

CAREERS360
PREPARATION Series

NMMS Puducherry

Question Paper and
Answer Key 2024-25

NATIONAL MEANS CUM MERIT SCHOLARSHIP SCHEME

EXAMINATION 2025

KEY FOR MAT

SL. NO.	KEY	SL. NO.	KEY
1	4	46	4
2	3	47	1
3	1	48	1
4	2	49	2
5	2	50	4
6	1	51	3
7	4	52	3
8	3	53	3
9	1	54	4
10	3	55	3
11	4	56	2
12	2	57	1
13	2	58	4
14	4	59	1
15	2	60	2
16	3	61	3
17	2	62	4
18	4	63	1
19	2	64	1
20	3	65	3
21	1	66	2
22	2	67	4
23	4	68	4
24	3	69	4
25	2	70	1
26	2	71	3
27	4	72	3
28	3	73	2
29	4	74	1
30	1	75	1
31	1	76	4
32	2	77	3
33	4	78	1
34	2	79	1
35	4	80	2
36	3	81	4
37	4	82	2
38	1	83	1
39	3	84	3
40	3	85	4
41	4	86	1
42	2	87	4
43	1	88	1
44	4	89	3
45	3	90	2

NATIONAL MEANS CUM MERIT SCHOLARSHIP SCHEME EXAMINATION 2025
KEY FOR SAT

SL. NO.	KEY	SL. NO.	KEY	SL. NO.	KEY
1	1	36	2	71	2
2	3	37	4	72	1
3	4	38	3	73	4
4	1	39	3	74	4
5	1	40	2	75	4
6	2	41	3	76	3
7	1	42	2	77	4
8	4	43	4	78	2
9	1	44	4	79	4
10	1	45	1	80	1
11	3	46	4	81	1
12	2	47	4	82	3
13	2	48	4	83	1
14	4	49	1	84	4
15	1	50	2	85	2
16	3	51	2	86	1
17	3	52	1	87	2
18	1	53	2	88	1
19	3	54	2	89	2
20	2	55	4	90	4
21	3	56	4		
22	4	57	2		
23	4	58	3		
24	3	59	4		
25	2	60	2		
26	2	61	3		
27	1	62	2		
28	2	63	3		
29	3	64	1		
30	3	65	3		
31	3	66	1		
32	1	67	4		
33	1	68	2		
34	1	69	1		
35	4	70	1		



**GOVERNMENT OF PUDUCHERRY
DIRECTORATE OF SCHOOL EDUCATION**

QUESTION BOOKLET

MARCH 2025

**PART – I
MENTAL ABILITY TEST**

Centre Code No.

<input type="text"/>	<input type="text"/>	<input type="text"/>
----------------------	----------------------	----------------------

Register No.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
----------------------	----------------------	----------------------	----------------------

INSTRUCTIONS

1. Answer all the questions. All questions carry one mark each
2. Since all questions are compulsory, do not try to read through the Whole question paper before beginning to answer.
3. Begin with the first question and keep on trying one question after another till you finish all the question.
4. If you do not know the answer to any question, do not spend much time on it but pass on to the next one. If time permits, you can come back to the questions which you have left in the first instance and try them again.
5. Since the time allotted to this question paper is very limited, you should make the best use of it by not spending too much time on any one question.
6. Separate sheets have been provided for rough work in the Question Booklet itself.
7. The answers should be marked on a separate answer sheet provided in the Examination Hall.
8. The answer sheet has two parts corresponding to Part – I and Part –II of the Test.
9. Answer to each question is to be indicated by shading the number of the correct choice in the answer sheet with black ballpoint pen from amongst the ones given for the corresponding question in the test booklet.

(Qns. 1 to 5)

Directions: In each question, the numbers / letters are arranged in a sequence based on a certain principle. Select the answer from the four alternatives given under each sequence to complete the series.

(Qns. 6 to 10)

Directions: Choose the most suitable answer from the given four alternatives.

6. If $6x43 - 19y4 = 4639$, then the value of x is
(1) 5 (2) 6 (3) 7 (4) 9

7. If vowels are left out, which letter would be the 13th consonant?
(1) M (2) N (3) P (4) Q

8. Rakesh is eighth in a queue from either end. How many people are there in the queue?
(1) 13 (2) 14 (3) 15 (4) 16

9. The unit digit in $(364)^{102} + (364)^{103}$ is
(1) 0 (2) 2 (3) 4 (4) 6

10. The sum of first 6 odd positioned letters in complete listing of all 26 alphabets in ascending order is
(1) 16 (2) 25 (3) 36 (4) 48

(Qns. 11 - 12)

Directions: In the following questions three out of the four alternatives are same in a certain way and so form a group. Find the odd one that does not belong to the group.

