This booklet contains **32** pages.

J

Test Booklet Code

Test Booklet Number →

Do not open this Test Booklet until you are asked to do so.

Read carefully the Instructions given in this Test Booklet.

Name of the Candidate (in Capitals) : _____

Roll Number : in figures _____

: in words _____

Centre of Examination (in Capitals) : _____

Candidate's Signature : _____   Invigilator's Signature : _____

Fascimile Signature Stamp of
Centre Superintendent : _____

INSTRUCTIONS

1. This question paper booklet contains **FIVE** sections. **Section "A"** Mathematics contains **50** questions of **4** marks each. **Section "B"** English, **Section "C"** General Science, **Section "D"** Social Studies and **Section "E"** Intelligence contain **25** questions each, of **2** marks per question. In all, the paper consists of **150** questions for a total of **400** marks. Answer all questions.

2. Duration of the test is 3 hours. (180 minutes)

3. The question paper booklet is in English only, for all the candidates.

4. The question paper booklet is of **32** pages. Please check and ensure that the question paper booklet is complete and contains all the pages.

5. Answer all questions in the OMR answer sheet only.

6. The OMR Answer Sheet is inside this Question Paper Booklet. When you are directed to open the Question Paper Booklet, take out the OMR Answer Sheet and fill in the particulars carefully with Blue/Black ball point pen only.

7. Darken only one circle as your correct answer for each question. If you darken more than one circle for the same question, your answer will be treated as wrong.

8. There is no negative marking for a wrong answer.

9. Do not make unnecessary marks on the OMR answer sheet or fold or attempt to deface it. If you do so, your answer sheet will not be evaluated.

10. Use Blue/Black ball point pen only for writing particulars on this page and for writing answers. Do not use pencil.

11. Rough work is to be done on the space provided for this purpose in the Question Paper Booklet only and not on the OMR sheet.

12. On completion of the test, hand over the OMR Answer Sheet to the Invigilator before leaving the Room/Hall.

13. You are allowed to take away this Question Paper Booklet with you.

14. The CODE for this Booklet is **J**. Make sure that the CODE printed on the OMR Answer Sheet is the same as that on this Question Paper Booklet. In case of discrepancy, report the matter immediately to the Invigilator for replacement of both the Question Paper Booklet and the Answer Sheet.

15. Do not write your Roll No. anywhere else except in the specified space in the Question Paper Booklet / OMR Answer Sheet.

16. Do not use white fluid for carrying out any correction on the OMR Answer Sheet.

SJ91

SECTION - 'A' : MATHEMATICS

001 If $a = 5 + 2\sqrt{6}$ and $b = \dfrac{1}{a}$, then what will be the value of $a^2 + b^2$?

    (1) 100   (2) 96   (3) 102   (4) 98

002 Gauransh has 290 cards. Tanya has 150 cards. How many cards must Gauransh give to Tanya so that Tanya may have 3 times as many cards as Gauransh ?

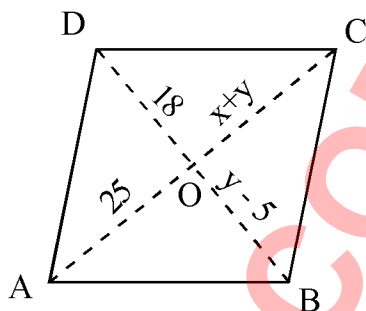   (1) 180   (2) 40   (3) 140   (4) 80

003 A's present age is twice that of B. If B's age 5 years ago was b, then what is A's present age ?

    (1) $2b + 5$ (2) $2b - 5$ (3) $2b - 10$ (4) $2b + 10$

004 If *ABCD* is a parallelogram, then find the value of *x* and *y*,

where $OC = x + y,\ OD = 18$

$OB = y - 5$ and $OA = 25$

    (1) $x = 13,\ y = 12$ (2) $x = 2,\ y = 23$ (3) $x = 23,\ y = 2$ (4) $x = 12,\ y = 13$

005 Statement A : Every parallelogram is a trapezium and every rhombus is a kite.

Statement B : Every rectangle is a square but every square is not a rectangle.

    (1) Both A and B are true

    (2) A is true and B is false

    (3) A is false and B is true

    (4) Both A and B are false

SJ91

006 The denominator of a rational number is greater than its numerator by 2. If the denominator is increased by 5 and the numerator is decreased by 2, the number obtained is $\dfrac{1}{10}$. The rational number is :

(1) $\dfrac{25}{8}$

(2) 3

(3) 1

(4) $\dfrac{3}{5}$

007 Which one of the following is a pythagorean triplet in which one side differs from the hypotenuse by two units ?

(1) $(2n+1, 4n, 2n^2 + 2n)$

(2) $(2n, 4n, n^2 + 1)$

(3) $(2n^2, 2n, 2n+1)$

(4) $(2n, n^2 - 1, n^2 + 1)$

008 The ratio of the circumference of 2 wheels is 5:3. Find the ratio of the radii of the 2 wheels.

(1) 5:3

(2) 3:5

(3) 9:10

(4) 10:9

009 The following marks are obtained by a student in different subjects during formative assessment in 8 subjects. Find median.

7, 3, 8, 0, 9, 10, 8, 7

(1) 7.5

(2) 9

(3) 6.5

(4) 8, 7

010 Factorize $4a^2 - 9b^2 - 2a - 3b$. Identify the correct factorize answer.

(1) $(2a - 3b)\,(2a - 3b - 1)$

(2) $(2a - 3b)\,(2a + 3b + 1)$

(3) $(2a + 3b)\,(2a + 3b + 1)$

(4) $(2a + 3b)\,(2a - 3b - 1)$

011 $\sqrt[4]{\sqrt[3]{2^2}}$ is equal to :

(1) $2^{-\frac{1}{6}}$

(2) $2^{\frac{1}{6}}$

(3) 2^{-6}

(4) 2^{6}

012 Match List-I with List-II :

	List-I		List-II
(A)	$3m \times 2m$	(I)	$16a^2$
(B)	$-9m \times -3n$	(II)	$6m^2$
(C)	$4a^2 \times 4a^2$	(III)	$27mn$
(D)	$2a \times 8a$	(IV)	$16a^4$

Choose the correct answer from the options given below :

(1)   (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

(2)   (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

(3)   (A)-(II), (B)-(III), (C)-(IV), (D-(I)

(4)   (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

013 If a 4-digit number $2x\,y8$ is exactly divisible by 3, then which of the following is the least value of $(x + y)$?

(1)   2   (2)   4   (3)   6   (4)   5

014 Find the digits A and B if

$$
\begin{array}{r}
BA \\
\times\ A4 \\
\hline
13A0 \\
\hline
\end{array}
$$

(1)   5, 4   (2)   5, 2   (3)   4, 5   (4)   2, 5

015 One of the factors of $6x^2 + 5x - 6$ is :

(1) $2x - 3$ (2) $3x + 2$ (3) $2x + 3$ (4) $2x - 2$

016 A tree broke at a height of 6m from the ground and its top touched the ground at the distance of 8m from the foot of the tree. Find the height of the tree.

