

## KVPY Interview Important Questions General Part 1

Q: 1. Introduce yourself in minimum words?

Q: 2. Arrangements of Numbers?

Q: 3. Questions related with Geometry

Q: 4. What is Fermat's last theorem?

Q: 5. Give details about waves?

Q: 6. If inclined plane move so what mechanics will be there?

Q: 7. Tell any five lines about chemistry?

Q: 8. Define differential equations?

Q: 9. Give chemical formulae of some organic compounds like benzene.

Q: 10. What is heat?

Q: 11. Types of works?

Q: 12. Equations of motion for constant acceleration?

Q: 13. Geometrical optics: a pencil in water looks tilted. Why?

Q: 14. Difference between Galilean and terrestrial telescope?

Q: 15. Working of terrestrial telescope.

Q: 16. Maths: They gave a number And said what is important about this. (That no. was either Ramanujan number or Aryabhata number)

Q: 17. What is a perfect number?

Q: 18. Chemistry: What is Ellingham diagram?

Q: 19. What are your future plans? What are you going to do in future?

Q: 20. Which is your favourite subject?

Q: 21. What is parallax? How do you measure distance between earth and moon/ earth and stars.

Q: 22. How do you measure earth's radius?

Q: 23. What's your father's profession?

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Q: 24. Which institute would you like to join in Udaipur and why?

Q: 25. If we provide you scholarship, then what will you do with that in Science (research) field?

Q: 26. What are your future plans? What are you going to do in future?

Q: 27. Draw the graph of  $\frac{1}{\sqrt{x-1}}$ .

Q: 28. A man is standing on an escalator. If he climbs the stairs while the escalator is stopped, then it takes time  $t_1$  to climb up. If he is standing while the escalator is moving, then it takes time  $t_2$ . What time will be taken if both the man and the escalator are moving?

Q: 29. What's your father's profession?

Q: 30. What would you do if you got no scholarship?

Q: 31. Write the cell reaction for Daniell cell?

Q: 32. Sketch the curve;  $y = \left[ \sqrt{2 - x^2} \right]$ ; where [.] denotes the greatest integer function.

Q: 33. Can bromide ion reduce ferric ion?

Q: 34. The value of the reaction quotient Q, for the cell.

$\text{Zn}(s) | \text{Zn}^{2+} (0.01\text{M}) || \text{Ag}^{+1} (1.25 \text{M}) | \text{Ag}(s)$  is:

Q: 35. From which glacier does the Godavari river originate?

Q: 36. How will you check pH of a solution?

Can a solution of pH = 3 be changed to pH = 7? How.

Q: 37. In which coaching institute are you studying?

Q: 38. What is the ratio of frequencies of the notes 'Sa' and 'Ga' in musical instruments?

Q: 39. If take measurements for  $\text{Al}_2$  gas at 300K, 400K, 500 K and find its specific heat capacity constant. Can I differ that the heat capacity of  $\text{H}_2$  gas is constant?

Q: 40. Do you know about Vanderwaals gas equation?

Q: 41. Explain – 1st law, 2nd law, 3rd law of thermodynamics.

Q: 42. Is the temperature of a single molecule defined?

Q: 43. What was the need of 2nd law of thermodynamics.

Q: 44. Define the temperature.

Q: 45. Why is water not used to put out the fire caused by petrol?

Q: 46. Why is TEL used in vehicle fuels?

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Q: 47. What is science?

Q: 48. What are hypothesis and thesis?

Q: 49. Which is your favourite subject and why?

Q: 50. A polynomial  $p(x)$  when divided by  $x^2 - 3x + 2$  leaves remainder  $2x - 3$ . Then:  $p(x)$  cannot have a root between 0 and 3 Or  $p(x)$  must have a root between 0 and 3

Q: 51. The number of distinct pair  $(x,y)$  of the real number satisfying  $x = x^3 + y^4$  and  $y=2xy$  is :  
5, 12, 3 OR 7

Q: 52. The number of integers  $a$  such that  $1 \leq a \leq 100$  and  $a^a$  is a perfect square is:

(A) 50

(B) 53

(C) 55

(D) 56

Q: 53. Two solid sphere of same radius ( $r$ ) and same material are placed in contact gravitational force between them is proportional to

(A)  $r^{-2}$

(B)  $r^{+2}$

(C)  $r^{+4}$

(D)  $r^{-4}$

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