11. Which one of the following words will come at second place in the Dictionary?

(1) Acidity (2) Acupuncture (3) Accident (4) Accumulate

12. Which one of the following words will Come at fourth place in the Dictionary?

(1) Raise (2) Rain (3) Rapport (4) Rapid

(Qns. 13 - 17)

Directions: Each letter of the alphabet from Z to A has been given a value from 1 to 26 serially. Solve the questions on the basis of value of words.

13. Which word has the maximum value at most?

(1) Mouth (2) Table (3) Tanker (4) Thank

14. Select the Correct Statement?

(1) ROOT +Y is STEM. (2) STEM - Dis LEAF.
 (3) LEAF +Tis FRUIT (4) FRUIT -Q is STEM

15. Which words have the equivalent Value?

(1) FEAR : ACID (2) BASE : THANK (3) WATER : SEAT (4) SOUR: SALT

16. Which equation is Correct?

(1) S+J=A (2) U+J=D (3) V+J=E (4) Y+J=I

17. If ROOT = 40, LEAF = 84, then FRUIT = ?.

(1) 54 (2) 61 (3) 64 (4) 67

(Qns. 18 - 19)

Directions: Which term will come in the place of question mark?

18. **EDOPRS** **SRODE** **EDRS** **?**

(1) EDR (2) SRD (3) DRS (4) SRE

19. A1A, D4E, G7I, ? , M13U

(1) J 10 O (2) J 10 Q (3) P 10 Q (4) G 10 P

20. A die is thrown 24 times. How many times do you expect the number '4' to come up?

(1) 6 times (2) 24 times (3) 4 times (4) 12 times

(Qns. 21 to 25)

Directions: Choose the correct answer from the given options.

21. Assertion (A): James Watt invented the steam engine.

Reason (R): It was invented to pump out the water from the flooded mines.

- (1) Both A and R are true and R is the correct explanation of A.
- (2) Both A and R are true, but R is not the correct explanation of A.
- (3) A is true, but R is false.
- (4) A is false, but R is true.

22. Statement 1: A is bigger than B but shorter than C

Statement 2: D is smaller than C and bigger than A

Statement 3: B is greater than D

If statement 1 and statement 2 are true, statement 3 will be -

- (1) True
- (2) False
- (3) Uncertain
- (4) None of the above

23. What is Geeta's rank in the class?

I. There are 30 students in the class.

II. There are 10 students who scored less than Geeta.

- (1) Statement I alone is sufficient, but statement II alone is not sufficient
- (2) Statement II alone is sufficient, but statement I alone is not sufficient
- (3) Neither I nor II is sufficient
- (4) Both I and II are needed

24. If you are a fitness walker, you don't need to go to a health gym. You also don't need any fitness equipment for workout. All you need is a pair of comfortable athletic shoes.

This paragraph supports which of the following statements;

- (1) Fitness walking is better than weight lifting.
- (2) Walking outdoors provides more health benefits than walking indoors.
- (3) Fitness walking is an effective and convenient form of exercise.
- (4) Poorly designed shoes can cause foot injuries.

25. Statements:

- I) All heroes are villains.
- II) All villains are zeros.
- III) Some heroes are jokers.

Conclusion:

- i) Some Jokers are heroes
- ii) Some villains are jokers
- iii) Some zeros are villains

(1) Only I, II follow.	(2) All I, II, III follows.
(3) Only I, III follows.	(4) Only I, II follows.

(Qns. 26 - 35)

Directions: Choose the correct answer from the given options.

26. If PINK is coded as 1691411, then RED will be coded as -

(1) 1853	(2) 1854	(3) 1954	(4) 1963
----------	----------	----------	----------

27. In a certain code, NAGPUR is coded as OBHQVS, then BENGALURU will be coded as

(1) DGPICMVSV	(2) CROHBMVTV	(3) DGPICNWTV	(4) CFOHBMVSV
---------------	---------------	---------------	---------------

28. If GOLD is coded as HOME and COME is coded as DONE then SONS can be coded as -----

(1) TTOT	(2) TOOS	(3) TOOT	(4) TONT
----------	----------	----------	----------

29. If SALVAR is coded 123456 and SAINT is coded as 12789, then SALIVA will be coded as

(1) 127342	(2) 127324	(3) 123724	(4) 123742
------------	------------	------------	------------

30. If ZEBRA is coded as 1-22-25-9-26, WOLF is coded as 4-12-15-21, then RABBIT is coded as -----

(1) 9-26-25-25-18-7	(2) 18-1-2-2-9-21	(3) 18-1-2-25-18-7	(4) 9-26-2-2-18-7
---------------------	-------------------	--------------------	-------------------

31. In a certain code RAIN is written as 8\$% 6 and MORE is written as 7#8@. How is REMAIN written in that code?

(1) 8@7\$%6	(2) 7@#\$%6	(3) #@&\$%6	(4) #@7\$%6
-------------	-------------	-------------	-------------

32. How many such digits are there in the number 57692483, which after rearranging the digits of the number in descending order from left to right will remain at the same position as before the rearrangement?

