



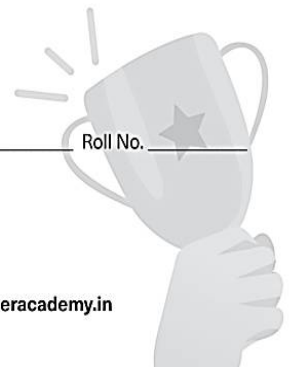
TALENT SEARCH EXAM

INSTRUCTIONS

1. Immediately fill in the particulars on this page of the Test Booklet with Blue/Black Ball Point Pen. Use of pencil is strictly prohibited.
2. Test duration is ONE HOUR (60MINUTES)
3. The Test Booklet consists of 40 questions of 4 marks each. The maximum marks are 160.
4. There are four sections in the question paper.
The distribution of question, subject wise in each part is mentioned below.

SCIENCE	- 10 Questions
SOCIAL SCIENCE	- 10 Questions
MATHEMATICS	- 10 Questions
MENTAL ABILITY	- 10 Questions
5. Candidates will be awarded Four marks (+4) each for indicated correct response of each Question & One mark (-1) deduct for indicated incorrect response. No deduction from the total score will be made if no response is indicated.
6. No candidate is allowed to carry any textual material, printed or written, bits of papers, mobile phone, any electronic device etc.
7. After the completion of the test, the candidate must hand over the Answer Sheet to the Invigilator on duty in the Room/Hall. However, the candidates are allowed to take away this Test Booklet with them.
8. Do not fold or make any stray marks on the Answer sheet.

Name : _____ Class : _____ Roll No. _____



SCIENCE

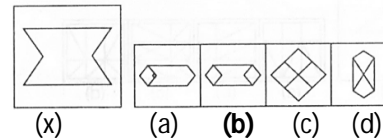
- Which of the following is not ultimately derived from the sun's energy
 (a) Geothermal energy
 (b) Wind energy
(c) Nuclear energy
 (d) Bio – mass
- Three resistors having resistances $2\ \Omega$, $4\ \Omega$ and $8\ \Omega$ are connected in parallel arrangement. The equivalent resistance is
 (a) $\frac{8}{7}\ \Omega$
 (b) $\frac{7}{8}\ \Omega$
 (c) $1\ \Omega$
 (d) $14\ \Omega$
- The phenomenon of electromagnetic induction is
 (a) the process of charging a body
 (b) The process of generating magnetic field due to current passing through a coil.
(c) Producing induced current in a coil due to relative motion

between a magnet and the coil

- (d) None of these
- Which of the following compound can't be used as an acid & base at a same time?
 (a) Amphoteric substance
 (b) Amphiprotic substance
 (c) Ampholyte
(d) photophilic
- Primary ore of aluminium is which of following
 (a) Kaolinite
(b) Bauxite
 (c) Malachite
 (d) Cinnabar
- Which of the following can also be termed as a thermal decomposition reaction
 (a) Combination
(b) Decomposition
 (c) Displacement
 (d) Double placement
- Which of the following is non-renewable source of energy.

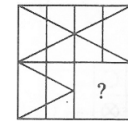
boys are there between R and W ?

- (a) 15
(b) 16
 (c) 17
 (d) cannot be Determined
- If $7 * 2 = 81$, then what is the value of $8 * 5$?
 (a) 144
 (b) 89
(c) 169
 (d) 121
- What is the number of rectangles in the following figure?
 (a) 6
 (b) 7
(c) 8
 (d) 9
- In the given question, you are given a figure (X) followed by four figures (a), (b), (c) and (d) such that (X) is embedded in one of them. Trace out the correct alternative.



- In this question, problem figure is given on the left side of the line, which is incomplete. One, out of the four answer figures (a), (b), (c) and (d) can complete the same. You have to locate the answer which if inserted in the problem figure without changing the direction completes the same.

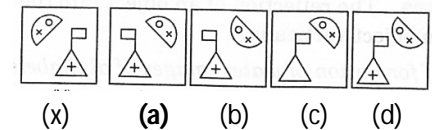
Problem Figure



Answer Figure



- Choose the correct mirror image of the figure (X) form amongst the four alternatives (a), (b), (c) and (d) given along with it



equations $37x + 43y = 123$, $43x + 37y = 117$, then $x + y$ is equal to
 (a) -7
 (b) 7
(c) 9
 (d) -9

29. If two zeros of the polynomial $f(x) = x^3 + x^2 - 5x - 5$ are $\sqrt{5}$ and $-\sqrt{5}$, then its third zero is
 (a) 1
(b) -1
 (c) 2
 (d) -2

30. If $f(x - 1) = 2x^2 - 3x + 5$ then the remainder when $f(x)$ is divided by $x - 1$
 (a) 5
 (b) 4
 (c) 10
(d) 7

MENTAL ABILITY

31. If 'diamond' is called 'gold', 'gold' is called 'silver', 'silver' is called 'ruby' and 'ruby' is called 'emerald', which is 'golden yellow metal'?

