



Instructions : Each question has four options. There is only one correct answer to each question. Choose the **Correct / Most Appropriate** option and darken/blacken the corresponding circle on the OMR Answer Sheet.

SECTION - "A" : MATHEMATICS

001. If the cost price of 14 chairs is equal to the selling price of 10 chairs, then the gain percentage is

- (1) 33% (2) 45%
 (3) $28\frac{4}{7}\%$ (4) 40%

002. The simple interest on a certain sum at the rate of 8.5% for 3 years is ₹ 7,140. Find the simple interest on the same sum at the rate of 7.5% for 2 years.

- (1) ₹ 4,140
 (2) ₹ 4,250
 (3) ₹ 3,980
 (4) ₹ 4,200

003. In how many years, ₹ 1,500 will produce the same simple interest at the rate of 8% as ₹ 6,000 produce in 3 years at the rate of 4%?

- (1) 6 (2) 8
 (3) 5 (4) 7

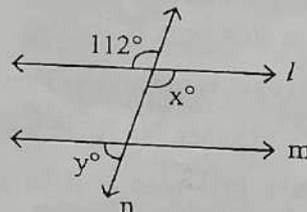
004. On compound interest a certain sum of money amounts to ₹ 34,560 in 2 years and to ₹ 41,472 in 3 years at the same rate of interest. Find the rate of interest per annum.

- (1) 20% (2) 25%
 (3) 12% (4) 10%

005. The compound interest on a certain sum of money for 2 years at 10% per annum is ₹ 525. The simple interest on the same sum of money for double the time at half the rate of interest per annum is

- (1) ₹ 500
 (2) ₹ 600
 (3) ₹ 484
 (4) ₹ 515

006. In the following figure, $l \parallel m$ and n is a transversal. Find the value of $(x + y)$.



- (1) 200 (2) 154
 (3) 168 (4) 180



007. Which of the following statements are true ?

Statement I : If two lines are parallel to a third line, then they themselves are parallel.

Statement II : All the eight angles made by a transversal with two parallel lines are always equal.

Statement III : If the alternate angles made by a transversal with a pair of lines are 80° and 100° , then the lines are parallel.

Statement IV : If the lines are parallel, then the interior angles on the same side of the transversal are supplementary.

(1) only I, III only I, IV

only I, II, III (4) only II, II

008. A, B and C can do a work in 10 days, 16 days and 20 days respectively. They started working together, but B left the work after 4 days. In how many days the work got completed ?

(1) 5

(2) $4\frac{3}{4}$

(3) 4

$5\frac{1}{2}$

009. Amit and Sunil together can do a work in 6 days. If Amit can do it in 10 days, then in how many days can Sunil do it ?

(1) 14 days

16 days

(3) 12 days

15 days

010. If $5^{2x} \times 5^{x+3} \times 5^{5-x} = (\sqrt{5})^{20}$, then the value of 'x' is

0

(2) 2

(3) -1

1

011. The angles of a quadrilateral are in the ratio 2 : 4 : 5 : 7. The measure of smallest of these angles is

20°

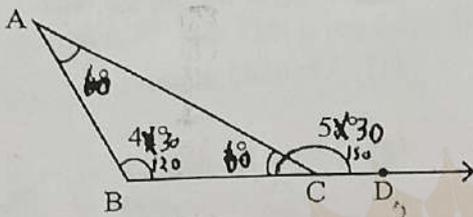
(2) 60°

(3) 10°

40°



012. In the given figure.



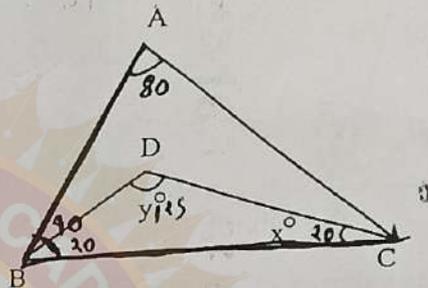
The values of x and 30 , respectively are

- (1) 30, 60
- (2) 36, 40
- (3) 25, 50
- (4) 30, 30

013. A 5 m long ladder is placed against a wall. The foot of the ladder is 3 m away from the base of the wall. How far up the wall does the top of the ladder reach?

- (1) 4 m
- (2) 2.5 m
- (3) 5 m
- (4) 3 m

014. In the figure, in $\triangle ABC$, $\angle A = 80^\circ$ and $\angle ABC = 40^\circ$. BD and CD bisect angles B and C , respectively. The values of x and y respectively are



- (1) 10 and 125
- (2) 20 and 125
- (3) 10 and 130
- (4) 30 and 130

015. If P is the smallest number that should be added to 669 to get a perfect square, then what is the value of $\sqrt{3P+4}$?