(1) None	(2) One	(3) Two	(4) Three
----------	---------	---------	-----------

33. Five friends were travelling by train between stations A and B. Each one gets down at a different station one after the other. Nitin gets down before Lata and Shikha but not before Sunil. Anil is not the last to get down. Who got down first from the train?

(1) Sunil	(2) Nitin	(3) Shikha	(4) Cannot be determined
-----------	-----------	------------	--------------------------

34. If it is possible to make only one meaningful word from the first, the fifth, the seventh, the eighth and the eleventh letters of the word DEPARTMENTAL, first letter of the word is your answer.

(1) A (2) D (3) R (4) None of these

35. If a means “walk”, B means “stand”, y means “run” and 6 means “sit”, how many times does the following sequence of commands require sitting?

$\alpha \beta \gamma \delta \beta \gamma \alpha \delta \delta \gamma \beta \beta \alpha \alpha \beta \delta \gamma \alpha \delta \gamma \alpha \delta \alpha \gamma$

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

(Qns. 36 - 37)

Direction: In each of the following questions, different positions of a dice are given. Answer the questions that follow.



36. Which number is opposite to 5?

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

37. Which number is opposite to 2?

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

(Qns. 38 - 40)

Direction: Three different positions of a dice are given. Observe the positions Answer the questions that follow.



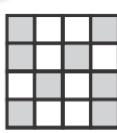
38. Find the number of dots on the face opposite to the face with one dot?

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

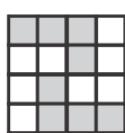
39. Find the number of dots on the face opposite to the face with six dots?

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

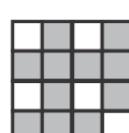
40. Which of the following figures has a line of symmetry?



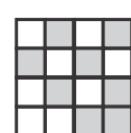
(A)
(1) A



(B)
(2) B



(C)
(3) C

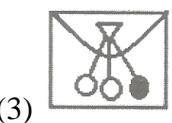
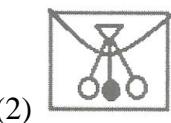
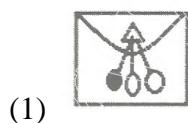
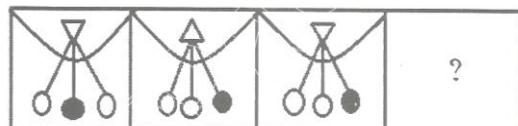


(D)
(4) D

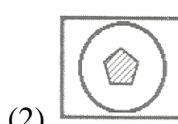
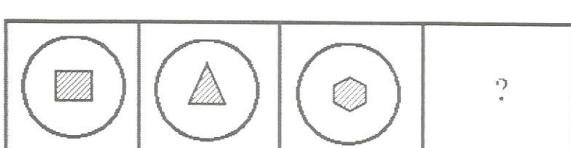
(Qns. 41 - 45)

Directions: identify the figure based on the continuation of the previous figures.

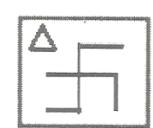
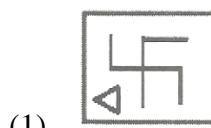
41.



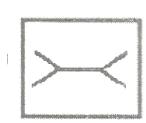
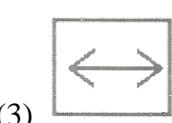
42.



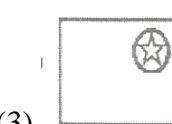
43.



44.



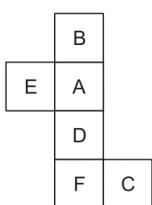
45.



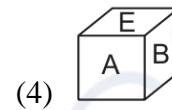
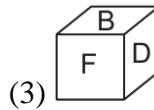
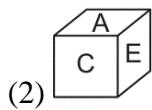
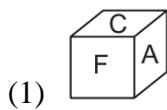
(Qns. 46 -51)

Directions: Choose the box that is similar to the box formed from the given sheet of paper (X).

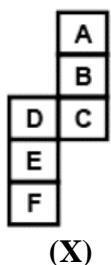
46.



