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P-SAT 2025

Pinnacle Scholastic Aptitude Test

For Classes 6th to 11th (Appearing)

Pinnacle Scholastic Aptitude Test

SAMPLE TEST PAPER

Class 8th

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INSTRUCTIONS

Duration: 1 Hour

Maximum Marks: 240

Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.

Things NOT ALLOWED in EXAM HALL: Blank Paper, clipboard, log table, slide rule, calculator, camera, mobile and any electronic or electrical gadget. If you are carrying any of these, then keep them at a place specified by invigilator at your own responsibility.

I. General Instructions

1. This Booklet is your question paper. Don't break the seal of booklet until the invigilator instructs to do so.
2. The answer sheet (ORS) is provided to you separately which is a machine readable optical response sheet. You have to mark your answers in the ORS by darkening bubbles as per your answer choice, by using black or blue ball point pen.
3. This question paper contains three sections as follows:
 - a) **Section - A** contains total 10 questions (Q. No. 1 to 10) of Mental Ability.
 - b) **Section - B** contains total 20 questions (Q. No. 11 to 30) of Mathematics.
 - c) **Section - C** contains total 30 questions (Q. No. 31 to 60) under 3 parts, which are Physics, Chemistry, Biology.
4. Rough spaces are provided for rough work inside the question paper. No additional sheets will be provided for rough work.
5. If you are found involved in cheating or disturbing others, then your ORS will be cancelled.

II. Filling of OMR Sheet

1. Ensure matching of OMR sheet with the Question paper before you start marking your answers on OMR sheet.
2. On OMR sheet, darken the appropriate bubble with black/blue pen for each character of your Enrollment No. and your Name, Test Code and other details at the designated places.
3. Think wisely before darkening bubble as there is negative marking for wrong answer. Answer once marked by pen can't be cancelled.
4. Don't put any stain on ORS and hand it over back properly to the invigilator.

III. Marking Scheme

1. All the questions of **each Part** have only one correct answer.
2. If darken bubble is **RIGHT** answer: 4 Marks.
3. If darken bubble is **WRONG** answer: -1 Marks (Minus One Mark).
4. If no bubble is darkened in any question: No Marks.

Please follow the instructions





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NEET RESULT



670 720 Prachi	705 720 MAULANA AZAD DELHI Saransh Garg	651 720 GMC PATIALA Riya	648 720 GMC PATIALA Priyanka
636 720 GMCH CHD Bhawna	604 720 GMC PATIALA Balwinder Singh	599 720 GMCH CHD Aurya Arrarwal	598 720 GMCH CHD Chhaavi
665 720 AIIMS-BILASPUR Nitish Singla	636 720 DMC-LUDHIANA Arshita Aggarwal	601 720 AIIMS-BATHINDA Anmoldeep Kaur	

What Makes Pinnacle Unique?

- 1 Best Faculty Team
- 2 Hi-Tech Classrooms
- 3 Customized Study material
- 4 Personal Attention
- 5 Unlimited Doubt Sessions
- 6 Best Testing Methodology



Lecture Recording Lab



Revision Classes & Self Study Zones



Online Testing Lab (CBT)



Smart & AC Classrooms



Objective + Subjective



Student Performance and Analysis Report



Rich Library & Researched Study Modules



Extra Support to weaker students



CCTV Campus



Biometric Attendance

Classroom Program

1 Comprehensive Classroom Lectures

All classes at Pinnacle are conducted by highly qualified and experienced faculty members, mostly IITians. Each chapter is started at the grass root level and is dealt to an extent which is the requirement of competitive examinations, with an aim of enabling the students to develop a comprehensive view of the whole chapter with a thorough understanding.



Doubt Clearance 2

"If you ask a question, you may appear fool for some time, but if you don't, you'll remain a fool for whole life." System at Pinnacle encourages all students to ask their doubts and questions.

3 Regular Tests Online and Offline

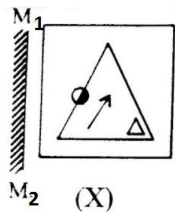
As JEE Mains and Advanced have gone completely online and NEET is in the pipeline, we have launched a dedicated online testing platform where students can practise over CBT (Computer Based Tests). The combination of online and offline testing modes based on latest JEE/NEET patterns ensure that students are at par with the recent changes. Students can check their test reports and performance analysis via a unique online login ID. Their results are also communicated to parents via SMS.