(1)   10 m   (2)   14 m   (3)   16 m   (4)   2 m

017 The following bar graph shows the average daily hours of sunshine in two cities during the year. Observe the double bar graph and answer the following question.

In which month is the difference between average hours of sunshine of two cities least?
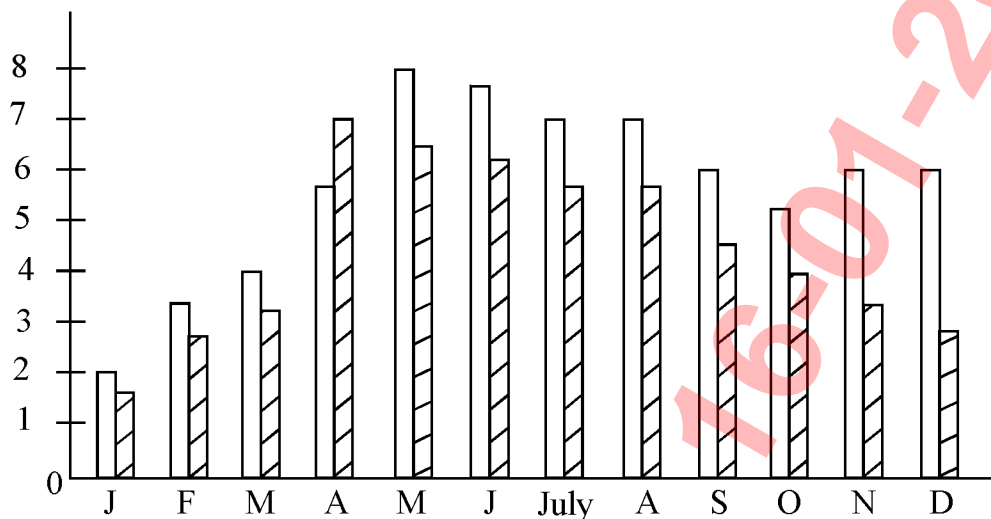
    (1) December   (2) May   (3) January   (4) February

018 If one of the number of a Pythagorean triplet is 10, the triplet is :

    (1) (23, 25, 10)   (2) (10, 24, 26)   (3) (5, 8, 10)   (4) (3, 4, 10)

019 If one number is twice the other number and the sum of the squares of two numbers is 50,000, then find the difference of numbers.

    (1) 10000   (2) 50   (3) 100   (4) 10

020 Evaluate : $\sqrt[3]{1372} \times \sqrt[3]{1458}$

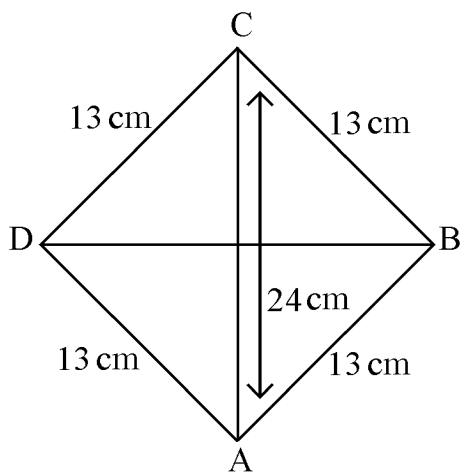   (1) 126   (2) 136   (3) 116   (4) 106

021 If $a = 12$, $b = -5$ and $c = -7$, then the value of $a^3 + b^3 + c^3$ is :

    (1) 1360   (2) 420   (3) 1260   (4) −1260

022 The value of a smart phone depreciates every year by 40%. Find out its value after 2 years if its present value is ₹ 70000.
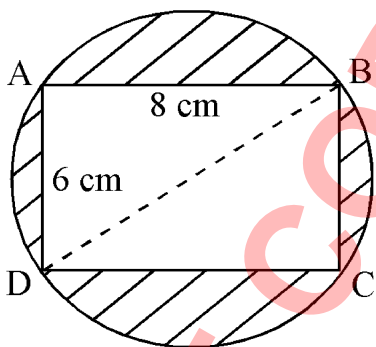
    (1) ₹ 28000   (2) ₹ 16800   (3) ₹ 25200   (4) ₹ 35000

SJ91

023 Find the area of Rhombus *ABCD* having each side equal to 13 cm and one of its diagonal is 24 cm.

(1) 80 cm² (2) 140 cm² (3) 100 cm² (4) 120 cm²

024 A rectangle ABCD is inscribed in a circle having sides 8 cm and 6 cm. Find the area of the shaded region.

(1) 32 cm² (2) 30.5 cm² (3) 40.5 cm² (4) 36 cm²

025 Find *m* so that $(-5)^{m+1} \times (-5)^{m-1} = (-5)^3$

(1) 1 (2) 3 (3) 5 (4) $\dfrac{3}{2}$

SJ91

026 Arun bought binder clips at the rate of 5 for a rupee. He had to sell them at the rate of 6 for a rupee. Find his loss percent in the transaction.