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

016. A square and a rectangle have same perimeter. If area of the square is 121 cm^2 and length of the rectangle is 18 cm, then area of the rectangle is

- (1) 324 cm^2
- (2) 198 cm^2
- (3) 121 cm^2
- (4) 72 cm^2



017. If $x = 2 + \sqrt{3}$, then the value of $x^3 + x^{-3}$ is

52

(2) $18\sqrt{3}$

(3) 76

$52\sqrt{3}$

018. The value of $(3^2)^3 \times 3^{-5} \times \sqrt[3]{216} \div \sqrt{9} \times \sqrt[3]{8}$ is

12

24

(3) 10

(4) 18

019. There are 24 men who can build a wall in 10 days. If the wall is to be built in 8 days, then how many additional men need to be employed?

(1) 5

8

(3) 4

6

020. If 5 similar pipes can fill a tank in 2 hours 8 minutes, then in how much time 8 similar pipes will fill the tank?

(1) 1 hour 45 minutes

1 hour 15 minutes

(3) 1 hour 30 minutes

1 hour 20 minutes

021. What is the difference between the greatest and the smallest of the fractions

$\frac{5}{8}, \frac{3}{4}, \frac{4}{7}, \frac{2}{3}, \frac{5}{9}$?

$\frac{7}{36}$

$\frac{5}{28}$

(3) $\frac{5}{72}$

(4) $\frac{1}{9}$

022. Evaluate

$$256 \div \frac{4}{3} + 5 \times \frac{4}{3} - 8 \div \frac{27}{24} \times \left(\frac{1}{3} \text{ of } 81 \right)$$

(1) 3

(2) 84

$\frac{20}{3}$

(4) $\frac{64}{3}$



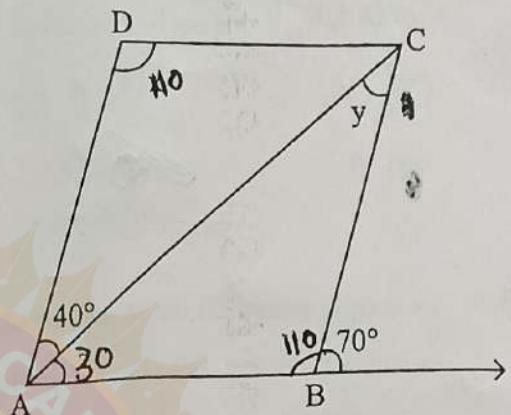
023. The present age of a father is five times the age of his only son. After 10 years, the age of the father will be three times the age of his son. The present age of the father is

- (1) 50 years
- (2) 30 years
- (3) 45 years
- (4) 40 years

024. The denominator of a fraction is 5 more than twice its numerator. If the numerator is increased by 4 and the denominator is decreased by 1, the fraction becomes $\frac{2}{3}$. The original fraction is

- (1) $\frac{3}{11}$
- (2) $\frac{6}{17}$
- (3) $\frac{2}{9}$
- (4) $\frac{4}{13}$

025. In the figure, ABCD is a parallelogram. The measures of the angles x, y and z are



- (1) $x = 110^\circ, y = 40^\circ, z = 30^\circ$
- (2) $x = 70^\circ, y = 40^\circ, z = 30^\circ$
- (3) $x = 100^\circ, y = 50^\circ, z = 30^\circ$
- (4) $x = 90^\circ, y = 20^\circ, z = 70^\circ$

026. What is the mean of the observations 2, 5, 7, 5, 12, 16, 14, 18, 15 and 16?

- (1) 11
- (2) 11.5
- (3) 10
- (4) 11.2

027. The median of ten consecutive even natural numbers starting from 8 is

- (1) 16
- (2) 12.5
- (3) 15
- (4) 17



028. If mode of the observations 5, 7, 11, 14, 15, 16 and $(2k + 3)$ is 11, then the value of $(k + 1)^2$ is

(1) 16

(2) 4

(3) 9

(4) 25



029. A coin is tossed 60 times and head appears 25 times. What is the probability of getting a tail?

(1) $\frac{1}{25}$

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

(3) $\frac{5}{12}$

(4) $\frac{7}{12}$

030. A bag contains 6 black and 8 white balls. One ball is drawn at random. What is the probability that the ball drawn is white?

(1) $\frac{4}{7}$

(2) $\frac{3}{7}$

(3) $\frac{3}{4}$

(4) $\frac{1}{8}$

031. In a polyhedron, there are 18 vertices and 28 edges. The number of faces is

(1) 12

(2) 18

(3) 20

(4) 15

032. Seven equal solid metallic spheres having radius 6 cm are melted to cast a cuboid with length 33 cm and width 24 cm.