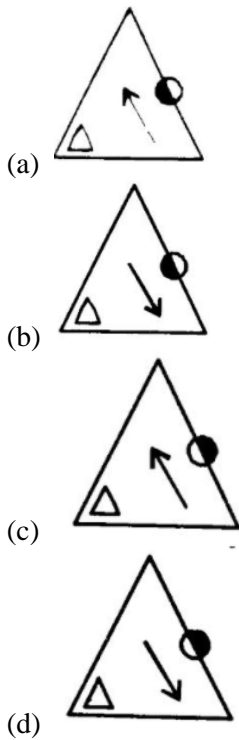
Addressing the Board Exam 4

Pinnacle has a very distinct methodology for preparing the students for competitive examinations while in full synchronization with Board Exams as well. Board level tests are conducted alongside the regular JEE/NEET tests and the copies are graded at very meticulous level by teachers. Students receive methodological tips so as to perform excellent in the board Exams as well.

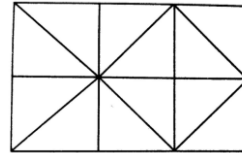
Section – A Mental Ability

1. Complete the series
220, 200, 100, 80, 40, 20, ?
(a) 20
(b) 10
(c) 30
(d) 40
2. If the letter of RUTHLESS are arranged alphabetically then which letter would be the last letter?
(a) T
(b) E
(c) H
(d) U
3. If REASON is coded as 5, BELIEVED as 7, what is the code number of GOVERNMENT?
(a) 6
(b) 8
(c) 9
(d) 10
4. A bus for Delhi leaves every thirty minutes from a bus stand. An enquiry clerk told a passenger that the bus had already left ten minutes ago and the next bus will leave at 9.35 a.m. At what time did the enquiry clerk give this information to the passenger?
(a) 9.10 a.m.
(b) 8.55 a.m.
(c) 9.08 a.m.
(d) 9.15 a.m.
5. A lady said, 'The person standing there is my grandfather's only son's daughter' How is the lady related to the standing person?
(a) Sister
(b) Mother
(c) Aunt
(d) Cousin
6. If $20 - 10$ means 200, $8 \div 4$ means 12, 6×2 means 4 then $100 - 10 \times 1000 \div 1000 + 100 \times 10 = ?$
(a) 0
(b) 20
(c) 1000
(d) 1900
7. Deepak starts walking straight towards east. After walking 75 metres, he turns to the left and walks 25 metres straight. Again he turns to the left, walks a distance of 40 metres straight, again he turns to the left and walks a distance of 25 metres. How far is he from the starting point?
(a) 25 metres
(b) 50 metres
(c) 115 metres
(d) 35 metres
8. Choose the correct mirror image


Space for Rough Work



9. In certain language, if 1 is coded as A, 2 as B, 3 as C, and so on, how is FLOWER coded in that code?
 (a) 6121523518
 (b) 6121823515
 (c) 6211523518
 (d) 6218123515
10. How many squares does the figure have?



- (a) 6
 (b) 7
 (c) 9
 (d) 10

Space for Rough Work

Section - B Mathematics

11. If m is prime, then n is a composite number and $m + n = 240$ also their LCM is 4199. Find m and n .

- (a) 13,227
(b) 17,223
(c) 19,221
(d) 23,217

12. Kiran wanted to type the first 180 natural numbers. Find the number of times he had to press the numbered keys.

- (a) 384
(b) 432
(c) 416
(d) 448

13.
$$\sqrt[3]{\frac{-a^6 \times b^3 \times c^{21}}{c^9 \times a^{12}}} =$$

- (a) $\frac{-bc^3}{a^2}$
(b) $\frac{bc^4}{a^2}$
(c) $\frac{-ab^4}{c^2}$
(d) $\frac{-bc^4}{a^2}$

