects are agents of pollina Choose from the options given below A) (i) and (iii) C) (ii) and (iii)	tion.
29.		s (as compare through atmospheric) pressure B) Decreases D) None of the above
30.	Bird that posses a large long beak is A) Kiwi C) Penguin	B) Taucan D) Pigeon

## **MATHS**

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

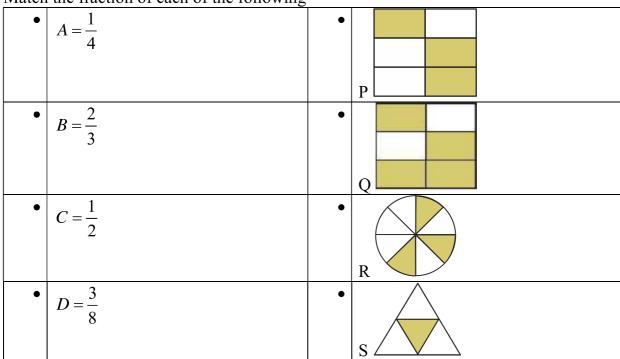
- This section contains **TWENTY** questions.
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31. Match the fraction of each of the following



- A) A-P
- B-Q
- C-R
- D-S

- B) A-Q
- B-P
- C-S
- D-R

- C) A-Q
- B-S
- C-P
- D-R

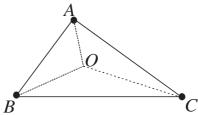
- D) A-S
- B-Q
- C-P
- D-R
- 32. Natural numbers are written on a board, of which no two are the same. The product of the two smallest numbers is 16, the product of the two biggest is 225. What is the sum of all numbers written on the board?
  - A) 243

B) 42

C) 44

D) 58

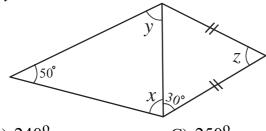
33. Let O be any point in the interior of a triangle  $\triangle ABC$  then, which of the following is incorrect?



- A) BC + CA + AB < 2(OB + BC + OA)
- B) OB + OC > BC

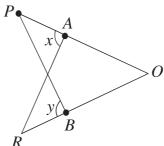
C) OC + OA > CA

- D) OA + OB < AB
- 34. The sum of angles x, y & z will be



- A)  $180^{\circ}$
- B) 240°

- C)  $250^{\circ}$
- D)  $360^{\circ}$
- 35. In the given figure,  $\angle x = \angle y$  & PO = RO then which of the following is INCORRECT



- A)  $\angle RAO = \angle PBO$
- C) BO = PA

- B) BP = AR
- $\overrightarrow{D}$ )  $\angle OPB = \angle ARO$
- 36. Let the present ages of A and B be in the ratio 9 : 4. Seven year hence, the ratio of their ages will be 5 : 3. Find the present age of A.
  - A) 16 years

B) 18 years

C) 20 years

D) None

37. Find the value of x & y

$$(10\% \text{ of } x) + (20\% \text{ of } y) = 24$$

$$3x - y = 20$$

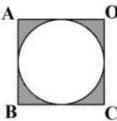
A) x = 40; y = 100

B) x = 100; y = 40

C) x = 60; y = 120

D) None

In the given figure OABC is a square of side 14 cm. Taking  $\pi = \frac{22}{7}$ , the area of the 38. shaded portion is



A)  $154cm^2$ 

B)  $196cm^2$ 

C)  $42cm^{2}$ 

D)  $52 cm^{2}$ 

39. Value of the expression

$$\frac{1}{3-2\sqrt{2}} - \frac{1}{2\sqrt{2}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{56}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2}$$
B) 3

A) 0

C) 7

- D) 5
- 40. The population of a town decreases by 10% in a particular year & then increase by 15% in the next year. The population at the end of two year is
  - A)  $\left[1 \frac{10}{100} + \frac{15}{100}\right]$  times

- B)  $\left[1 \frac{10}{100}\right] \left[1 + \frac{15}{100}\right]$  times
- C)  $\left[1 \frac{10}{100}\right] \left[1 \frac{15}{100}\right]$  times
- D)  $\left[1 + \frac{10}{100} \frac{15}{100}\right]$  times
- The value of  $x^2 + \frac{1}{x^2}$  if  $x = \sqrt{3} + \sqrt{2}$ 41.
  - A)  $2\sqrt{3}$

B) 10

C) 12

- D) 14
- A & B together can do a piece of work in 15 days. If one day's work of A be  $1\frac{1}{2}$  times 42. one day's work of B. Then find out how many days will A take to finish the work alone?
  - A) 20 days

B) 23 days

C) 25 days

- D) None
- 43. A small zoo has a giraffe, an elephant, a lion and a turtle. Molina wants to visit exactly two of the animals today but does not want to start with the lion. How many different possibilities does she have, to visit the two animals one after the other?
  - A) 9

B) 7

C) 8

D) 12

44. Riu has hidden a Smiley behind some of the grey boxes. The numbers state how many Smileys there are in the neighbouring boxes. Two boxes are neighbouring if they have one side or one corner in common.