What will be the height of the cuboid so formed? (Use $\pi = \frac{22}{7}$)

(1) 7 cm

(2) 9 cm

(3) 6 cm

(4) 8 cm

033. A solid metallic cuboid having dimensions $250 \text{ cm} \times 40 \text{ cm} \times 100 \text{ cm}$ is melted and recast into a solid cube. The edge (in meter) of the cube so formed is

(1) 1 m

(2) 25 m

(3) 100 m

(4) 50 m



034. The area of a parallelogram is 63 cm^2 . If its base is 7 cm, then what is the height of the parallelogram ?

(1) 8 cm

(2) 11 cm

(3) 7 cm

(4) 9 cm

035. If the diagonals of a rhombus are 8 cm and 6 cm, then perimeter of the rhombus is

(1) 15 cm

(2) 25 cm

(3) 10 cm

(4) 20 cm

036. If $\sqrt{18 \times 14 \times x} = 168$, then the value of x is

(1) 112

(2) 117

(3) 113

(4) 115

037. What is the smallest number by which 3087 must be divided, so that the number obtained is a perfect cube ?

(1) 9

(2) 13

(3) 7

(4) 11

038. Karishma paid 15% of her monthly salary towards an EMI. From the remaining salary she paid 10% as internet bill and 20% as rent of the house. If after the mentioned expenses she was left with ₹ 35,105, then what was Karishma's monthly salary ?

(1) ₹ 55,500

(2) ₹ 59,000

(3) ₹ 55,000

(4) ₹ 57,000

039. 76% of the students in a school are boys. If there are 204 girls in the school, then what is the total number of students ?

(1) 800

(2) 900

(3) 760

(4) 850

[P.T.O.]



040. A shopkeeper bought a table and a chair for ₹ 8,000 each. He sold them and made a profit of 8% on the table and incurred a loss of 4% on the chair. The gain percent on the whole transaction is

(1) 3%

(2) 4% ~~3%~~

(3) 5%

(4) 2%

041. A shopkeeper was selling all his items at 25% discount. During the off season, he offered 30% discount over and above the existing discount. If an item is marked for ₹ 2,400, then how much the customer has to pay for it?

(1) ₹ 1,260

(2) ₹ 1,320

(3) ₹ 1,140

(4) ₹ 1,080

042. A shopkeeper marked an item for ₹ 800 and sold the item by allowing 10% discount. If he earned a profit of 20% in the transaction, then what was the cost price of the item?

(1) ₹ 650

(2) ₹ 600

(3) ₹ 680

(4) ₹ 620

043. Two statements are given below:

Statement (I): The sum of $(4a + 2ab - c)$ and $(6a + 3c)$ is $(10a + 2ab + 4c)$.

Statement (II): $(6a + 3c)$ when subtracted from $(4a + 2ab - c)$ gives $(-2a + 2ab - 4c)$.

Choose the correct answer from the options given below.

(1) Statement (I) is false and Statement (II) is true

(2) Both Statements (I) and (II) are false

(3) Statement (I) is true and Statement (II) is false

(4) Both Statements (I) and (II) are true

044. Which of the following is equal to

$$\frac{(312)^2 - (126)^2}{(719)^2 - (281)^2} ?$$

(1) 0.186

(2) 0.438

(3) $\frac{93}{219}$

(4) 1

045. If $a^2 + \frac{1}{a^2} = 51$, $a > 1$, then the value of

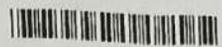
$a - \frac{1}{a}$ is

(1) 7

(2) 11

(3) 5

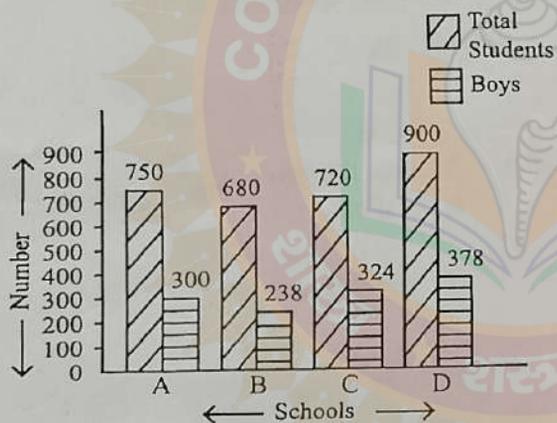
(4) 9



046. When $(5x^2 + 70x - 160)$ is divided by $(x + 16)$, then the quotient is

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

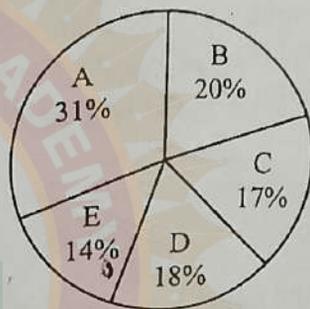
047. In the following bar graph, total number of students and number of boys in the school have been presented for schools A, B, C and D.



Which school has maximum number of girls and what is the percentage of girls in that school ?

- (1) A, 62%
- (2) D, 44%
- (3) A, 40%
- (4) D, 58%

048. A shopkeeper sold 5 kinds of cosmetic creams A, B, C, D and E. The number of creams sold by the shopkeeper in a month is presented in the given pie chart. If the total number of creams sold by the shopkeeper is 800, then how many cream B were sold by the shopkeeper ?



- (1) 152 (2) 182
- (3) 164 (4) 160

049. If the 4-digit number $48ab$ is divisible by 2, 5 and 7, then the value of $(10a - b)$ is

- (1) 30 (2) 50
- (3) 15 (4) 45

050. If 7-digit number $78*3945$ is divisible by 11, then value of '*' is

- (1) 1 (2) 5
- (3) 0 (4) 3



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AC - Com
BC - Ph

SECTION - "B" : INTELLIGENCE

051. A, B, C and D are four friends. A and C like Computer Science while others do not. B and C like Physics while others do not. Who does not like any of these subjects ?