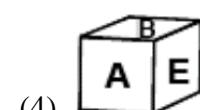
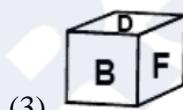
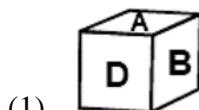
(X)



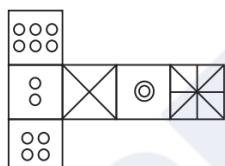
47.



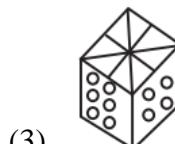
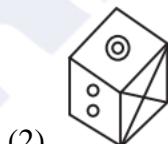
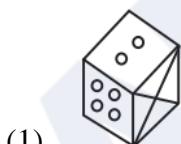
(X)



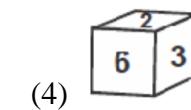
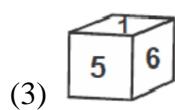
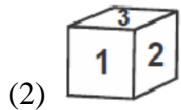
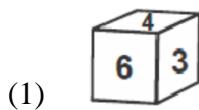
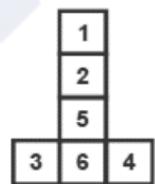
48.



(X)

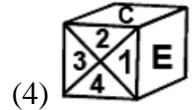
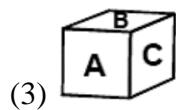
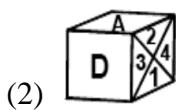
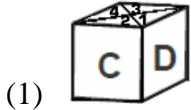
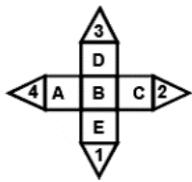


49.

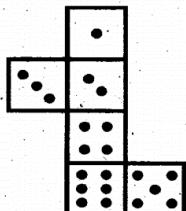


50.

8011



51. How many dots lie opposite the face having five dots, when the given figure is folded to form a Cube?



(1) 1

(2) 2

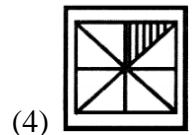
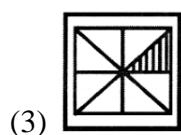
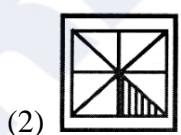
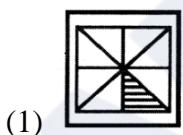
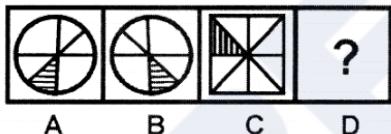
(3) 3

(4) 6

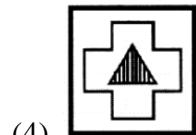
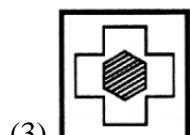
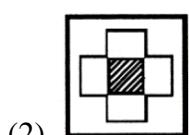
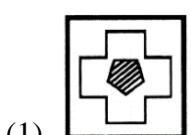
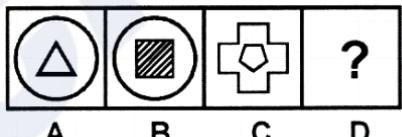
(Qns. 52 - 53)

Directions: Figure A, B, C and D constitute the problem set while figure 1, 2, 3 and 4 constitute the answer set. There is a definite relationship between figures A and B. Establish a similar relationship between figure C and D by choosing a suitable figure (D) from the answer set

52. Which of the following figures complete the second pair in the same way as the first pair?



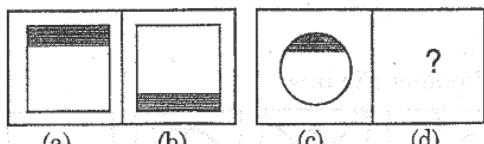
53. Which of the following figures complete the second pair in the same way as the first pair?



(Qns. 54 - 58)

Directions: Each of the following questions consist of problem figures followed by answer figures. Select a figure from amongst the answer figures which will continue the same series or pattern as established by the problem figures.

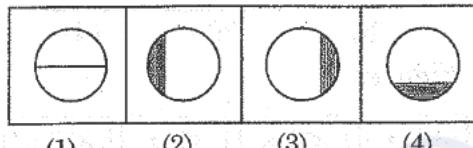
54.

PROBLEM FIGURE

(1) 1

(2) 2

(a) (b) (c) (d)

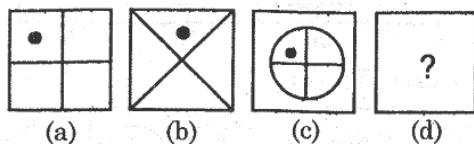
ANSWER FIGURE

(3) 3

(4) 4

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

55.