How many Smileys has Riu hidden?

	3	3	
2			Ī
		2	
	1		Ī

- A) 4
- C) 7

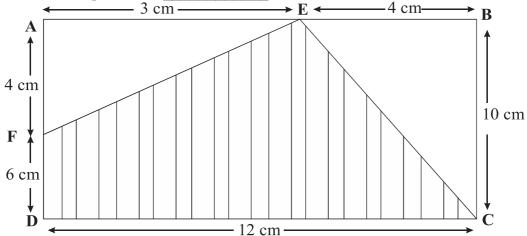
- B) 5
- D) 6
- 45. The average of 2, 3, 5 and m is 5 and the average of 2, 15, 3, m and n is 10. Find m-n.
  - A) -10

B) -20

C) 10

D) 20

46. Area of shaded portion is



A) 34cm<sup>2</sup>

B) 24cm<sup>2</sup>

C) 94cm<sup>2</sup>

D) 84cm<sup>2</sup>

- Fill in the blank and select the correct option. 47.
  - When a die is thrown, the probability of getting a number less than 4 is (i)
  - is the measure of central tendency greater than the median of data (ii) 12, 13, 11, 13, 14, 12, 11, 13, 14, 12, 11, 14, 12.
  - When a die is rolled once, the probability of getting a number, which is multiple (iii) of 3 is
  - of data, the sum of all the observation is divided by To find the (iv) number of observation.
    - (i)
- (ii)
- (iii)
- (iv)

- A)
- mode
- mean

- B)
- mean
- mean

- mode
- median

mode

- D)
- mode

- Simplify 48.
  - (i)  $2a^2b(a-b^2) + ab^2(4ab-2a^2) a^3b(1-2b)$
  - (ii)  $(2x^2 + 4y^2) + (7y^2 10) [(3x^2 + 4y^2) + (7y^2 14)]$

A)  $a^2b + 2ab$ 

(ii)  $x^2 - 4$ 

B)  $a^3b - 2a^2b^3$ 

 $-2x^2 - 8$ 

C)  $a^3b + 2a^2b^3$ 

 $-x^2 + 4$ 

D)  $a^2b - 2ab$ 

- $-4x^2 + 16$
- 49. More than 800 people take part in the SCORE-run. Amongst the participants 35% are female. There are 252 more male than female participants. How many people in total are taking part in the run?
  - A) 812

B) 840

C) 822

- D) 880
- If  $\frac{x}{y} = \frac{3}{4}$ , then which of the following expression is incorrect? 50.
  - A)  $\frac{x+y}{x-y} = \frac{7}{-1}$

B)  $\frac{x-y}{y} = \frac{1}{4}$ 

C)  $\frac{y}{y+x} = \frac{4}{7}$ 

D)  $\frac{x+y}{v} = \frac{7}{4}$ 

IQ

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

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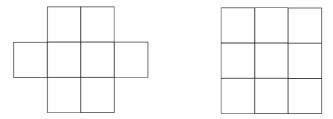
Negative Marks : -1, in all other cases

51. In the question given below, there are four statements which are to be taken as truth even if they do not seem to be so. There are conclusions numbered I, II, III and IV. Decide which of these logically follow from the given statements.

All student who like English also like Mathematics. Some students like Hindi.

All students who like Hindi do not like Mathematics. Students who like Mathematics also like English.

- I. Students who like Hindi also like English
- II. Students who like Mathematics also like Hindi.
- III. Students who like Mathematics do not like Hindi.
- IV. Students who like English do not like Hindi.
- A) I and II B) I and III
- C) I and IV D) III and IV
- 52. The square boxes in the figure below are to be painted with different colours such that no two adjacent boxes (even diagonally) have same colour. How many minimum colours do you need in each case?



- A) (3, 4) B) (4, 4)
- C) (4, 5) D) (3, 5)

53. Identify which number does not fit in the sequence?

156, 182, 210, 240, 282, 306

A) 182

B) 282

CODE - A

C) 210

D) 306

54. What is the number in place of "?"

6, 15, 35, 77, ?, 221

A) 121

B) 163

C) 143

D) 153

55. A family consist of six members P, Q, R, X, Y, Z.

Q is the son of R but R is not mother of Q.