(1) $\dfrac{40}{3}\%$ (2) $\dfrac{50}{3}\%$ (3) $\dfrac{10}{3}\%$ (4) $\dfrac{20}{3}\%$
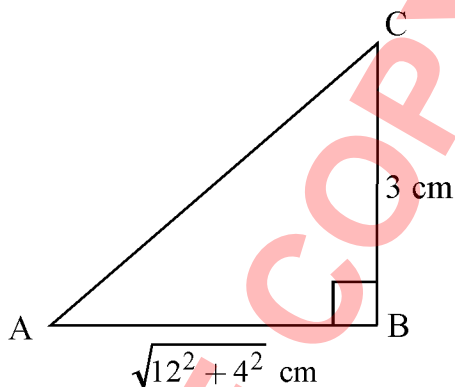
027 For what value of m

$$xy^2 m = (2xy + 5y)^2 - (2xy - 5y)^2$$

(1) -100 (2) 100 (3) 40 (4) -40

028 Which is the like term as $84xy^2z^2$?

(1) $-3 \times 8 \times x \times y \times z \times z$ (2) $12 \times 7 \times x \times x \times y \times z \times z$

(3) $-5 \times 6 \times x \times x \times y \times y \times z$ (4) $6 \times 4 \times x \times z \times y \times z \times y$

029 *ABC* is a right angled triangle, which is right angled at *B*. If $AB = \sqrt{12^2 + 4^2}$ cm, $BC = 3$ cm, then find out the perimeter of the given figure :
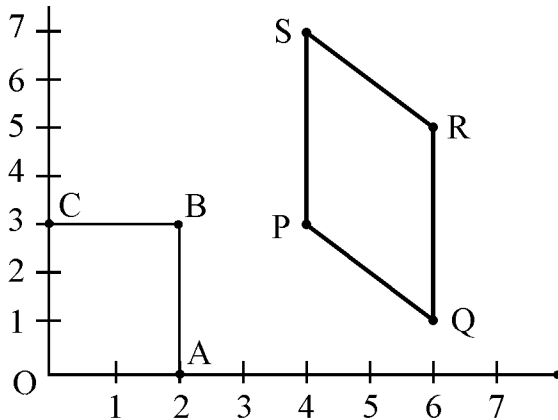

(1) $(4\sqrt{10} + 16)$ cm   (2) $(16\sqrt{10} + 4)$ cm

(3) $(8\sqrt{10} + 2)$ cm   (4) $(2\sqrt{10} + 8)$ cm

030 A bicycle wheel makes 1000 revolutions in moving 2 km. Find the diameter of the wheel.

(1) 1.57 m   (2) 1.27 m   (3) 6.036 m   (4) 0.636 m

SJ91

031 Identify the correct coordinates of the vertices of rectangle OABC from the adjoining figure.

(1) $O(0,0), A(2,0), B(2,3), C(0,3)$

(2) $P(4,3), Q(6,1), R(6,5), S(4,7)$

(3) $O(0,0), A(0,2), B(3,2), C(3,0)$
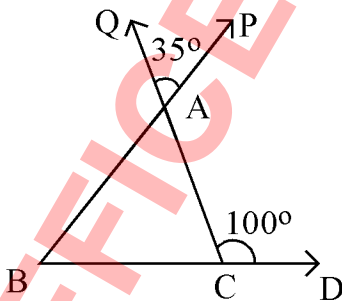
(4) $O(1,1), A(0,2), B(2,3), C(3,3)$

032 A cistern can be filled by one tap in 4 hours and by another tap in 3 hours. How long will it take to fill it, if both taps are opened together ?

(1) $\dfrac{11}{7}$ hours   (2) $\dfrac{12}{7}$ hours   (3) $\dfrac{7}{12}$ hours   (4) $\dfrac{7}{11}$ hours

033 Choose the correct remainder when $p(x):3x^2+4x+5$ is divided by $g(x):x-2$:

(1)   20   (2)   25   (3)   30   (4)   35

034 In the Fig. $\angle QAP = 35°$ and $\angle ACD = 100°$. Find $\angle ABC$:

(1)   55°   (2)   65°   (3)   75°   (4)   50°

SJ91

035 Which of the following cannot be true for a polyhedron ?

(1) $V=4, F=4, E=6$ (2) $V=6, F=8, E=12$

(3) $V=20, F=12, E=30$ (4) $V=4, F=6, E=6$

036 Consider the following distribution :

Class	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
Frequency	17	28	32	f	19

If the mean of the above distribution is 50, what is the value of f ?

(1) 24 (2) 34 (3) 56 (4) 96

037 The mean of 20 observations is 19. On checking it was found that the two observations were wrongly copied as 3 & 6. If wrong observations are replaced by correct values 8 and 9, then what is the correct mean ?

(1) 19.4 (2) 16.6 (3) 15.8 (4) 14.2

038 A person has 2 bags. First bag has 3 black and 4 white balls. Second bag has 4 black and 3 white balls. A bag is selected at random and then a ball is selected from it. Find the probability of the ball to be black.

(1) $\dfrac{1}{3}$ (2) $\dfrac{1}{4}$ (3) $\dfrac{1}{7}$ (4) $\dfrac{1}{2}$

039 What is the probability that the number selected from the numbers 1, 2, 3, ... 30 is a prime number.

(1) $\dfrac{1}{29}$ (2) $\dfrac{5}{6}$ (3) $\dfrac{1}{3}$ (4) $\dfrac{2}{3}$

SJ91

040 In India people speak different languages. Choose the correct option in degrees which represent the number of people speaking Tamil using the information given in the chart :
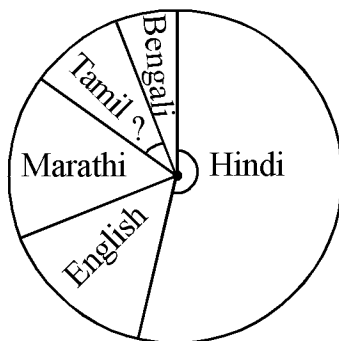
	Language	Number of People
(i)	Hindi	40
(ii)	English	12
(iii)	Marathi	9
(iv)	Tamil	7
(v)	Bengali	4
	Total	72

(1) 45°   (2) 35°   (3) 20°   (4) 60°

041 The following line graph shows the yearly sales figures for a manufacturing company. Study the line graph and answer the following question.