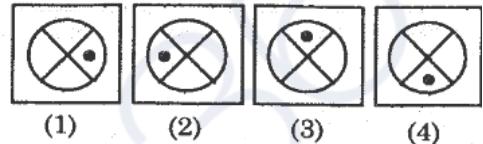
PROBLEM FIGURE

(1) 1

(2) 2

(3) 3

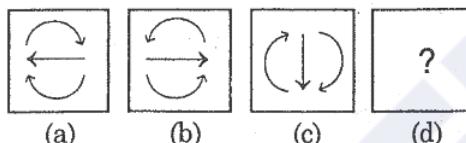
(a) (b) (c) (d)

ANSWER FIGURE

(4) 4

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

56.

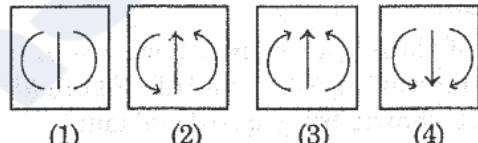
PROBLEM FIGURE

(1) 1

(2) 2

(3) 3

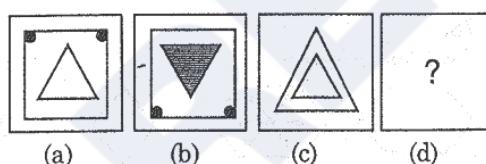
(a) (b) (c) (d)

ANSWER FIGURE

(4) 4

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

57.

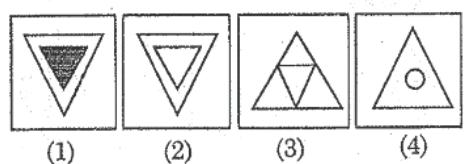
PROBLEM FIGURE

(1) 1

(2) 2

(3) 3

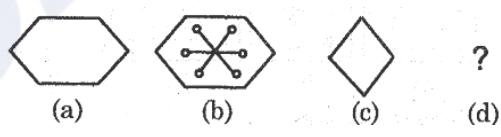
(a) (b) (c) (d)

ANSWER FIGURE

(4) 4

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

58.

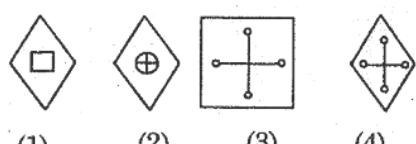
PROBLEM FIGURE

(1) 1

(2) 2

(3) 3

(a) (b) (c) (d)

ANSWER FIGURE

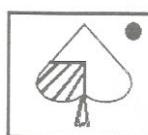
(4) 4

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

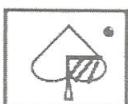
(Qns. 59-63)

Directions: In each of the following, choose the correct mirror image amongst the four alternatives.

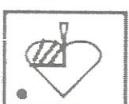
59.



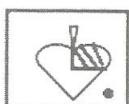
2)



3)



4)



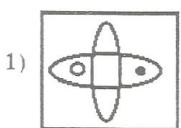
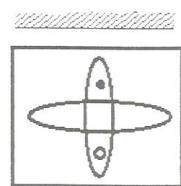
(1) 1

(2) 2

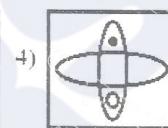
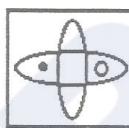
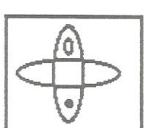
(3) 3

(4) 4

60.



2)



(1) 1

(2) 2

(3) 3

(4) 4

61.



1) E T I H W

2) E T I H W

3) E T I H W

4) E T I H W

(1) 1

(2) 2

(3) 3

(4) 4

62.



1) 7 0 9 4 6

2) 7 0 6 4 9

3) 7 0 8 4 5

4) 7 0 8 4 6

(1) 1

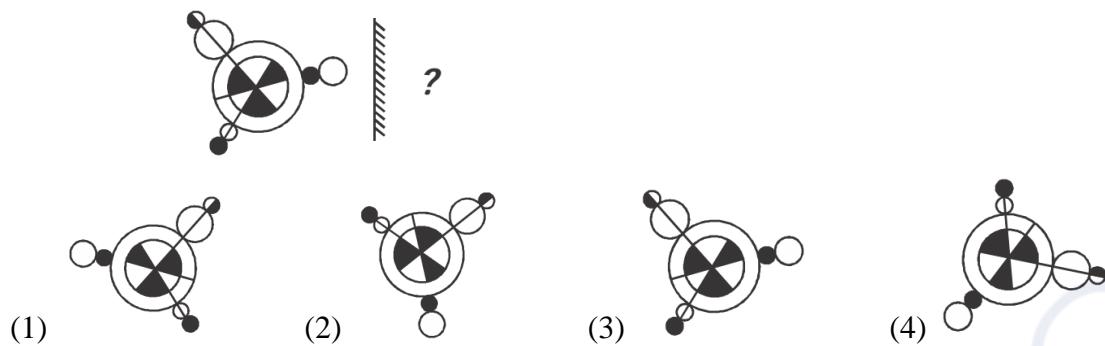
(2) 2

(3) 3

(4) 4

63. Find the mirror image of the given figure.

8011



(1)