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

052. Choose the figure from given alternatives which contains figure (X) as it's part.

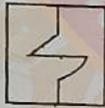


fig. (X)

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

053. Choose the odd one out :

- (1) NLJ ^{14 12 10} 36
- (2) WUS ^{23 21 19} 63
- (3) TQN ^{17 14} 51 (-3, -3)
- (4) KIG ^{11 9 7} 27

054. Complete the following analogy :

CAT : 24 :: MAN : ?

- (1) 28 ^{13 11 4}
- (2) 25
- (3) 22
- (4) 26

055. Arrange the given words as they appear in the dictionary.

- A. Broucher
- B. Brother
- C. Broadcast
- D. Brought
- E. Broadband

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

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

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

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



056. In the following sequence, if the first half of the alphabets are written in reverse order, then which is the 9th letter from the right ?

(Left) E P M Z N R B | C K F G H T N (Right)

- (1) P
- (2) M
- (3) R
- (4) K

057. Choose the odd one out :

- (1) (14, 36, 4)
- (2) (12, 49, 5) $12-5=7^2=49$
- (3) (11, 64, 3) $11-3=8^2=64$
- (4) (13, 25, 8) $13-8=5^2=25$

058. In a certain code language if 'SCIENCE' is written as 'RBHDMBD' then how will be 'HISTORY' written in the same language ?

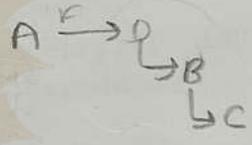
G H R S N Q X

- (1) GHRSPSX
- (2) IJTUPSZ
- (3) GHRSNQX
- (4) GHTSNQX

059. 'Teacher' is related to 'Student' in the same way as 'Doctor' is related to

- (1) Patient
- (2) Practice
- (3) Hospital
- (4) Medicine

060. 'A' is the father of 'D', 'D' is not his son, 'B' is the brother of 'D', 'C' is the mother of 'B'. How is 'C' related to 'A'?



- (1) Mother
- (2) Daughter
- (3) Sister
- (4) Wife

061. Complete the following analogy.

Circle : Diameter :: Rectangle : ?

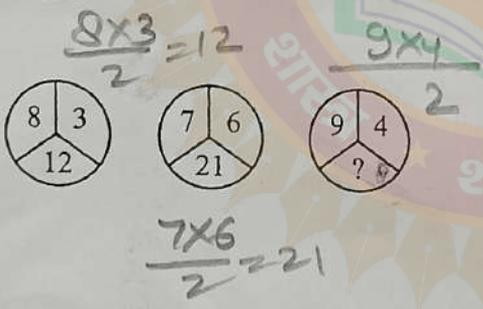
- (1) Perimeter
- (2) Angle
- (3) Radius
- (4) Diagonal



062. 'Cyclone' is related to 'Anti cyclone' in the same way as 'Flood' is related to :

- (1) River
- (2) Sea
- (3) Operation Flood
- (4) Drought

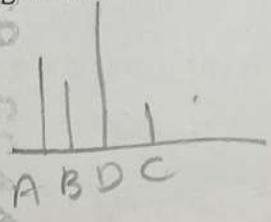
063. The members in each figure follow a similar pattern. Find the missing number.



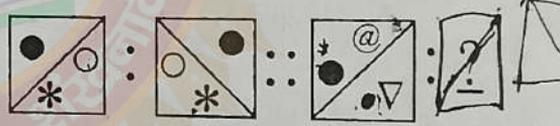
- (1) 17
- (2) 18
- (3) 20
- (4) 19

064. Amit is faster than Bobby but slower than Dharam. Chetan is the slowest. Who is the fastest among these ?

- (1) Amit
- (2) Chetan
- (3) Bobby
- (4) Dharam



065. The first two figures are related in same way. To establish the similar relation with third figure. Choose the correct option.



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



066. If the day before yesterday was Sunday, what day of the week is day after tomorrow ?

(1) Tuesday

(2) Friday

(3) Thursday

(4) Wednesday

*Sun Yes Tod, Tom
m T We Th*

067. Which of the following groups of letters can be rearranged to get the word 'TRIANGLE' ?

(1) GLRFTNIE

(2) ATGRNEIL

(3) LRNTLHEA

(4) GRIATEMN

068. In a certain code language, if 'LATE' is coded as '1234', then how is 'TALE' coded in the same language ?

(1) 2314

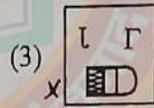
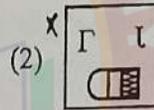
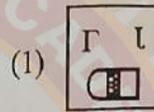
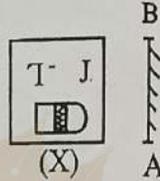
(2) 2341

(3) 1432

(4) 3214

3214

069. Choose the correct mirror image of the following figure (X). If the mirror is kept as shown at line AB.



070. One term in the following series is wrong. Find the wrong term.

2483, 3584, 4685, 5786, 6898, 7988

(1) 4685

(2) 6898

(3) 5786

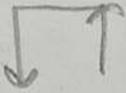
(4) 7988

6887



071. Ram goes straight 40 m towards North. He turns left and covers 50 metres and then again turns left. In which direction is he facing now ?