The average sales of the company of the even years will be,
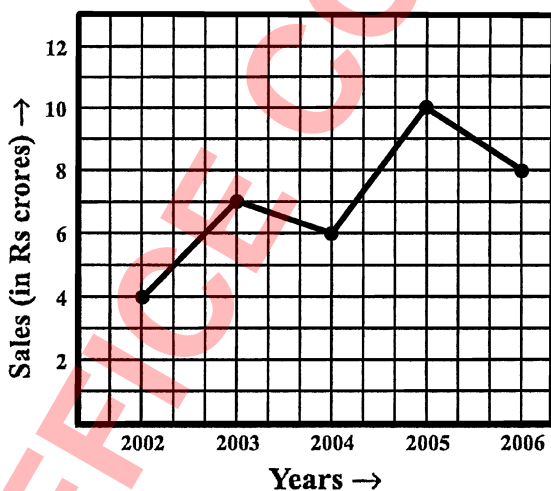
(1) 7   (2) 8.5   (3) 6   (4) 18

042 15 boys earn ₹ 900 in 5 days. How much will 20 boys earn in 7 days ?

(1) ₹ 1680   (2) ₹ 1720   (3) ₹ 1420   (4) ₹ 2008

043 If $AB \parallel CD$ and $EF \parallel GH$ then find $\angle QRH$:

```
              A              C
               \              \
               _\             _\
E ←-------------P-------------Q-------------→ F
                 \ 110°         \
                  \              \
                   \             ? _\
G ←----------------S-------------R-------------→ H
                    \             \
                    _\            _\
                     B             D
```
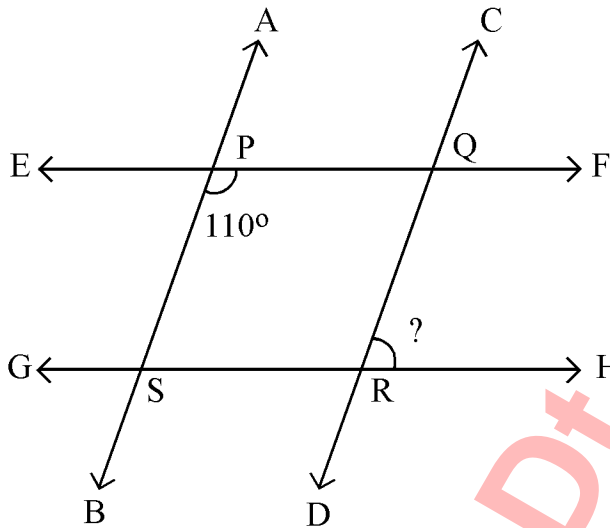
(1) 105°   (2) 50°   (3) 110°   (4) 70°

044 In what time will ₹ 160000 amount to ₹ 176400 at 5% per annum compounded annually?

(1) 4 years   (2) 3 years   (3) 2 years   (4) 1 year

045 Anita borrows ₹ 1000 at 10% p.a. simple interest for 3 years. She immediately lends this money at compound interest at the same rate and for the same time. What is her gain at the end of 3 years ?

(1) ₹ 40   (2) ₹ 41   (3) ₹ 30   (4) ₹ 31

046 Mohan can do a piece of work in 25 days alone and Rohan can finish it in 20 days. They work together for 5 days & then Mohan left the work. In how many days will Rohan finish the remaining work ?

(1) 20 days   (2) 9 days   (3) 14 days   (4) 11 days

047 There are 200 employees in an office. Food provision for them is for 20 days. How long will this provision last if 90 of them leave the group ?

(1) 16 days   (2) 25 days   (3) 17 days   (4) 30 days

048 5 pipes are required to fill a tank in 1 hour 36 minutes. How long will it take if 2 pipes stopped working ?

(1) 57.40 minutes   (2) 2 hours   (3) 48 minutes   (4) 2 hour 40 minutes

049 The Curved surface area of a cylindrical pipe is $2\pi\,(x^2+x-132)$ metres and its radius is $(x+12)$ metres. What will be the height of the pipe ?

(1) $(x+12)$ sq. m   (2) $(x-11)$ sq. m

(3) $(x-11)$ m   (4) $(x+12)$ m

050 Match List-I with List-II :

List-I		List-II	
(A)	$(7a+6b)(7a-6b)$	(I)	$49a^2+84ab+36b^2$
(B)	$(7a+6b)^2$	(II)	$49a^2+21ab-18b^2$
(C)	$(7a-6b)^2$	(III)	$49a^2-36b^2$
(D)	$(7a+6b)(7a-3b)$	(IV)	$49a^2-84ab+36b^2$

Choose the correct answer from the options given below :

(1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(3) (A)-(III), (B)-(I), (C)-(IV), (D-(II)

(4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

SJ91

SECTION - 'B' : ENGLISH

051 Choose the correct option :

The synonym of 'take' is _____

(1) except   (2) accept   (3) ignore   (4) refuse

052 Choose the correct option :

The antonym of 'Stiff' is _____.

(1) bland   (2) dark   (3) limp   (4) bright

053 Choose the correct option to fill in the blank :

They aren't good scuba divers, _____ ?

(1) could they ?   (2) are they ?   (3) can they ?   (4) will they ?

054 Which of the following is an assertive sentence ?

(1) Do you enjoy Idli Sambhar ?

(2) You are requested to stand in line.

(3) The Taj is a beautiful monument.

(4) Hurrah ! the school team has won the match.

055 Match the poems/books with poets/authors :

Poems/Books	Poets/Authors
(A) Vocation	(I) Rabindranath Tagore
(B) Christmas Carol	(II) Jawaharlal Nehru
(C) Geography Lesson	(III) Charles Dickens
(D) Discovery of India	(IV) Zulfikar Ghose

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(2) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

(3) (A)-(II), (B)-(IV), (C)-(III), (D-(I)

(4) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

SJ91

Direction : Read the passage given below : **(Q. No. 056 to 060)**

Valentin Hauy developed a system of reading for the blind. He printed normal letters in relief that could be felt by a touch of finger. He also started a school for the blind children. Hauy's system of reading for the blind was very useful. But it was quite difficult to learn. Moreover, it was only a reading system. There was no way for the blind to write in this system. In 1819, a ten-year-old blind boy named Louis Braille entered Hauy's school. He was an intelligent student and quickly learnt to read with the help of embossed letters. But he soon realised the disadvantages in Hauy's system. He made up his mind to develop an easier method of reading and writing for the blind. And in 1824, when he was only 15, Braille invented a system of writing which has been accepted all over the world. He was yet a student in Hauy's school. This school is now known as the National Institute for Blind Children. It is supported by the French government.

