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techno school

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IIT-JEE / NEET / Olympiads / NTSE / Boards



**P-STAR 2024**

Pinnacle STAR Reward Exam

For 5<sup>th</sup> to 12<sup>th</sup> Class Students

STAGE - 1 & STAGE - 2

**Pinnacle STAR Reward Exam**

**SAMPLE TEST  
PAPER**

**Class 6<sup>th</sup>**

Pinnacle Techno School



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# 5<sup>th</sup> to 12<sup>th</sup> Class Students GET READY FOR

THE MOST AWAITED & BIGGEST  
TALENT QUEST EXAM  
OF THE YEAR BY PINNACLE IS HERE!



## P-STAR 2024

Pinnacle STAR Reward Exam

STAGE - 1 & STAGE - 2



**SCHOLARSHIP**  
WORTH  
**₹ 1 Crore**



### Test Date

**Stage-1** 5<sup>th</sup> Nov & 3<sup>rd</sup> Dec, 2023

**Stage-2** 10<sup>th</sup> December, 2023

### Registration Details

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Bhrihu Ashram Rd,  
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# 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



## 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 Science

This section contains **30 Multiple Choice Questions**. Each question has four options out of which **ONLY ONE** is correct.

1. The climate of a place depends on
  - (a) latitude
  - (b) altitude
  - (c) distance from the sea
  - (d) all of these
2. Fennec adapt to the desert climate with the help of
  - (a) long ears
  - (b) being nocturnal in nature
  - (c) both (A) & (B)
  - (d) none of these
3. The basic unit of speed is:
  - (a) km/min
  - (b) m/min
  - (c) km/h
  - (d) m/s
4. Which of the following relations is correct?
  - (a) Speed = Distance  $\times$  Time
  - (b) Speed =  $\frac{Dis\ tan\ ce}{Time}$
  - (c) Speed =  $\frac{Time}{Dis\ tan\ ce}$
  - (d) Speed =  $\frac{1}{Dis\ tan\ ce\ Time}$
5. A weak current can be detected by replacing electric bulb in an electric tester with :
  - (a) LED
  - (b) A coil wound over a compass needle
  - (c) CFL
  - (d) Both (A) and (B)
6. In lateral inversion:
  - (a) Image is upside down
  - (b) Image bends laterally
  - (c) Left of an object appears right of an image
  - (d) Image gets inverted
7. Which of these does not conduct electricity?
  - (a) Brass spoon
  - (b) Silver jewellery
  - (c) Steel tumbler
  - (d) Plastic jug
8. An electric cell can generate electric current in a:
  - (a) Open circuit
  - (b) Closed circuit
  - (c) Both of these
  - (d) None of these
9. The process of returning back of light ray from a shining surface is called:
  - (a) Reflection
  - (b) Refraction
  - (c) Inversion
  - (d) Lateral inversion
10. Evaporation of water from the soil surface is due to heat from:
  - (a) Sun
  - (b) Earth
  - (c) Moon
  - (d) Fire
11. Maximum-minimum thermometer are used to measure
  - (a) humidity
  - (b) maximum and minimum temperature
  - (c) rainfall
  - (d) wind
12. Humidity is measured by using
  - (a) Thermometer
  - (b) Rain gauge
  - (c) Hygrometer
  - (d) All of these
13. Rain gauge is used to measure
  - (a) humidity
  - (b) rainfall
  - (c) temperature
  - (d) all of these
14. The process of changing water into ice is called
  - (a) Sublimation
  - (b) Evaporation
  - (c) freezing
  - (d) precipitation
15. The process of falling down of water in the form of rain, snow or hail is called
  - (a) Sublimation
  - (b) Evaporation
  - (c) Condensation
  - (d) Precipitation
16. How much water is lost approximately through transpiration by wheat plants that give one kilogram of wheat ?
  - (a) 5 litres
  - (b) 50 litres
  - (c) 500 litres
  - (d) 5000 litres
17. Water freezes at \_\_\_ to a solid state called snow or ice
  - (a) 0°C
  - (b) -1C<sup>0</sup>
  - (c) 1°C
  - (d) 100°C
18. A tester is used to check the conduction of electricity through two liquids, labelled A and B. It is found that the bulb of the tester glows

