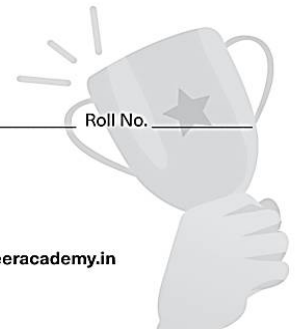




INSTRUCTIONS

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

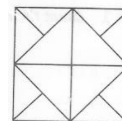
- How much work is done in moving a charge of 2C across two points having a potential difference of 12V ?
(a) 24 J
 (b) 12 J
 (c) 6 J
 (d) 3 J
- The device used for producing electric current is called a
(a) Generator
 (b) Galvanometer
 (c) Ammeter
 (d) Motor
- Which of the following is not an example of a bio mass energy source?
 (a) wood
 (b) Gobar Gas
(c) Nuclear energy
 (d) Coal
- According to Robert Boyle, which of the following is not an acid property?
 (a) Turn blue litmus red
 (b) neutralizes based

(c) sour in taste
(d) bitter in taste

- Which of the following is not an appropriate ore for iron extraction
 (a) Hematite
 (b) Magnetite
 (c) siderite
(d) iron pyrites
- A student performs an experiment to form aluminium chloride from aluminium & chlorine. Which of the following option gives chemical equation of reaction?
 (a) $Al + Cl_2 \rightarrow AlCl_2$
 (b) $2Al + Cl_2 \rightarrow 2AlCl$
(c) $2Al + 3Cl_2 \rightarrow 2AlCl_3$
 (d) $3Al + 3Cl_2 \rightarrow 2AlCl_3$
- Which of the following is the ultimate source of energy for us?
 (a) LPG
 (b) Nuclear
(c) Solar
 (d) CNG.

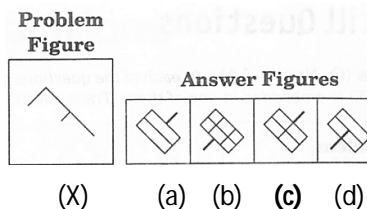
- If + is \div , \div is +, \times is - and - is \times , then the value of $24 \times 12 + 4 \div 6 + 2 - 3$ is
(a) 30
 (b) 4
 (c) 5
 (d) 6

- How many triangles are contained in the given figure?



- (a) 9
 (b) 12
 (c) 13
(d) 20

- 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.

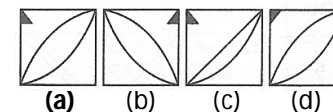


- In this question, problem figure is given on the left side of the line, which is incomplete. One, out of the four answer figures (a), (b), (c) and (d) can complete the same. You have to locate the answer which if inserted in the problem figure without changing the direction completes the same.

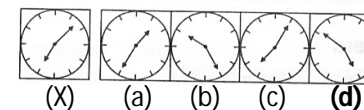
Problem Figure



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



- (a) $\frac{3}{7}$
(b) $-\frac{3}{2}$
 (c) $\frac{9}{2}$
 (d) $-\frac{9}{2}$

30. If $f(x + 1) = 3x^2 - 5x + 1$, then the remainder when $f(x)$ is divided by $x + 1$

- (a) -1
 (b) 9
 (c) 1
(d) 23

MENTAL ABILITY

31. If $Z = 52$ and $ACT = 48$, then BAT will be equal to
 (a) 41
 (b) 39
 (c) 44
(d) 46
32. 10, 90, 170, 250, 340, 410
 (a) 170
 (b) 250
(c) 340
 (d) 410
33. Pointing to a man in a photograph, a woman

said, "His brother's father is the only son of my grandfather". How is the woman related to the man in the photograph?

- (a) Mother
 (b) Niece
(c) Sister
 (d) Daughter

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

3	7	52
5	11	126
?	9	107

- (a) 18
(b) 26
 (c) 36
 (d) 6
35. Ravi is 7th ranks ahead of Sumit in a class of 39. If Sumit's rank is 17th from the last, what is Ravi's rank from the top?
 (a) 14th
 (b) 12th
(c) 16th
 (d) 11th

8. The respiratory pigment in human beings is:

- (a) Carotene
 (b) Chlorophyll
(c) Haemoglobin
 (d) None of these

9. Mendel conducted his famous breeding experiment by working on;

- (a) Drosophila
(b) Pisum sativum
 (c) Escherichia coli
 (d) All of these.