14. If a is any natural, then $a^3 - \frac{1}{a^3}$ will always be greater than or equal to _____.

- (a) $3\left(a + \frac{1}{a}\right)$
(b) $a + \frac{1}{a}$
(c) $\left(a^3 + \frac{1}{a^3}\right)$
(d) $3\left(a - \frac{1}{a}\right)$

15. The sum of cubes of the 'first n ' natural numbers =

$$\left(\frac{n(n+1)}{2}\right)^2 \text{ [i.e., } 1^3 + 2^3 + 3^3 + \dots + n^3 = \left[\frac{n(n+1)}{2}\right]^2 \text{]}$$

$$\left(\frac{n(n+1)}{2}\right)^2 \text{ [i.e., } 1^3 + 2^3 + 3^3 + \dots + n^3 = \left[\frac{n(n+1)}{2}\right]^2 \text{]}$$

using this result find the value of $11^3 + 12^3 + 13^3 + \dots + 20^3$.

- (a) 45,225
(b) 41,075
(c) 38,425
(d) 52,125

16. If a and b are whole numbers such that $a^b = 512$, where $a > b$ and $1 < b < 4$, then $\sqrt[b]{a} =$ _____

- (a) 2
(b) 3
(c) 4
(d) 8

17. The population of a city increases by 30 % every year. If the present population is 338, 000, then what was the population of the city two years ago?

- (a) 300,000
(b) 250,000
(c) 200,000
(d) 240,000

18. The side of square ABCD is 20 % longer than the side of square PQRS. By what percentage is the area of ABCD more than the area of PQRS?

- (a) 20 %
(b) 24%
(c) 40%
(d) 44%

19. The ratio of the incomes of P and Q is 5: 4. The ratio of their expenditure is 4:3. The savings of P is

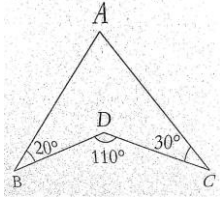
Space for Rough Work

- more than that of Q by $16\frac{2}{3}\%$. what percentage of his income does P spend?
- (a) $52\frac{2}{3}\%$
 (b) $53\frac{1}{3}\%$
 (c) $54\frac{1}{3}\%$
 (d) $51\frac{2}{3}\%$
20. C and D share a certain sum of money in the ratio $2\frac{1}{4} : 1\frac{3}{4}$. if D's share is Rs 210, then find the total sum of money shared.
- (a) Rs 540
 (b) Rs 490
 (c) Rs 480
 (d) Rs 420
21. If the ratio of the ages (in years) of A and B, 5 years ago was 5:7, then which of the following can be the sum of their ages 5 years from now?
- (a) 90
 (b) 98
 (c) 92
 (d) 87
22. A mixture contains milk and water in the ratio of 5:6. On adding 8 litres of water, the ratio of milk and water becomes 1:2. Find the quantity of the milk in the mixture (in litres).
- (a) 12
 (b) 10
 (c) 14
 (d) 8
23. A man sells 200 mangoes at the cost price of 250 mangoes. His profit percentage is _____.
- (a) 12.5%
 (b) 25%
 (c) 20%
 (d) 25.5%
24. The cost price of a shirt is Rs 900. When it is sold at a discount of 10%, a loss of 5% is incurred. Find the marked price of the shirt.
- (a) Rs 950
 (b) Rs 1050
 (c) Rs 930
 (d) Rs 1020
25. Two persons A and B move towards each other from P and Q, respectively. They meet 50 kms away from Q. if the ratio of the speeds of A and B is 4:1, then find the distance between P and Q.
- (a) 200 km
 (b) 175 km
 (c) 125 km
 (d) 250 km
26. Two taps A and B can fill a tank in 12 min and 20 min, respectively. If both the pipes are opened for 10 min then the volume of water which overflows as a percentage of the volume of the tank is _____.
- (a) 25%
 (b) $16\frac{2}{3}\%$
 (c) 20%
 (d) $33\frac{1}{3}\%$
27. Which is the greatest among $(81)^{18}$, $(243)^{15}$, $(27)^{21}$ and $(9)^{38}$?
- (a) $(243)^{15}$
 (b) $(27)^{21}$
 (c) $(9)^{38}$
 (d) $(81)^{18}$
28. Which of the following is the factor of $4a^2 + b^2 - 4ab + 2b - 4a + 1$?
- (a) $(a - b)$
 (b) $(a + b - 2)$
 (c) $(a - b + 2)$
 (d) $(2a - b - 1)$