On the basis of your understanding of the passage, answer the following questions :

056 What according to the passage was the major disadvantage in Hauy's system ?
- (1) It was difficult to comprehend.
- (2) Hauy's system was difficult for the blind to use for writing.
- (3) It was easy to learn.
- (4) It was a regular reading and writing system.

057 What according to you is Louis Braille known for ?
- (1) A blind boy
- (2) A general student in Hauy's school
- (3) The inventor of a system of reading and writing for the blind
- (4) A ten year old boy

058 He printed letters in relief.
Here the word - 'relief' means _____.
- (1) engraved
- (2) in a depressed form
- (3) normal form
- (4) in a raised form

059 Give the *synonym* of the word - 'invent'.
- (1) create
- (2) realize
- (3) discover
- (4) unearth

060 Give the *antonym* of the word - 'develop'.
- (1) grow
- (2) decline
- (3) overweight
- (4) ripe

SJ91

061 Match the following books/poems with their authors/poets :

Books / Poems		Authors / Poets
(A)	Treasure Island	(I) Major H.P.S. Ahluwalia
(B)	Swami and Friends	(II) Robert Louis Stevenson
(C)	Harry Potter	(III) R.K. Narayan
(D)	The Summit Within	(IV) J.K. Rowling

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(3) (A)-(I), (B)-(II), (C)-(IV), (D-(III)

(4) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

062 Choose the correct option.

The mason is building the wall.

The above sentence would be written in passive form as :

(1) The wall are being built by the mason.

(2) The wall is being built by the mason.

(3) The mason is being built by the wall.

(4) The wall was being built by the mason.

063 Choose the correct option.

His _____ is in the ascendant.

(1) galaxy (2) universe (3) star (4) luckily

064 Identify the error and choose the correct option.

Energy is very essential in succeed in life.

(1) in-to (2) is-was (3) in-for (4) is-were

065 Choose the correct option :

Ramesh and his brother _____ dancing.

(1) was (2) were (3) will (4) would

066 Choose the correct option that has the right rearrangement of words to make a meaningful sentence.

    (A) butter

    (B) is a

    (C) bread and

    (D) combination

    (E) tempting

Choose the correct answer from the options given below :

(1) (D), (A), (E), (C), (B)   (2) (A), (B), (D), (C), (E)

(3) (C), (A), (B), (E), (D)   (4) (A), (B), (E), (C), (D)

067 Choose the correct option that has the right rearrangement of words to make a meaningful sentence.

    (A) is important

    (B) rules

    (C) it

    (D) to observe

    (E) traffic

Choose the correct answer from the options given below :

(1) (C), (A), (D), (E), (B)   (2) (D), (A), (B), (C), (E)

(3) (E), (B), (A), (C), (D)   (4) (A), (B), (C), (E), (D)

068 Choose the correct option to fill in the blanks

The patient was _____ weak to walk without help.

(1) too   (2) little   (3) much   (4) few

069 Choose the correct preposition :

Are you looking for anything _____ particular ?

(1) over   (2) among   (3) above   (4) in

SJ91

070 Choose the correct option and fill in the blanks :

My sister said, "You lied to me yesterday."

My sister said that _____ to her _____.

(1) you had lied, yesterday

(2) I had lied, yesterday

(3) I had lied, the previous day

(4) you had lied, the previous day

071 Identify the subject in the following sentence :

The Board of Directors has arrived.

(1) The Board   (2) The Board of Directors

(3) Directors   (4) The Board of

072 Choose the correct option :

Sam is a _____ man.

(1) first   (2) handsome   (3) half   (4) delicious

073 Choose the correct option to fill in the blank :

The _____ man died in the hospital.

(1) injury   (2) injure   (3) to injure   (4) injured

074 Identify the positive degree from the following options :

(1) Hottest   (2) Hot   (3) Hotter   (4) Hotters

075 Choose the correct option to complete the following sentence :

Did _____ see her paintings ?

(1) her   (2) them   (3) you   (4) him

SECTION - 'C' : GENERAL SCIENCE

076 Choose the feasible displacement reaction from the options given below :

(1) Copper sulphate + Zinc granules   (2) Iron sulphate + Copper turnings

(3) Zinc sulphate + Iron nails   (4) Zinc sulphate + Copper turnings

077 Plastic containers or boxes are mostly preferred to store food items because these are -

(1) non biodegradable

(2) non reactive

(3) poor conductor of heat and electricity

(4) more expensive

078 If current is passed through copper sulphate solution copper gets deposited on the plate connected to -

(1) positive terminal of battery   (2) negative terminal of battery

(3) when battery is not connected   (4) copper deposited on both plates

079 ISRO stands for -

(1) Indian Science Research Organisation

(2) International Science Research Organisation

(3) Indian Space Research Organisation

(4) Interstate Research Organisation

080 Identify which is not a water pollutant from the following :

(1) Sewage   (2) Algae   (3) Fertilisers   (4) Weedicides

081 Which of these gases are responsible for global warming ?

(1) CO_2, methane and water vapour   (2) CO_2, sulphur dioxide, water vapour

(3) CO, CO_2 and water vapour   (4) CO_2, ozone and methane

082 The bread or idli dough becomes fluffy because of -

(1) Heat   (2) Grinding

(3) Growth of yeast cells   (4) Kneading

083 Identify the name of a book carrying information about endangered species from the following :

(1) Red Data Book   (2) Record Data Book

(3) Record Book   (4) Observation Book

084 Identify the traditional methods of Irrigation -

(a) Chain pump

(b) Lever system

(c) Sprinkler system

(d) Drip system

(1) Both (a) and (c)   (2) Both (a) and (b)

(3) Both (c) and (d)   (4) Both (d) and (a)

085 Name a National Park situated in Pachmarhi Biosphere Reserve from the following -

(1) Satpura National Park   (2) Bori National Park

(3) Jim Corbett National Park   (4) Tawa National Park

086 Ankush has just entered his adolescence years. He wishes to know what should be eaten to remain healthy. Which of the following set of food should he consume to remain fit and healthy ?