(2)

(3)

(4)

(Qns. 64 - 70)

Directions: Choose the correct answer from the given options

64. What is the missing figure in the given series?



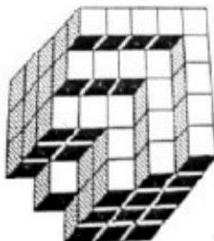
(1)

(2)

(3)

(4)

65. Count the number of cubes in the given figure.



(1) 80

(2) 88

(3) 89

(4) 91

66. How many squares in the given figure?



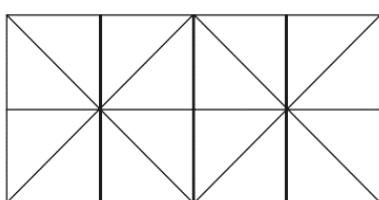
(1) 10

(2) 9

(3) 8

(4) 7

67. How many squares in the given figure?



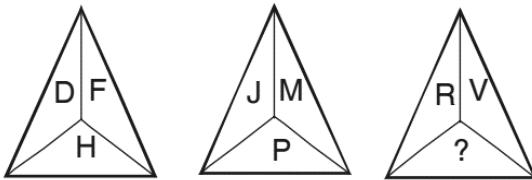
(1) 10

(2) 11

(3) 12

(4) 13

68. Which letter should be in place of the question mark?



(1) T (2) U (3) V (4) Z

69. If day after tomorrow is Friday, what day was three days before yesterday?

(1) Sunday (2) Friday (3) Thursday (4) Saturday

70. Which letter replaces the question mark?

$$R = 81 \quad Y = 52$$

$$X = 42 \quad ? = 91$$

(1) S (2) Q (3) O (4) L

(Qns.: 71 - 76)

Directions: All the faces of wooden cube with 8 cm length are painted in the same colour. This cube has been cut into small cubes with a 2 cm length. Answer the following questions.

71. How many small cubes are to be cut out?

(1) 4 (2) 8 (3) 64 (4) 32

72. How many times that cube is cut out?

(1) Four times (2) Eight times (3) Nine times (4) Twelve times

73. How many small cubes will be there whose only one face is colored?

(1) 12 (2) 24 (3) 8 (4) 32

74. How many small cubes will be there whose no face is coloured?

(1) 8 (2) 12 (3) 32 (4) 16

75. How many small cubes will be there whose two faces are coloured?

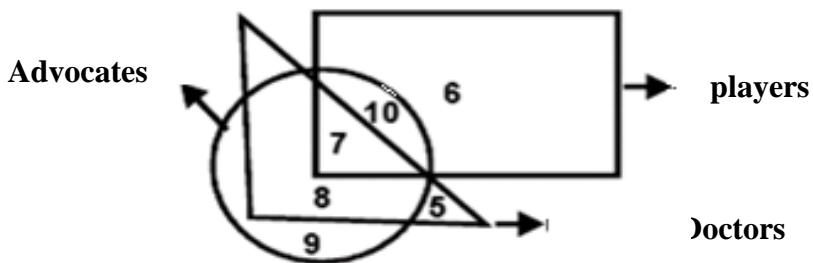
(1) 24 (2) 8 (3) 12 (4) 32

76. How many small cubes will be there whose three faces are coloured?

(1) 12 (2) 16 (3) 24 (4) 8

(Qns.: 77- 81)

Directions: In the following Questions, answers are based on the diagram given below, where the circle represents advocates, the triangle represents doctors, the rectangle represents players.



(Qns. 82 - 85)

Directions: Choose the correct answer from the given options

(Qns. 86 to 90)

Directions: In the following questions, find the missing number, if a certain rule is followed either row-wise or column-wise.

86.

44	25	36
64	49	81
100	??	??

(1) 169 & 81 (2) 67 & 121 (3) 64 & 115 (4) 70 & 110

87.

11	7	36
18	14	64
17	9	?

(1) 81 (2) 85 (3) 98 (4) 104

88.

1	9	?
2	12	14
3	117	105

(1) 7 (2) 8 (3) 9 (4) 11

89.

44	14	48
12	51	30
56	??	78

(1) 48 (2) 58 (3) 65 (4) 72

90.