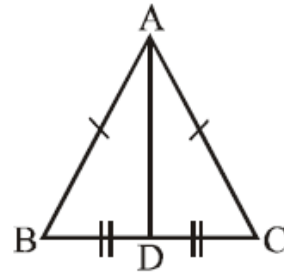
- brightly for liquid A while it glows very dimly for liquid B. You would conclude that
- liquid A is a better conductor than liquid B.
  - liquid B is a better conductor than liquid A.
  - both liquids are equally conducting
  - conducting properties of liquid cannot be compared in this manner.
- Silicon is a :
    - Conductor
    - Insulator
    - Semiconductor
    - Superconductor
  - Water occurs in the atmosphere in how many forms?
    - One
    - Two
    - Three
    - Four
  - What will happen when diaphragm relaxes and curves upwards?
    - Air is forced out of the lungs
    - The rib cage goes up and outward
    - The volume of the thoracic cavity increases
    - Air pressure inside the thoracic cavity decreases
  - When we inhale, we breathe in air into the lungs. What do we breathe out when we exhale?
    - Only oxygen gas
    - Only hydrogen gas
    - Air that has more oxygen than inhaled air
    - Air that has more carbon dioxide than inhaled air
  - Which one of the following structures closes the respiratory passage during ingestion of food?
    - Larynx
    - Epiglottis
    - Hard palate
    - Soft palate
  - The covering of lungs is called
    - Pericardium
    - Pleural membrane
    - Perichondrium
    - Peritoneum
  - The narrowest and most numerous tubes of lungs are termed as
    - Bronchus
    - Alveoli
    - Bronchioles
    - Hilum
  - Which of the following will lead to a reduction in the availability of ground water ?
    - Plantation
    - Rain water harvesting
    - Constructing more lakes
    - Building concrete roads
  - Cotton bolls are which part of the plant?
    - Flower
    - Fruit
    - Stem
    - Root
  - Earth worm takes oxygen from the soil through:
    - Lungs
    - Gills
    - Moist skin
    - Spiracles
  - Oxygen and carbon dioxide are replaced in nature through:
    - Photosynthesis
    - Respiration
    - Both (A) and (B)
    - None of these
  - Sugar is obtained from
    - sugarcane
    - beetroot
    - Both a and b
    - none

## Section - B Mathematics

This section contains **20 Multiple Choice Questions**. Each question has four options out of which **ONLY ONE** is correct.

- Solve :  $2^{x+1} = 8^x$ 
  - 1
  - 3
  - $\frac{1}{3}$
  - $\frac{1}{2}$
- Which of the following is not equal to  $y^6$ ?
  - $[y^{2/3}]^9$
  - $\sqrt{y^6}^2$

- (c)  $\sqrt[3]{y^{18}}$   
 (d)  $y^{1/3 \cdot 12}$
33.  $16^{\frac{5}{2}} \cdot 16^{\frac{1}{2}} = ?$   
 (a) 250  
 (b) 256  
 (c) 255  
 (d) 200
34. Find the value of p so that  $\frac{4}{5}^3 \cdot \frac{4}{5}^3 = \frac{4}{5}^{3p}$ .  
 (a) 3  
 (b) 0  
 (c) 2  
 (d) 1
35. The value of  $3\sqrt[3]{2} \cdot 7\sqrt[3]{6} \cdot 5\sqrt[3]{18}$   
 (a) 545  
 (b) 500  
 (c) 630  
 (d) 400
36. The value of  $\frac{x^{a^2}}{x^{b^2}} \cdot \frac{1}{a \cdot b} \cdot \frac{x^{b^2}}{x^{c^2}} \cdot \frac{1}{b \cdot c} \cdot \frac{x^{c^2}}{x^{a^2}} \cdot \frac{1}{c \cdot a}$  is  
 (a) 0  
 (b) 1  
 (c) 2  
 (d) 3
37. Given that  $-0.3k + 2.1 = 0.4k$ , the value of k =  
 (a) 21  
 (b) 7  
 (c) 3  
 (d) -1
38. If  $\frac{1}{7} \cdot \frac{x}{7} = 3$ , then the value of x =  
 (a) 20  
 (b) 7  
 (c) 3  
 (d) 1
39. Three-fourths of a number is 60 more than its one-third. The number is  
 (a) 108  
 (b) 84  
 (c) 144  
 (d) 116
40. If 20 is added to four times a certain number, the result is 5 less than five times the number. The number is  
 (a) 10  
 (b) 15  
 (c) 20  
 (d) 25
41. There were only two candidates in an election. One got 62% votes and was elected by a margin of 144 votes. The total number of votes were  
 (a) 500  
 (b) 600  
 (c) 700  
 (d) 800
42. A quadrilateral can have  
 (a) 4 acute angles  
 (b) 4 obtuse angles  
 (c) 3 obtuse angles  
 (d) 2 right angles and 2 obtuse angles
43. A regular polygon is  
 (a) equilateral  
 (b) equiangular  
 (c) both (A) & (B)  
 (d) none of these
44. If PQRS is a parallelogram, then  $\angle P - \angle R$  is  
 (a)  $0^\circ$   
 (b)  $90^\circ$   
 (c)  $180^\circ$   
 (d)  $360^\circ$
45. In a  $\triangle ABC$ , If  $AB + BC = 10$  cm,  $BC + CA = 12$  cm,  $CA + AB = 16$  cm, then the perimeter of the triangle is :  
 (a) 19 cm  
 (b) 17 cm  
 (c) 28 cm  
 (d) None of these
46. In the following figure, If  $AB = AC$  and  $BD = DC$ , then  $\angle ADC =$