(1) Milk, rice, dal, leafy vegetables

(2) Chips, leafy vegetables, milk, burger

(3) Milk, dal, leafy vegetables, fried snacks

(4) Dal, rice, burger, chips

087 At puberty which hormone is secreted by ovaries ?

(1) Estrogen   (2) Growth hormone

(3) Testosterone   (4) Insulin

088 Metamorphosis in frog is controlled by this hormone -

(1) Insulin   (2) Thyroxine   (3) Estrogen   (4) Adrenaline

SJ91

089 Tadpole develops into an adult frog by the process of -

(1) Fertilisation   (2) Metamorphosis   (3) Budding   (4) Adaptation

090 Force acting opposite to the direction of motion of a body is -

(1) Gravitational Force   (2) Electrical Force

(3) Friction Force   (4) Atmospheric Pressure

091 Human ears are sensory organs that help to hear sound. Its outer portion can be seen. The rest of the delicate ear is buried deep inside the skull. Identify the correct sequence from Outer ear to Inner ear -

     (A) Auditory Nerve

     (B) Ear drum

     (C) Pinna

     (D) Ear tube

     (E) INNER EAR

Choose the correct answer from the options given below :

(1) (C), (D), (B), (E), (A)   (2) (B), (C), (D), (E), (A)

(3) (A), (B), (C), (D), (E)   (4) (D), (E), (A), (B), (C)

092 Match List I with List II :

List-I	List-II
(A) Braille	(I) Splitting of white light into seven colours
(B) Kaleidoscope	(II) Left of the object appears right and right appears left
(C) Dispersion	(III) Resource for visually (Blind) challenged person
(D) Lateral inversion	(IV) Beautiful patterns are formed because of multiple reflection

Choose the correct answer from the options given below :

(1) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)

(2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(4) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

093 Identify the correct sequence of process that results in lightning -

    (A)   Magnitude of accumulated charge becomes large.

    (B)   Accumulation of negative charge near the lower edges of cloud.

    (C)   Air becomes conductor of charges.

    (D)   Accumulation of positive charge near the upper edges of cloud.

    (E)   Negative and positive charge meet producing streaks of bright light and sound called as lightning.

Choose the correct answer from the options given below :

(1) (A), (C), (B), (D), (E)   (2) (D), (B), (C), (A), (E)

(3) (D), (B), (A), (C), (E)   (4) (A), (C), (B), (D), (E)

094 The calorific value of a fuel is expressed in the unit -

(1) g/J   (2) kg/J   (3) kJ/kg   (4) J/g

095 To electroplate silver (Ag) on a metal object, what will you choose as cathode, anode and electrolyte ?

(1) Cathode - metal object, Anode - silver bar, Electrolyte - copper salt

(2) Cathode - silver bar, Anode - metal object, Electrolyte - silver salt

(3) Cathode - metal object, Anode - silver bar, Electrolyte - silver salt

(4) Cathode - copper rod, Anode - silver bar, Electrolyte - copper salt

096 Rashi was unable to hold the greasy tumbler of milk in her hand. It would be because-

(1) Greasing has made the surface smooth, increasing the friction

(2) Greasing has made the surface rough, decreasing the friction

(3) Greasing has made the surface smooth, reducing the friction

(4) Greasing has made the surface rough, increasing the friction

097 'Combine' is a machine. Identify from the following for which it is used ?

(1) For harvesting and threshing   (2) For sowing and harvesting

(3) For threshing and sowing   (4) For irrigation and sowing

SJ91

098 Which of the following statements is incorrect for CNG ?

(1) It can be easily transported through pipes.

(2) It is more polluting.

(3) It is stored under high pressure.

(4) It is used as fuel for transport vehicles.

099 Amish has to demonstrate a Science Activity on Ignition temperature from the objects given to him like paper sheets, candle, matchbox and water. The correct sequence for the activity to work will be -

(A) Light the candle.

(B) Pour the water in one of the cups.

(C) Continue heating both the cups.

(D) Make two paper cups by folding a sheet of paper.

(E) Heat both the cups separately with a candle.

Choose the correct answer from the options given below :

(1) (D), (C), (B), (E), (A)   (2) (D), (B), (E), (A), (C)

(3) (D), (B), (A), (E), (C)   (4) (B), (D), (E), (A), (C)

100 Match List - I with List - II :

List-I	List-II
Cell organelles	**Function**
(A) Nucleus	(I) Contains cell organelles
(B) Cell membrane	(II) Control center of all activities of cell
(C) Chromosomes	(III) Transfer of characters
(D) Cytoplasm	(IV) Provide shape and protection

Choose the correct answer from the options given below :

(1) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)

(2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(3) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

(4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

SECTION - 'D' : SOCIAL STUDIES

101 Match List I with List II :

	List-I		**List-II**
(A)	Intensive subsistence	(I)	Slash and burn
(B)	Shifting cultivation	(II)	Amount of capital use is large
(C)	Nomadic herding	(III)	Prevalent in the thickly populated areas
(D)	Commercial farming	(IV)	Move from place to place with their animals

Choose the correct answer from the options given below :

(1) (A)-(I), (B)-(II), (C)-(IV), (D)-(III) (2) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

(3) (A)-(II), (B)-(III), (C)-(I), (D-(IV) (4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

102 Which of the following is a public sector company ?

(1) Maruti Suzuki India Limited (2) Anand Milk Union Limited

(3) Steel Authority of India Limited (4) Pesticide Factory of Union Carbide

103 Arrange in chronological order :

(A) Tughlaq Dynasty

(B) Early Turkish

(C) Khalji Dynasty

(D) Rajput Dynasty

(E) Lodi Dynasty

Choose the correct answer from the options given below :

(1) (D), (C), (A), (E), (B) (2) (D), (B), (C), (A), (E)

(3) (C), (A), (B), (E), (D) (4) (B), (D), (C), (E), (A)