48	28	38
28	35	23
39	?	37

(1) 7 (2) 14 (3) 21 (4) 42

Rough Work only

8011

CAREERS 360



8021

**GOVERNMENT OF PUDUCHERRY
DIRECTORATE OF SCHOOL EDUCATION**

QUESTION BOOKLET

MARCH 2025

**PART - II
SCHOLASTIC APTITUDE TEST**

Centre Code No.

--	--	--

Register No.

--	--	--	--

INSTRUCTIONS

1. Answer all the questions. All questions carry one mark each.
2. Since all questions are compulsory, do not try to read through the whole question paper before beginning to answer.
3. Begin with the first question and keep on trying one question after another till you finish all the question.
4. If you do not know the answer to any question, do not spend much time on it but pass on to the next one. If time permits, you can come back to the questions which you have left in the first instance and try them again.
5. Since the time allotted to this question paper is very limited, you should make the best use of it by not spending too much time on any one question.
6. Separate sheets have been provided for rough work in the Question Booklet itself.
7. The answers should be marked on a separate answer sheet provided in the Examination Hall.
8. The answer sheet has two parts corresponding to Part - I and Part -II of the Test.
9. Answer to each question is to be indicated by shading the number of the correct choice in the answer sheet with black ballpoint pen from amongst the ones given for the corresponding question in the test booklet.

SCIENCE

1. Which statement is / are true?
 - a) The ball bearings used in bicycle is an example for Rolling Friction.
 - b) In science, the gases and liquids are named as fluids.
 - c) Vehicles have treaded tyres to reduce friction.
 - d) Sliding friction is slightly larger than the Static friction

(1) a) and b) are correct (2) a) and d) are correct
(3) a), b) and c) are correct (4) c) and d) are correct
2. If a coin is placed between two plane mirrors making 60° angle with each other, then how many images of coins are formed?
(1) 3 (2) 4 (3) 5 (4) 6
3. The person who represented India on Braille problems in UNESCO is
(1) Ravindra Jain (2) Diwakar (3) Helen A. Keller (4) Lal Advani
4. The motion of seconds hand in a clock is
(1) Oscillatory (2) non-uniform (3) uniform (4) rectilinear
5. Match the following:

i) Hans Christian Oersted	-p) Coloured Disc appearing white
ii) Newtons's Disc	-q) Liberation of oxygen and hydrogen by electrodes
iii) Benjamin Franklin	-r) Magnets' deflection by current
iv) William Nicholson	- s) lighting phenomena

(1) i)-r), ii)-p), iii)-s), iv)-q) (2) i)-q), ii)-p), iii)-s), iv)-r)
(3) i)-s), ii)-p), iii)-r), iv)-q) (4) i)-q), ii)-p), iii)-r), iv)-s)
6. Chromium plating is done in
(1) Iron bridges (2) Kitchen gas burners (3) Gold ornaments (4) Food parcel foil
7. The Pitch of the sound is determined by its
(1) frequency (2) speed (3) amplitude (4) loudness

8. Two objects repels each other. This repulsion could be due to
 (1) Frictional force only (2) Electrostatic force only
 (3) Magnetic force only (4) Either an Electrostatic force or a Magnetic force

9. Consider the terms given below
 (i) Tsunami (ii) Landslide (iii) Floods (iv) Lightning
 Earthquakes can cause
 (1) (i), (ii) and (iii) (2) (ii) and (iv) (3) (ii), (iii) and (iv) (4) (iii) and (iv)

10. The conversion of dead vegetation into coal is
 (1) Carbonisation (2) Calcification (3) Condensation (4) Canonisation

11. Desert plants have spine-like leaves to reduce loss of water by
 (1) transportation (2) transposition (3) transpiration (4) transmission

12. _____ lives in the roots of plants like gram, peas, moong
 (1) Agrobacterium (2) Rhizobium (3) streptomyces (4) Bacillus subtilis

13. Match Column I and Column II and select the correct matching:

Column I	Column II
i) Edward Jenner	- p) Pencillin
ii) Louis Pasteur	- q) Anthrax
iii) Alexander Fleming	- r) Fermentation
iv) Robert Koch	- s) Vaccine
(1) i)-q), ii)-p), iii)-r), iv)-s)	(2) i)-s), ii)-r), iii)-p), iv)-q)
(3) i)-p), ii)-q), iii)-s), iv)-r)	(4) i)-q), ii)-r), iii)-p), iv)-s)

14. Which among the following is not an endocrine gland
 (1) Pancreas (2) Pituitary (3) Thyroid (4) Liver

15. The organism with tracheal system is
 (1) ant (2) Book lice (3) Mealy bug (4) scale insect

16. Which among the following is not a fungi
 (1) Aspergillus (2) Bread mould (3) Spirogyra (4) Penicillium

17. Which among the following reproduce by asexual reproduction

(1) frog (2) starfish (3) Fern (4) Rose

18. Asian lions are found only in

(1) India (2) America (3) China (4) Singapore

19. Match the following

i. Charge	- P. Seismic Zone
ii. Lightning	- Q. Electroscope
iii. Earthquake	- R. Richter Scale
iv. Seismograph	- S. Thunder Storm.