Space for Rough Work

29. The HCF of the polynomials $10(a - 1)(a - 2)^3$, $120(a - 3)(a - 2)^3$ and $135(a + 3)(a - 2)^3$ is _____.
- (a) $25(a - 3)(a - 2)$
(b) $5(a - 3)(a + 2)$
(c) $5(a - 2)^3$
(d) $5(a - 3)(a - 2)(a + 3)$

30. In the above figure, $\angle ABD = 20^\circ$, $\angle BDC = 110^\circ$ and $\angle DCA = 30^\circ$. What is the value of $\angle BAC$?



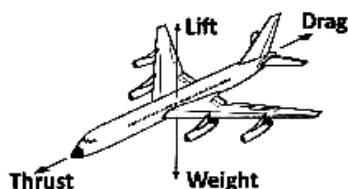
- (a) 30°
(b) 60°
(c) 90°

Space for Rough Work

Section - C Science

31. Which of the following statements are correct regarding formed by a concave lens?
- (i) The nature of image does not change much with the change in the object distance
 - (ii) Always a virtual image is formed
 - (iii) The image is larger in size
 - (iv) Image is never formed between the optical center and the focus
- (a) Only i, ii and iii
 - (b) Only i and ii
 - (c) Only iii and iv
 - (d) Only ii, iii and iv
32. When a glass rod is rubbed with a piece of silk cloth the rod
- (a) And the cloth both acquire positive charge
 - (b) Becomes positively charged while the cloth has a negative charge
 - (c) And the cloth both acquire negative charge
 - (d) Becomes negatively charged while the cloth has a positive charge
33. In an experiment to measure the speed of sound in air, a boy stands 140m away from a wall and bangs two pieces of wood together. At the instant he hears the echo, he bangs them together again. He does this activity 50 times. The time taken for 50 bangs is 12 s. which calculation gives the speed of sound in air?
- (a) $\frac{12}{140 \times 50}$
 - (b) $\frac{140 \times 50}{12}$
 - (c) $\frac{140 \times 2 \times 50}{12}$
 - (d) $\frac{140 \times 2 \times 12}{50}$
34. Complete the sentence. Friction always _____
- i. Helps the motion
 - ii. Opposes the motion
 - iii. Both a and b
 - iv. None of these
35. A student sitting in the last row of classroom is unable to see the writing on the board. He is suffering from:
- (a) Myopia
 - (b) Hypermetropia
 - (c) Farsightedness
 - (d) Astigmatism
36. A box is given a push across the floor. It comes to stop shortly after moving some distance, which one of the following reasons explains this?
- (a) Gravity is acting on the box in the direction opposite to the box's movement
 - (b) Friction is acting on the box in the same direction of the box's movement
 - (c) Friction is acting on the box in the direction opposite to the box's movement
 - (d) The heat produced during the box's movement slows down the box.
37. Which an airplane flies at a constant speed and height above the ground, which statement is true about the forces acting on the airplane?