P and R are a married couple.

Y is the brother of R. X is the daughter of P, Z is the brother of Q.

Which symbol represents all the children of P?

A) QZ

B) QXZ

C) XZR

D) QXYZ

56. If water image of OXIDE is OXIDE, then water image of METAL will be

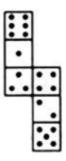
METAL (A

B) METAL

C) M<sub>3</sub>TAJ

D) METAL

57. How many dots lie opposite the face having three dots, when the given figure is folded to form a cube?



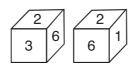
A) 2

B) 4

C) 5

D) 6

58. Two positions of a dice are shown. When number 3 is on the top, what number will be at the bottom?

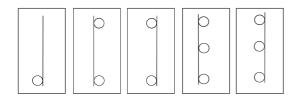


A) 1 but not 4

B) 4 but not 1

C) 5 or 4

- D) 5 but no 4
- 59. Which figure should come next among the options given below.

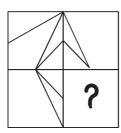


A) 0





60. Complete the missing pattern



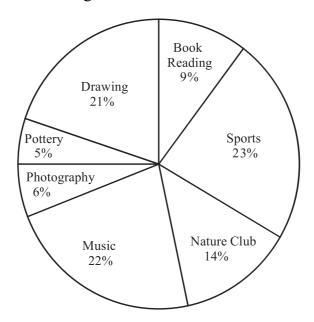






#### **Directions for (Questions 61-62)**

Study the pie chart and information given below and answer the following questions.



There are 1150 students of a school opted sports as a hobby.

61. How many students have books reading as a hobby?

A) 390

B) 420

C) 440

D) 450

62. What is the total number of students in the school?

A) 4990

B) 5000

C) 5050

D) 5100

63. Ayush, Hina, Harbhajan and George are four friends studying in Delhi and plan to go on a winter holiday some where in India. They can go to Rajasthan, Goa, Kerala, Odisha, Madhya Pradesh or any of the North Eastern States.

Ayush is willing to go any where except North Eastern States. Harbjajan prefers not to go to Goa and Kerala. Hina wants to go either to Goa or Odisha. George does not mind as long as it is not Rajasthan. Which destination from the following would be acceptable to all?

A) Goa

B) Kerala

C) Odisha

D) Rajasthan

64. Some translated words in an artificial Language (in which the word order is not

necessarily same) are given below

mie pie sie

good person sing

pie sie rie tie rie sie sing good lyrics love good lyrics

What is the translation for 'person love lyrics'?

A) pie tie rie

B) tie rie sie

C) mie tie rie

- D) sie mie pie
- 65. In the given sequence, some letters are missing. Which of the given options can fill the blanks in the correct order from left to right? ab ab aaa bbaaa bbbb
  - A) abab

B) abba

C) aabb

- D) baba
- 66. If A, B, C, D are distinct decimal digits, then which of the following option is correct?

A) A=3, B=7, C=5, D=9

B) A=2, B=3, C=6, D=5

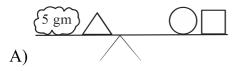
C) A=3, B=8, C=6, D=5

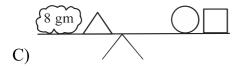
- D) A=2, B=3, C=5, D=7
- 67. Observe the following figures representing a balance

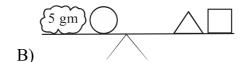


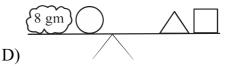












The following table shows the distribution of Boys and Girls students of seven 68. different schools.

School	Boys (Total 27,300)	Girls (Total 24,700)
A.	17%	8%
В.	12%	15%
C.	12%	12%
D.	13%	13%
E.	19%	14%
F.	14%	21%
G.	15%	17%

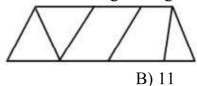
What is the ratio between the number of Girls and Boys students respectively from school F?

A) 21:14

B) 19:21

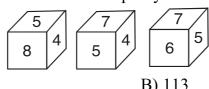
C) 17:21

- D) 19:14
- 69. How many quadrilaterals are there in the given figure?



- A) 10
- C) 12

- D) 13
- 70. A pattern is being followed to derive numbers using two out of the six numbers appearing on the faces of a dice having numbers from 4 to 9, both inclusive. Two such pairs yield 106 and 52. What will be third pair yield?



- A) 100
- C) 130

- B) 113
- D) 145

## SPACE FOR ROUGH WORK



## Class 7th Answer Key Code A

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

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