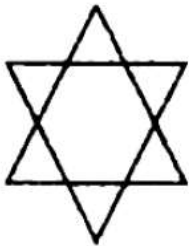
- (a)  $60^\circ$   
 (b)  $120^\circ$   
 (c)  $90^\circ$   
 (d)  $45^\circ$
47. If two sides of an isosceles triangles are 3 cm and 8 cm, then the length of the third side is :  
 (a) 3 cm  
 (b) 8 cm  
 (c) 3 cm or 8 cm  
 (d) 5 cm
48. The three angles of a triangle are in the ratio 1 : 2 : 1, then the greatest angle is :  
 (a)  $45^\circ$   
 (b)  $90^\circ$   
 (c)  $60^\circ$   
 (d)  $120^\circ$
49. An exterior angle of a triangle is \_\_\_\_\_ the sum of its interior opposite angles  
 (a) Greater than  
 (b) Less than  
 (c) Equal to  
 (d) Greater or equal to

50. In a  $\triangle PQR$ ,  $PQ = PR$  and  $\angle Q$  is twice that of  $\angle P$ . Then  $\angle Q =$
- (a)  $72^\circ$   
 (b)  $36^\circ$   
 (c)  $144^\circ$   
 (d)  $108^\circ$

### Section - C Mental Ability

This section contains **10 Multiple Choice Questions**. Each question has four options out of which **ONLY ONE** is correct.

51. How many triangles are there in the following figure?



- (a) 6  
 (b) 7  
 (c) 8  
 (d) 9
52. 3, 8, 15, 24, 34, 48, 63
- (a) 15  
 (b) 24  
 (c) 34  
 (d) 48
53. 24, 27, 31, 33, 36
- (a) 24  
 (b) 27  
 (c) 31  
 (d) 33
54. 5.40, 8.00, 10.20, 12.30, 3.00, 5.20
- (a) 5.40  
 (b) 8.00  
 (c) 10.20  
 (d) 12.30
55. BEGK is related to ADFJ in the same way as PSVY is related to ....?....
- (a) LOQT  
 (b) ROUX  
 (c) OTUZ  
 (d) ORUX
56. A's father's mother-in-law's only daughter's son is B. How is A related to B?
- (a) Brother  
 (b) Sister  
 (c) Nephew  
 (d) Cannot be determined
57. A person starts towards South direction. Which of the following orders of direction will lead him to East direction ?
- (a) Right, Right Right  
 (b) Left, Left, Left  
 (c) Left, Right, Right  
 (d) Right, Left, Right
58. Mohit walks 6 km to the East and turns to the South and walk 5 km. Again he turns to the East and walks 6 km. Next, he turns northwards and walks 10 km. How far is he from his starting point?
- (a) 5 km  
 (b) 12 km  
 (c) 13 km  
 (d) 17 km
59. BLOCKED : YOLXPVW :: ? : OZFMXS
- (a) LAUNCH  
 (b) DEBATE  
 (c) LABOUR  
 (d) RESULT
60. Ashok is facing North. He turns 45 degrees in the clockwise direction and then turns 90 degrees in the anticlockwise direction. Finally, he turns back. Which direction is he facing now ?
- (a) South-East  
 (b) South-West  
 (c) North-East  
 (d) North-West

SPACE FOR ROUGH WORK



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