- (1) South
- (2) West
- (3) North
- (4) East



072. If the boy's position in a row is seventh from left end and eighth from right end. How many boys are there in that row ?

- (1) 17
- (2) 14
- (3) 18
- (4) 15



073. Which number will come in the place of question mark (?) to complete the following matrix ?

3^2	5	7	9	11	13
8	23	46	?	116	163

- (1) 78
- (2) 75
- (3) 80
- (4) 77

Handwritten notes for Q73:

- $3^2 - 1 = 8$
- $5^2 - 2 = 23$
- $7^2 - 3 = 46$
- $9^2 - 4 = 77$
- $11^2 - 5 = 116$

074. Find the missing number in the following series :

Handwritten solution for Q74:

Series: 3, 12, 36, 72, 72, 36, 48

Operations: $\div 4, \div 3, \div 2, \div 1, \div \frac{1}{2}$

(1) 48

- (2) 42
- (3) 6
- (4) 9

075. If 'P' denotes multiplied by, 'T' denotes subtracted by, 'M' denotes added to and 'B' denotes divided by, then 28B7P8T6M4 is equal to

- (1) 1
- (2) 30
- (3) 0
- (4) 25

Handwritten solution for Q75:

$$28 \div 7 \times 8 - 6 + 4$$

$$4 \times 8 - 6 + 4$$

$$32 - 6 + 4$$



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SECTION – “C” : ENGLISH

076. Fill in the blanks with the correct pair of prepositional phrase from the options given below :

She accepted the offer _____ her settlement claim that was finalized by the insurance company _____ their client.

- (1) in lieu of, on behalf of
- (2) on behalf of, in lieu of
- (3) by way of, in lieu of
- (4) in event of, in lieu of

077. Fill in the blanks with the correct conjunctions :

She will help you _____ you ask her but he will be penalised _____ that the charges of aiding and abetting are proved beyond doubt.

- (1) provided, if
- (2) lest, unless
- (3) unless, supposing
- (4) if, provided

078. Choose the correct conjunction to fill in the blank :

_____ she is clever, she often makes mistakes.

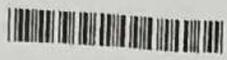
- (1) Since
- (2) Yet
- (3) Despite
- (4) Although

079. Choose the correct spelling from the following options :

- (1) congrous
- (2) conspicuous
- (3) conjuncture
- (4) connoisseur

080. Find out the correctly spelt word from the options :

- (1) Descrepancy
- (2) Discrepancy
- (3) Discrepancy
- (4) Discripancy



Read the passage carefully and answer the questions given below : (from 081 – 085)

Diagnosing disease and prompting treatment options is one thing, but can artificial intelligence really design new drugs to tackle the source of antimicrobial resistance ? Apparently it can, right down to the atom.

Massachusetts Institute of Technology (MIT) has used generative A.I. to structure two new antibiotics that have shown much promise in mice models, killing super bugs that cause drug resistance and MSRA, a bacterial infection many antibiotics fail to cure.

Antimicrobial resistance has become a global public health threat. In 2019, it led to around 5 million deaths, according to World Health Organisation estimates. Excessive use of antibiotics has made bacteria mutate to resist the drug, but very few new antibiotics have been launched over the decades. The MIT study, published in the journal 'cell', aims to bridge the gap.

081. The passage does not talk about

- (1) drug resistance
- (2) use of homeopathy to cure bacterial disease
- (3) generative A.I.
- (4) bacterial mutation

082. Out of the given options, choose the synonym of 'generative'.

- (1) destructive
- (2) generation
- (3) generous
- (4) creative

083. According to the passage, around 5 million people lost their lives in 2019 due to

- (1) antimicrobial resistance
- (2) mice models
- (3) generative A.I.
- (4) new antibiotics

084. According to the passage, which of the following shows the utility of A.I. in providing treatment options ?

- (1) promoting excessive use of antibiotics
- (2) decoding the journal published by various organisations
- (3) helping bacterial mutation to resist the drug
- (4) providing generative A.I. feature to structure new antibiotics

085. According to the passage, what is the cause of bacterial mutation to resist the drug ?

- (1) excessive use of antibiotics
- (2) global public health
- (3) use of generative A.I.
- (4) death of 5 million people



086. Choose the sentence from the options given below that has the correct usage of transitive verb :

- (1) The elephant walks
- (2) The glass broke
- (3) She walks the dog
- (4) She burnt with revenge

087. Choose the sentence with the correct "Present Continuous Tense" usage from the options given below :

- (1) I think you are right
- (2) I have known her for a long time
- (3) Pawan received his letter a week ago
- (4) I am thinking you are right

088. Identify the tense of the following sentence :

"They have been building the stadium for several years."