104 Match List I with List II :

	List-I		**List-II**
(A)	Khilafat Agitation	(I)	Mohammad Ali Jinnah
(B)	Rowlatt Act	(II)	Viceroy Curzon
(C)	Salt March	(III)	Shaukat Ali
(D)	Partition of Bengal	(IV)	Mahatma Gandhi

Choose the correct answer from the options given below :

(1) (B) - (I), (C) - (II), (D) - (III), (A) - (IV)

(2) (A) - (III), (B) - (I), (C) - (IV), (D) - (II)

(3) (D) - (IV), (B) - (III), (C) - (I), (A) - (II)

(4) (A) - (III), (C) - (II), (D) - (I), (B) - (IV)

SJ91

105 Match List I with List II :

List-I		List-II	
(A) Right to Equality	(I)	Prohibits human trafficking	
(B) Right to Freedom	(II)	Equal before law	
(C) Right to Freedom of Religion	(III)	The right to form associations	
(D) Right against Exploitation	(IV)	The right to practise any religion of their choice	

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(I), (C)-(IV), (D)-(II) (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(3) (A)-(I), (B)-(II), (C)-(III), (D-(IV) (4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

106 Identify the crop which is not classified as a plantation crop ?

(1) Rice   (2) Tea   (3) Sugarcane   (4) Cashew

107 Who founded the "Brahmo Samaj" ?

(1) Dayanand Saraswati   (2) Raja Rammohan Roy

(3) Ishwar Chandra Vidyasagar   (4) Pandita Ramabai

108 Choose the correct meaning of 'Patent'.

(1) It means adding the value of any commodity.

(2) It means enhancing the usability of any thing.

(3) It means reducing cost of production.

(4) It means the exclusive right over any idea or invention.

109 Who am I ?

I am founder of Sur dynasty.

(1) Humayun   (2) Sher Shah   (3) Alauddin   (4) Genghis Khan

110 Identify the source of funds for the Gram Panchayats.

(1) Income tax   (2) Government school's fee

(3) Taxes on national highways   (4) Taxes on houses, market places etc.

111 Choose the landform, which is not formed by the river ?

(1) Ox-bow   (2) Levees   (3) Meanders   (4) Loess

112 Iron made from iron ore is the product of _____ .

(1) Marine industry
(2) Mineral based industry
(3) Agro based industry
(4) Forest based industry

113 When and to whom the British Parliament transferred their powers in order to ensure a more responsible management of Indian affairs ?

(1) 1857, East India Company

(2) 1859, Lawrence - The Viceroy

(3) 1858, Governor General with the title of Viceroy

(4) 1887, Dinshaw Wacha

114 Which Article of the Constitution of India provides every citizen the Fundamental Right to life including the Right to health ?

(1) Article 15   (2) Article 360   (3) Article 12   (4) Article 21

115 Choose the meaning of the word Metamorphic from the following -

(1) Fire
(2) Settle down
(3) Change of form
(4) Air

116 Match List I with List II :

List-I		**List-II**
(A)	The Brahmo Samaj	(I) Jyotirao Phule
(B)	The Ramkrishna Mission	(II) Swami Dayanand
(C)	Gulamgiri	(III) Raja Rammohan Roy
(D)	Arya Samaj	(IV) Swami Vivekananda

Choose the correct answer from the options given below :

(1) (B) - (IV), (C) - (I), (D) - (II), (A) - (III)

(2) (A) - (IV), (B) - (III), (C) - (II), (D) - (I)

(3) (C) - (II), (D) - (III), (A) - (IV), (B) - (I)

(4) (D) - (II), (C) - (III), (B) - (I), (A) - (IV)

117 Choose the correct definition of 'birth rate' from the following options :

(1) The number of births per year

(2) The change in total population during a specific time

(3) The number of live births per 1,000 people

(4) The number of live births per year, per 10,000 people

SJ91

118 The neighbourhood markets are the ones which _____.

(1) are far from our house
(2) are very expensive
(3) provide all necessary items
(4) provide less items

119 The source of fresh water available for human use is -

(1) Rivers
(2) Rain
(3) Drains
(4) Water vapour

120 The Khilafat Movement was led by whom, from the following ?

(1) Mahatma Gandhi
(2) Mohammad Ali and Shaukat Ali
(3) C. R. Das
(4) Mahamud Ali

121 The Veda Samaj established in Madras in 1864 worked for which of the following causes?

(1) Promotion of man
(2) To abolish caste distinctions and for improving the conditions of women
(3) Poor people
(4) Against child marriage

122 The Ladakh desert is mainly inhabited by -

(1) Christians and Muslims
(2) Buddhists and Muslims
(3) Christians and Buddhists
(4) Only Buddhists

123 From the following options, choose which is not true about the Internet ?

(1) Provides worldwide information
(2) Provides interaction
(3) Allows moving physically from one place to another
(4) Enhances E-Commerce

124 From the following, choose the region that is known as 'Orchards of the World'.

(1) Coniferous region
(2) Tropical region
(3) Mediterranean region
(4) Temperate region

125 Sandstone is an example of _____ rock.

(1) Igneous
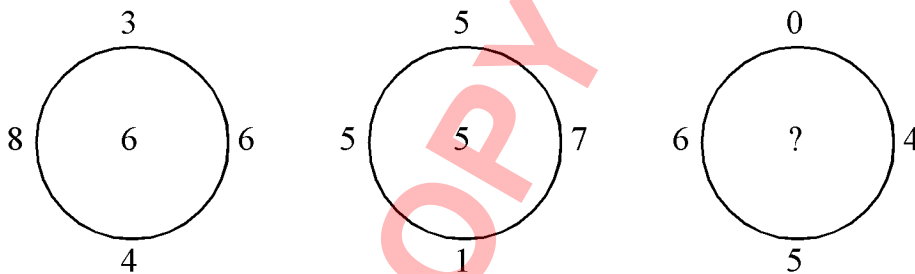(2) Metamorphic
(3) Sedimentary
(4) Extrusive igneous rock