10. What is the probability that the male progeny will be a boy?

- (a) 50%**
 (b) 56%
 (c) 47%
 (d) 100%.

SOCIAL SCIENCE

11. The term "suffrage" means
(a) Right to vote
 (b) Right to religious practice
 (c) Right to property
 (d) Right to express.

12. The Swaraj Party was formed by

- (a) C.R. Das and Motilal Nehru**
 (b) Motilal Nehru and M.A. Jinnah
 (c) M.K. Gandhi and C.R. Das
 (d) Motilal Nehru and Radha Krishnan.

13. On which one of the following rivers the Tehri Dam is being constructed?

- (a) Bhagirathi**
 (b) Yamuna
 (c) Koshi
 (d) Sutlej.

14. Which one of the following crops is the example of plantation farming?

- (a) Rice
 (b) Wheat
(c) Rubber
 (d) None of these.

15. Which of the following state was born out of culture, ethnicity and geography.

- (a) Kerala
(b) Nagaland

- (c) Mizoram
(d) Assam.
16. Apartheid was the name of a system unique to
(a) South America
(b) South Africa
(c) Asia
(d) Europe.
17. The other name of primary sector is
(a) Service sector
(b) Industrial sector
(c) Agriculture and related sector
(d) Manufacturing sector.
18. Deposits in bank accounts withdrawn on demand are called:
(a) Fixed deposit
(b) Recurring deposit
(c) Demand deposit
(d) None of these.
19. Periyar Tiger Reserve is situated in which state of India.
(a) Jammu & Kashmir
(b) Kerala
(c) Tamil Nadu
(d) Madhya Pradesh

20. The federal form of government was first established in the
(a) United State of America
(b) India
(c) Belgium
(d) Sri Lanka

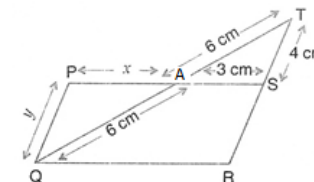
MATHEMATICS

21. If $a = 2^2 \times 3^x$, $b = 2^2 \times 3 \times 5$, $c = 2^2 \times 3 \times 7$, and $LCM(a, b, c) = 3780$, then $x =$
(a) 0
(b) 1
(c) 2
(d) 3
22. If the sum and product of the roots of the equation $kx^2 + 6x + 4k = 0$ are equal, then the value of k is
(a) $-\frac{3}{2}$
(b) $\frac{3}{2}$
(c) $\frac{2}{3}$
(d) $-\frac{2}{3}$
23. The length of the hypotenuse of an

isosceles right triangle whose one side is $4\sqrt{2} \text{ cm}$ is
(a) 12 cm
(b) 8 cm
(c) $8\sqrt{2} \text{ cm}$
(d) $12\sqrt{2} \text{ cm}$

24. If $\sec\theta + \tan\theta = x$, then $\sec\theta =$
(a) $\frac{x^2+1}{x}$
(b) $\frac{x^2+1}{2x}$
(c) $\frac{x^2-1}{2x}$
(d) $\frac{x^2-1}{x}$
25. The value of k for which the system of equations
 $x + 2y = 5$
 $3x + ky + 15 = 0$ has no solution is
(a) 6
(b) -6
(c) $3/2$
(d) none of these
26. If the first term of an A.P. is 2 and common difference is 4, then the sum of its 40 terms is
(a) 3200
(b) 1600

- (c) 200
(d) 2800
27. In Fig. $PQRS$ is parallelogram, if $AT = AQ = 6 \text{ cm}$, $AS = 3 \text{ cm}$ and $TS = 4 \text{ cm}$, then



- (a) $x = 4, y = 5$
(b) $x = 2, y = 3$
(c) $x = 1, y = 2$
(d) $x = 3, y = 4$
28. If $217x + 131y = 913$ and $131x + 227y = 827$, then $x + y$ is equal to
(a) 5
(b) 6
(c) 7
(d) 8
29. If the product of two zeroes of the polynomial $f(x) = 2x^3 + 6x^2 - 4x + 9$ is 3, then its third zero is