- (1) Present Continuous Tense
- (2) Present Perfect Continuous Tense
- (3) Simple Present Tense
- (4) Present Perfect Tense

089. Choose from the options which best describes the underlined idiom :

As usual he is blowing his own trumpet.

- (1) playing a tune on the trumpet
- (2) praising himself and others
- (3) refusing to use anybody else's trumpet
- (4) praising himself

090. Choose the correct meaning of the underlined idiom from the options given below :

Sukriti and Sara are at cross-purposes.

- (1) misunderstand each other
- (2) are each others sworn enemies
- (3) are continuously harming each other
- (4) are pursuing different things in life

091. Fill in the blank with the suitable question tag :

Somebody has called, _____ ?

- (1) hasn't they
- (2) haven't they
- (3) has they
- (4) have they

092. Fill in the blank with the suitable question tag :

They haven't come yet, _____ ?

- (1) has they
- (2) hadn't they
- (3) haven't they
- (4) have they

093. Choose the correct conjunction to fill in the blank :

_____ teaching, my father has always been involved in public affairs.

- (1) Similarly
- (2) As well as
- (3) In addition
- (4) No matter

094. Fill in the blank with the correct modal verb :

_____ you show me the way to the station.

- (1) Shall
- (2) May
- (3) Could
- (4) Might

095. Fill in the blank with the correct verb :

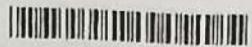
Five thousand rupees _____ charged by him.

- (1) is
- (2) were
- (3) am
- (4) was

096. Choose the correct option to improve the underlined part of sentence :

Krishna is stronger than all students.

- (1) any other student
- (2) all the students
- (3) any other students
- (4) all student



097. Spot the error in the following sentence :

None of the two boys could complete
A B C

the job.
D

(1) B

(2) D

(3) A

(4) C

098. Choose the opposite of the word
'Reasoning' from the given options :

(1) Intrigue

(2) Intuition

(3) Intrepidity

(4) Invariability

099. Choose the correct passive transformation
of the following sentence from the options
given below :

It is time to close the office.

(1) It is time that the office is to be
closed.

(2) It is time that the office be closed.

(3) It is time the office be closed.

(4) It is time for the office to be closed.

100. Choose the correct indirect transformation
of the following sentence from the options
given below :

My mother said, "You should take proper
diet."

(1) My mother said that I must take the
proper diet.

(2) My mother told me that I should take
proper diet.

(3) My mother said that I should take
proper diet.

(4) My mother told me that I must take
the proper diet.



Instructions : Each question has four options. There is only one correct answer to each question. Choose the **Correct / Most Appropriate** option and darken/blacken the corresponding circle on the OMR Answer Sheet.

SECTION – “D” : GENERAL SCIENCE

101. What is the chemical name of milk of magnesia ?

- (1) Magnesium hydroxide
- (2) Ammonium hydroxide
- (3) Sodium hydroxide
- (4) Calcium hydroxide

102. Choose the correct arrangement of different forces of friction.

- (1) rolling friction → sliding friction → static friction
- (2) static friction → sliding friction → rolling friction
- (3) rolling friction → static friction → sliding friction
- (4) sliding friction → static friction → rolling friction

103.

Match the objects mentioned in Column – I with their action mentioned in Column – II :

Column – I

Column – II

- | | |
|--------------------------|---|
| i. Opaque objects | a. allow light to pass through them partially |
| ii. Transparent objects | b. do not allow light to pass through them |
| iii. Translucent objects | c. allow light to pass through them and we can see through these objects easily |

Choose the correct answer from the options given below.

- (1) i – c ii – b iii – a
- (2) i – b ii – a iii – c
- (3) i – c ii – a iii – b
- (4) i – b ii – c iii – a

104. Different types of interactions occurs between organisms.

Match Column – I and Column – II.

Column – I

Column – II

- | | |
|-----------------|--|
| a. Parasitism | 1. Both organisms benefit |
| b. Commensalism | 2. One organism benefits while other is harmed |
| c. Mutualism | 3. One organism benefits while the other is not affected |

Choose the correct answer from the options given below.

- (1) a – 1 b – 2 c – 3
- (2) a – 2 b – 1 c – 3
- (3) a – 2 b – 3 c – 1
- (4) a – 3 b – 1 c – 2