126 Find the missing number
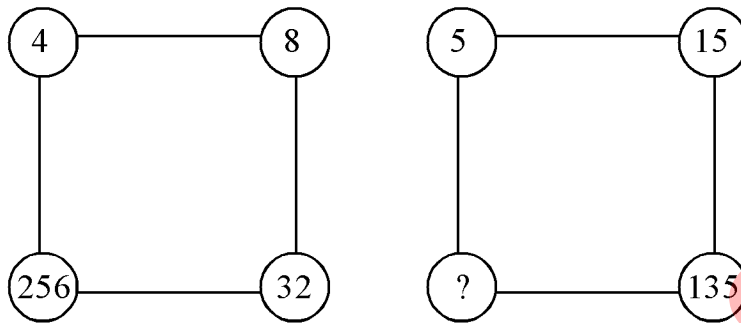
(1)   3800   (2)   3635   (3)   3435   (4)   3400

127 Find the missing term out of the options given below after studying the relationship among the given figures
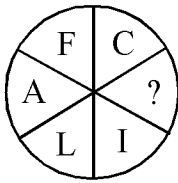

(1)   7   (2)   6   (3)   4   (4)   5

128 Decipher the pattern (study the pattern and fill in the blank)

5	40	7
11	77	6
3	?	9

(1)   29   (2)   43   (3)   52   (4)   30

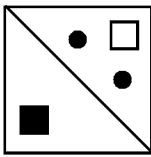**129** Which letter will come in the place of '?'

(1)   M   (2)   N   (3)   O   (4)   P

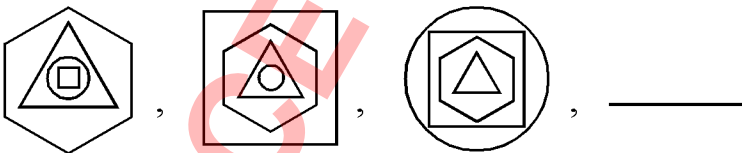**130** Which of the following is the water image of the given figure ?

(1)   (2)   (3)   (4)

131 Identify the correct mirror image of word BLINK $\updownarrow$ along the line XY.

(1)   ꓘꓠIⱠᗺ   (2)   BLINK   (3)   ꓘꓠIⱠᗺ   (4)   ꓘꓠIⱠᗺ

132 Find the next pattern in the sequence

(1)   (2)   (3)   (4)

133 Complete the analogy.

Thermometer : Temperature : : _____ : Current.

(1) Ammeter   (2) Voltmeter   (3) Anemometer   (4) Berometer

134 Arrange the given words in the sequence in which they occur in the dictionary.

     (A) Aaerstd

     (B) Aaersted

     (C) Amquarine

     (D) Acgledhi

     (E) Acgledih

Choose the correct answer from the options given below :

(1) (A), (B), (C), (D), (E)   (2) (A), (B), (D), (C), (E)

(3) (A), (B), (D), (E), (C)   (4) (A), (B), (C), (E), (D)

135 Find the missing word, which has the same relationship with the other word as that between words of different pair.

Pie : Cake : : π : _____.

(1) Pasta   (2) Pastry   (3) Mathematics   (4) Noodles

136 Complete the analogy.

Work : Joule : : _____ : Watt.

(1) Volume   (2) Area   (3) Time   (4) Power

137 Complete the analogy.

Chennai : Tamil Nadu : : Kohima : _____.

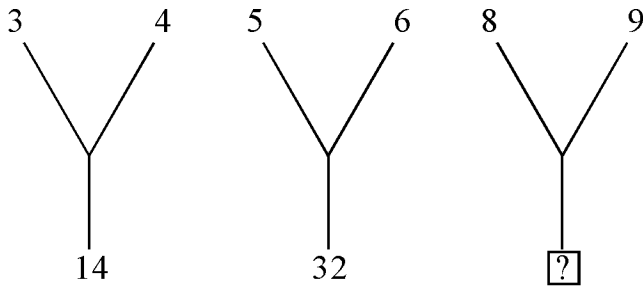(1) Nagaland   (2) Gujarat   (3) Orissa   (4) Meghalaya

138 Choose the odd one out.

ZXV, LJH, IGE, UTR, PNL

(1) PNL   (2) IGE   (3) UTR   (4) ZXV

SJ91

139 Choose the option that will replace question mark (?) in the following -

(1) 28   (2) 42   (3) 74   (4) 72

140 Find the odd one out.

(1) Alphonso   (2) Kesar   (3) Malgova   (4) Sherbati

141 Find the odd one out.

(1) Rhombus   (2) Square   (3) Rectangle   (4) Kite

142 Choose the odd one out.

(1) Scissors   (2) Knife   (3) Axe   (4) Hammer

143 Complete the analogy

36 : 225 : : 1225 : _____.

(1) 7929   (2) 6929   (3) 5929   (4) 4929

144 Find the missing number, which has the same relationship with the other number on the basis of the relation between the numbers in the given pair.

16 : 41 : : 20 : _____.

(1) 71   (2) 53   (3) 44   (4) 67

145 $\dfrac{2}{5} : \dfrac{8}{25} :: \dfrac{11}{15} :$ _____ .

(1) $\dfrac{1331}{225}$ (2) $\dfrac{121}{3375}$ (3) $\dfrac{111}{155}$ (4) $\dfrac{128}{55}$

146 If word MATH is coded as 26, 2, 40, 16, then code for the word BOOK is -

(1) 2, 15, 15, 11   (2) 10, 20, 20, 44

(3) 4, 30, 30, 22   (4) 1, 12, 12, 14

147 A, B, C, D are four friends. A is shorter than B but taller than C who is shorter than D. Who is shortest among all -

(1) A   (2) B   (3) C   (4) D

148 Choose the correct alternative from the given options :

If 8th of April falls on Monday, what Day would be the 30th May of that year ?

(1) Sunday   (2) Monday   (3) Tuesday   (4) Wednesday

149 If the English alphabets are divided into two equal halves from A to M and N to Z such as A corresponds to N, then which letter in the later half would be corresponding to letter K.

(1) X   (2) Y   (3) Z   (4) W

150 Arrange the given responses in a meaningful sequence -

(A) Leaf

(B) Fruit

(C) Stem

(D) Root

(E) Flower

Choose the correct answer from the options given below :

(1) (C), (D), (A), (E), (B)   (2) (D), (C), (E), (A), (B)

(3) (C), (D), (E), (A), (B)   (4) (D), (C), (A), (E), (B)

SJ91