- (a) Diamond
(b) Silver
 (c) Gold
 (d) Ruby

32. AZ, CX, FU, \dots
 (a) IR
 (b) IV
(c) JQ
 (d) KP

33. Pointing to a man, Sanjay said, "His son is my son's uncle". How is the man related to Sanjay?
 (a) Father
(b) Uncle
 (c) Brother
 (d) Grandfather

34. Insert the missing letter or numerical value in the given question

5	11	55
7	?	91
6	16	96

- (a) 11 (b) 12
(c) 13 (d) 14
35. In a row of thirty boys, R is fourth from the right end and W is tenth from the left end. How many

- (a) Petroleum**
 (b) Solar energy
 (c) Wind energy
 (d) Tidal energy.

8. Human heart is:
(a) 4 - chambered
 (b) 3 - chambered
 (c) 2 - chambered
 (d) None of these.
9. The term "allele" refers to:
(a) Different forms of same gene
 (b) Genetic mutation
 (c) Chromosomal abnormalities
 (d) Genetic disease.
10. Which of the following is vestigial organ:
(a) Appendix
 (b) Liver
 (c) Stomach
 (d) Colon

SOCIAL SCIENCE

11. The Frankfurt Parliament was held in the year

- (a) 1948 A.D.
 (b) 1748 A.D.
 (c) 1648 A.D.
(d) 1848 A.D.

12. The personality who organized Dalits into the depressed classes association in 1930 was
(a) B.R. Ambedkar
 (b) M.K. Gandhi
 (c) Maulana Azad
 (d) Bal Gangadhar Tilak.
13. Roof top rainwater harvesting system in Rajasthan is known as:
 (a) Guls
 (b) Kuls
(c) Tanks
 (d) Baobs.
14. Which one of the following is the example of plantation agriculture?
 (a) Jute
 (b) Wheat
(c) Tea
 (d) Oilseeds.

15. The administrative head of Municipal Corporation is called

- (a) Mayor
(b) Deputy-Mayor
(c) Municipal Commissioner
(d) Sarpanch.
16. When did the Civil Rights Movement take place in USA?
(a) 1953-1958
(b) 1954-1968
(c) 1960-1978
(d) 1946-1968.
17. Which one of the following activities does not belong to the primary sector?
(a) Agriculture
(b) Dairy
(c) Mining
(d) Weaving.
18. What was 'Barter System' based on?
(a) Double coincidence of wants
(b) Wants of buyer
(c) Wants of seller
(d) Climatic conditions.

19. The Indian Wildlife(Protection) Act was implemented in
(a) 1958
(b) 1960
(c) 1965
(d) 1972
20. Which one of the following countries is good example of 'holding together federations'.
(a) USA
(b) Switzerland
(c) India
(d) Britain

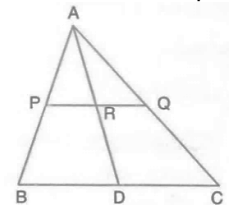
MATHEMATICS

21. If $a = 2^3 \times 3$, $b = 2 \times 3 \times 5$, $c = 3^n \times 5$ and $LCM(a, b, c) = 2^3 \times 3^2 \times 5$, then $n =$
(a) 1
(b) 2
(c) 3
(d) 4

22. If the sum of the roots of the equation $x^2 - x = \lambda(2x - 1)$ is zero, then $\lambda =$
(a) -2
(b) 2
(c) $-\frac{1}{2}$
(d) $\frac{1}{2}$
23. The perimeter of an isosceles right triangle the length of whose hypotenuse is 10cm, is
(a) 20cm
(b) $20\sqrt{2}$ cm
(c) $10(\sqrt{2} + 1)$ cm
(d) $(10\sqrt{2} + 9)$ cm
24. If $\sec\theta + \tan\theta = x$, then $\tan\theta =$
(a) $\frac{x^2+1}{x}$
(b) $\frac{x^2-1}{x}$
(c) $\frac{x^2+1}{2x}$
(d) $\frac{x^2-1}{2x}$
25. If the system of equations $2x + 3y = 5$, $4x + ky = 10$ has infinitely many solutions, then $k =$

- (a) 1
(b) $\frac{1}{2}$
(c) 3
(d) 6

26. The number of terms of the A.P. 3, 7, 11, 15, ... to be taken so that the sum is 406 is
(a) 5
(b) 10
(c) 12
(d) 14
27. In Fig, if $PQ \parallel BC$, $AP = 3\text{cm}$, $AR = 4.5\text{cm}$, $AQ = 6\text{cm}$, $AB = 5\text{cm}$ and $AC = 10\text{cm}$, then AD is equal to



- (a) 5.7 cm
(b) 7.6 cm
(c) 5.5 cm
(d) 7.5 cm
28. If x, y is the solution of the pair of linear