105. Which of the following mirror is used by dentists to see an enlarged image of the teeth ?
- (1) Concave mirror
 - (2) Plane lens
 - (3) Plane mirror
 - (4) Convex mirror
106. Which of the following relation is correct ?
- (1) Speed = Distance \times Time
 - (2) Speed = $\frac{1}{\text{Distance} \times \text{Time}}$
 - (3) Speed = $\frac{\text{Time}}{\text{Distance}}$
 - (4) Speed = $\frac{\text{Distance}}{\text{Time}}$
107. Which of the following statement is NOT true ?
- (1) Water changes its state on heating or cooling.
 - (2) The process of conversion of water vapour into its liquid state is called condensation.
 - (3) Evaporation causes heating effect.
 - (4) Water is found in different states-solid, liquid and gas.
108. The number of oscillations per second of a vibrating object is called as
- (1) Frequency
 - (2) Velocity
 - (3) Amplitude
 - (4) Wavelength
109. Which of the following statement is incorrect ?
- (1) Air is present in water and soil.
 - (2) Aquatic animals use dissolved oxygen in water for respiration.
 - (3) Air does not occupy space.
 - (4) We cannot see air, but we can feel it.
110. Which of the following statement is incorrect ?
- (1) Iron, Nickel and Cobalt are magnetic material.
 - (2) A cylindrical magnet has only one pole.
 - (3) Magnetite is a natural magnet.
 - (4) A freely suspended magnet always aligns in N – S direction.



111. What is the full form of ORS ?

- (1) Oral Rehydration Solute
- (2) Oral Rehydration Solvent
- (3) Oral Rehydration Salt
- (4) Oral Rehydration Solution

112. What is the range of temperature of laboratory thermometer ?

- (1) -10°C to 110°C
- (2) 10°C to 110°C
- (3) 10°C to 90°C
- (4) -10°C to 90°C

113. Choose the incorrect statement.

- (1) Coal and natural gas are fossil fuels.
- (2) Fossil fuels can be made in the laboratory.
- (3) Fossil Fuels are exhaustible resources.
- (4) Fossil fuels are formed from the dead remains of living organisms.

114. The process of depositing a layer of any desired metal on another material by means of electricity is called _____

- (1) Electrophoresis
- (2) Electrostatic
- (3) Electrolysis
- (4) Electroplating



115. The distance - time graph for the motion of an object moving with a constant speed will be _____

(1) Elliptical

(2) Straight Line

(3) Parabolic curve

(4) Hyperbolic

116. What is the function of Alveoli ?

Choose the correct one.

(1) To exchange gases

(2) To filter the air

(3) To protect lungs

(4) Air reaches our lungs through this part

117. What is the function of bile in digestion ?

(1) Digestion of Carbohydrates

(2) Digestion of fats

(3) Digestion of Proteins

(4) Digestion of Amino acid

118. Name the process by which heat is transferred from the hotter end to the colder end of an object.

(1) Radiation

(2) Insulation

(3) Convection

(4) Conduction

119. Richter scale is used to measure _____

(1) Tsunami

(2) Earthquake

(3) Thunder

(4) Lightning

120. Which of the following is NOT a part of Pistil ?

(1) Ovule

(2) Stigma

(3) Style

(4) Anther



121. The animals such as frog, lizard which lay eggs are called

- (1) Oviparous
- (2) Carnivorous
- (3) Viviparous
- (4) Ovoviviparous

122. Distinctive colour of the human eyes are due to which part of the eye ?

- (1) Iris
- (2) Lens
- (3) Pupil
- (4) Cornea

123. Match the micro-organisms given in Column - A with their action given in Column - B :

Column - A

Column - B

- | | |
|------------------|-----------------------|
| A. Rhizobium | i. Causing Malaria |
| B. Lactobacillus | ii. Rust of Wheat |
| C. A protozoan | iii. Setting of curd |
| D. A fungi | iv. Nitrogen fixation |

Choose the correct answer from the options given below.

- (1) A - iii B - iv C - i D - ii
- (2) A - ii B - i C - iv D - iii
- (3) A - i B - ii C - iii D - iv
- (4) A - iv B - iii C - i D - ii

124. Choose the correct order for the processing of fibre into wool.

- (1) Shearing → Scouring → Sorting → Rolling
- (2) Sorting → Rolling → Scouring → Shearing
- (3) Rolling → Scouring → Shearing → Sorting
- (4) Scouring → Shearing → Rolling → Sorting

125. Micro-organisms act upon the dead plants to produce _____

- (1) Wood
- (2) Humus
- (3) Mushrooms
- (4) Sand



Instructions : Each question has four options. There is only one correct answer to each question. Choose the **Correct / Most Appropriate** option and darken/blacken the corresponding circle on the OMR Answer Sheet.

SECTION – “E” : SOCIAL SCIENCE

126. Identify the correctly matched pair.
- (1) Ropar – Himachal Pradesh
 - (2) Lothal – Gujarat
 - (3) Dholavira – Rajasthan
 - (4) Kalibanga – Punjab
127. Which of the following regions was the first to enter into 'subsidiary alliance' of British in 1798 ?
- (1) Hyderabad
 - (2) Goa
 - (3) Bengal
 - (4) Mysore
128. Who amongst the following was the author of 'Prayaga Prashasti' of Samudragupta ?
- (1) Harisena
 - (2) Bharata
 - (3) Kalidasa
 - (4) Suradasa

129. Chinese traveller Fa-Hien visited India during the reign of :
- (1) Mauryan empire
 - (2) Satvahana empire
 - (3) Gupta empire
 - (4) Kushana empire