Space for Rough Work



- (a) The thrust is equal to the drag
 (b) The lift equal to the weight
 (c) The lift is more than the weight
 (d) Both a and b
38. When a tuning fork was struck and brought near a bucket of water, a wave as shown in figure was formed on its surface. If the fork is struck much harder and brought near the surface, what will increase?
-
- (a) Frequency
 (b) Wavelength
 (c) Velocity
 (d) Amplitude
39. Rolling friction is smaller than?
- (a) Sliding friction
 (b) Static friction
 (c) Fluid friction
 (d) All of the above
40. When the Moon is directly between the Sun and the Earth, what phase would the Moon be in?
- (a) Full moon
 (b) New moon
 (c) Half moon
 (d) Waxing crescent
41. Which thermoplastic is known as thermocole?
- i. Polystyrene
 ii. PVC
 iii. Teflon
 iv. Polythene
42. Which of the following element is metalloid
- i. Si
 ii. Sb
 iii. Fe
 iv. Both a and b
43. Which of the following reaction will occur?
- i. $\text{Zn(s)} + \text{CuSO}_4(\text{aq}) \rightarrow \text{ZnSO}_4(\text{aq}) + \text{Cu(s)}$
 ii. $2\text{Al(s)} + 3\text{ZnSO}_4(\text{aq}) \rightarrow \text{Al}_2(\text{SO}_4)_3(\text{aq}) + 3\text{Zn(s)}$
 iii. $3\text{Ca(s)} + \text{Al}_2(\text{SO}_4)_3 \rightarrow 3\text{CaSO}_4(\text{aq}) + 2\text{Al(s)}$
 iv. all of the above
44. Example of spontaneous combustion is
- i. Burning of calcium
 ii. Burning of lithium
 iii. Burning of phosphorous
 iv. Burning of copper
45. Ignition temperature of phosphorous is
- i. 65°C
 ii. 100°C
 iii. 35°C
 iv. 45°C
46. Coal gas is mixture of
- i. CH_4 , CO_2 and H_2
 ii. CO_2 , H_2 and O_2
 iii. CO , H_2 and CH_4
 iv. CH_4 , CO_2 and O_2
47. Which of the following is termed as 'hard coal'?
- i. Lignite
 ii. Peat
 iii. Anthracite
 iv. All of the above
48. Which of the following is a set of insulator?
- i. Glass, ebonite, tap water
 ii. Ebonite, wood, graphite
 iii. Diamond, plastic, vinegar
 iv. Plastic, glass, ebonite
49. In distilled water if we add two teaspoons of citric acid, then it becomes:
- i. Insulator

Space for Rough Work

- ii. Conductor
iii. Semi conductor
iv. None of these
50. The Kyoto Protocol agreement is to
i. Increase the emission of greenhouse gases
ii. Decrease the emission of greenhouse gases
iii. Increase the emission of sulphur dioxide
iv. Decrease the emission of sulphur dioxide
51. Which of the following organelle is known as powerhouse of the cell?
(a) Golgi body
(b) Chloroplast
(c) Mitochondria
(d) Plastid
52. Where does fertilisation occurs in mammals?
(a) Uterus
(b) Fallopian tube
(c) Oviduct
(d) Cervix
53. Binary fission occurs in –
(a) Amoeba
(b) Paramecium
(c) Planaria
(d) All of these
54. Egg laying animals are known as –
(a) Viviparous
(b) Oviparous
(c) Sterile
(d) None
55. The genetic information is carried by which part of the sperm?
(a) Tail
(b) Middle piece
(c) Head
(d) All of these
56. Diabetes mellitus is caused due to deficiency of –
(a) Glucagon
(b) Insulin
(c) Both a and b
(d) ADH
57. What is hormone?
(a) Organic complex substances
(b) Chemical messenger
(c) Blood cells
(d) None
58. Removal of top fertile layer of soil by wind of water is called –
(a) Latching
(b) Erosion
(c) Siltation
(d) Weathering
59. An example of in site conservation is –
(a) Zoo
(b) Botanical garden
(c) Biosphere reserve
(d) None of these
60. Which of the following organelle is called kitchen of the cell?
(a) Chloroplast
(b) Mitochondria
(c) Endoplasmic reticulum
(d) Golgi body

Space for Rough Work

ANSWER KEY

1	b	21	a	41	a
2	d	22	a	42	d
3	c	23	d	43	d
4	d	24	a	44	c
5	a	25	d	45	c
6	a	26	b	46	c
7	d	27	d	47	c
8	a	28	b	48	d
9	a	29	a	49	b
10	c	30	a	50	b
11	b	31	b	51	c
12	d	32	b	52	c
13	c	33	c	53	d
14	d	34	b	54	b
15	a	35	a	55	c
16	b	36	c	56	b
17	c	37	d	57	b
18	d	38	d	58	b
19	b	39	d	59	c
20	b	40	c	60	a

Space for Rough Work

Space for Rough Work