130. How many of the following constituencies are reserved for the Scheduled Tribes in the Lok Sabha ?
- (1) 84
 - (2) 56
 - (3) 23
 - (4) 47

131. Match List – I with List – II and choose the correct option.

List – I (Leaders of the Revolt of 1857)	List – II (Regions)
A. Rani Lakshmi Bai	I. Lucknow
B. Nana Saheb	II. Bihar
C. Kunwar Singh	III. Kanpur
D. Birjis Qadr	IV. Jhansi

Choose the correct answer from the options given below :

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



132. Who amongst the following British Governor Generals introduced the Permanent Settlement in Bengal ?

- (1) Charles Cornwallis
- (2) William Bentinck
- (3) Warren Hastings
- (4) Henry Hardinge

133. The 'Battle of Plassey' was fought between

- (1) The British and Sirajuddaulah
- (2) The British and Shah Alam
- (3) The British and Nadir Shah
- (4) The British and Tipu Sultan

134. Who amongst the following rulers composed, 'Amuktamalyada' poem in Telugu ?

- (1) Bukka
- (2) Krishnadeva Raya
- (3) Harihara
- (4) Rama Raya

135. An event occurred in 330 CE. How many years it dates back from the year 2024 ?

- (1) 1893 years
- (2) 2353 years
- (3) 1694 years
- (4) 2354 years

136. Which among the following is correct in the context of Himalayas ?

- (1) The Shivalik hills are the lowest ranges of the Himalayas
- (2) The Himadri have a more moderate climate, allowing rich diversity and human habitation
- (3) The Himachal are the highest and most rugged part of the Himalayas
- (4) Mount Everest is the part of Himachal ranges of Himalayas

137. Identify the correctly matched pair.

- (1) Atmospheric Pressure – Thermometer
- (2) Atmospheric Pressure – Hygrometer
- (3) Atmospheric Pressure – Barometer
- (4) Atmospheric Pressure – Anemometer

138. Choose the appropriate option to fill in the blank.

The _____ is a landform that rises up from the surrounding land and has a more or less flat surface, some of its sides are often steep slopes. They have been called 'store house of minerals'.

- (1) Mountain
- (2) Desert
- (3) Plain
- (4) Plateau



139. Puneet called up his friend who resides in another country. He was surprised to know when his friend told him that it was 6 pm there. While he was calling at 9 pm local time. What is the longitudinal difference between the given two countries ?

- (1) 60° (2) 120°
 (3) 45° (4) 90°

140. Find the incorrect option regarding the Nationalist Movement of India.

- (1) Non-Cooperation Movement – 1928
 (2) Quit India Movement – 1942
 (3) Champaran Movement – 1917
 (4) Civil-Disobedience Movement – 1930

141. Match Column – I with Column – II and choose the correct answer from the options given below.

Column – I
(Members of Parliament)

Column – II
(Numbers)

- | | |
|---------------------------------------|--------|
| I. Elected members of Lok Sabha | A. 233 |
| II. Elected members of Rajya Sabha | B. 12 |
| III. Nominated members of Rajya Sabha | C. 543 |

- (1) I-C II-B III-A
 (2) I-A II-C III-B
 (3) I-C II-A III-B
 (4) I-A II-B III-C

142. Which of the following is NOT a part of Parliament of India ?

- (1) The Lok Sabha
 (2) The Panchayat Samiti
 (3) The Rajya Sabha
 (4) The Prime Minister

143. Which one of the following is a method of soil conservation in hilly areas ?

- (1) Terrace farming
 (2) Mulching
 (3) Shelter belts
 (4) Strip cropping

144. Which of the following is a part of Local Self Government ?

- (1) Lok Sabha
 (2) Vidhan Sabha
 (3) Gram Panchayat
 (4) Rajya Sabha



145. On which of the following Lists of the Constitution of India both Union and State Governments Legislate ?

- (1) State List
- (2) Residuary Subject List
- (3) Union List
- (4) Concurrent List

146. Which of the following are the characteristics of sustainable development ?

- A. Justiciable usage of resources.
- B. Unlimited use of resources in present time.
- C. Balancing the need to use resources.
- D. Conserve the resources for future generation.

Choose the correct option from the answers given below :

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

147. In which of the following categories 'Thar' region of India belongs to ?

- (1) Deserts
- (2) River valleys
- (3) Glaciers
- (4) Volcanoes

148. Read the following statements in the context of wind and choose the correct option.

Statement I : Wind is the movement of air from areas of high pressure to low pressure areas.

Statement II : Speed and direction are the only factors affects the wind.

Statement III : Hygrometer is used to measure wind direction.

- (1) Only II is correct
- (2) Only II and III are correct
- (3) Only I is correct
- (4) Only I and II are correct

149. Which one of the following is NOT a method of water conservation ?

- (1) Drip irrigation
- (2) Sprinkler irrigation
- (3) Rain water harvesting
- (4) Agricultural runoff

150. Which of the following statements is correct regarding equator ?

- (1) It is the longest latitude
- (2) It is the frigid zone
- (3) It is the meridian of latitude
- (4) It is the longest longitude