(1) i - R, ii - P, iii - S, iv - Q (2) i - S, ii - Q, iii - R, iv - P
 (3) i - Q, ii - S, iii - P, iv - R (4) i - S, ii - R, iii - P, iv - Q

20. 'X' is a good conductor of electricity. Which of the following could be 'X'?

(1) Solid sodium chloride (2) Vinegar (3) Distilled water (4) Liquid oxygen.

21. The blood pressure in humans is greater at the feet than at the brain because
 (1) of gravitational force (2) weight of the human is concentrated at the feet.
 (3) of height of blood column (4) concentration of the blood is more at the feet.

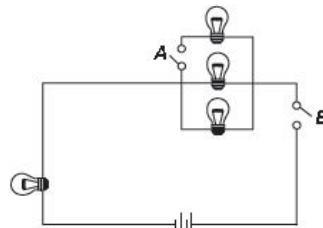
22. Which of the following practices does NOT improve the fertility of soil?

(1) keeping the land fallow (2) practicing crop rotation
 (3) practicing multiple cropping (4) practicing monocropping.

23. A cube of side 0.2 m and weighing 100 N rests on the floor. What is the pressure exerted by the cube on the floor?

(1) 10 N m^{-2} (2) 100 N m^{-2} (3) 500 N m^{-2} (4) 2500 N m^{-2} .

24. Study the given circuit diagram



How many bulbs will light up when switches A and B are closed in different situations?

Only switch A is closed Only switch B is closed

(1)	4	2
(2)	4	3
(3)	0	3
(4)	0	2

25. The killing of animals illegally is referred to as _____

(1) Assassinating (2) Poaching (3) Killing (4) Hunting

26. The oldest oil refinery in India is located at _____

(1) Mathura (2) Digboi (3) Haldia (4) Kochi

27. The calorific value of a fuel is expressed in a unit called _____

(1) Kilojoule per kilogram (2) Kilogram per Kilojoule
 (3) Joule per Kilogram (4) Kilojoule per gram

28. The purpose of applying lubricants to the moving parts of a machine is to

(1) Increase Friction (2) Decrease Friction (3) Clean the parts (4) Cool the parts

29. Imagine you're conducting an experiment where you bring a charged object close to another object. You observe that the second object moves without any direct contact. Which type of force are you likely observing in this scenario?

(1) Pressure (2) Muscular force (3) Electrostatic force (4) Gravitational force

30. IUCN stands for

(1) Indian Union for the Conservation of Nature and Natural resources.
 (2) International Union for the Conservancy of Natural resources
 (3) International Union for the Conservation of Nature and Natural resources.
 (4) Indian Union for the Chemical Nomenclature.

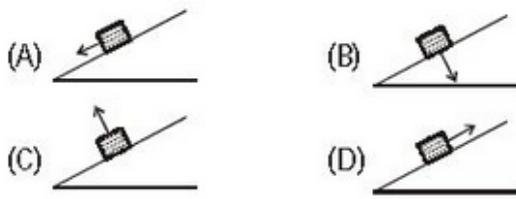
31. Transformation of larva into an adult is called _____

(1) Cloning (2) Fertilisation (3) Metamorphosis (4) Embedding

32. The defect due to which a person is not able to see the distant objects clearly

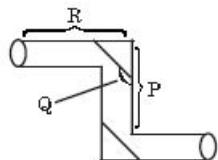
(1) Myopia (2) Hypermetropia (3) Cornea (4) Cataract

33. Which figure shows the correct direction of frictional force when a wooden block is moving up on an inclined plane?



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

34. A figure of a periscope is shown below. Which labelled parts should be adjusted to view an object placed higher?



(1) P (2) Q (3) R (4) All of these.

35. A boy feels difficult to pull the two similar rubber suckers apart as shown below. This is because



(1) The air pressure is pressing on the suckers with negligible force.
 (2) The air trapped inside the suckers is exerting a large pressure.
 (3) There is no air inside the suckers.
 (4) The air pressure is pressing on the suckers with a great force.

SOCIAL SCIENCE

36. Lithosphere is made up of

(1) Soil and minerals	(2) Rocks and minerals and Soil
(3) Minerals, soil and water	(4) Water and rocks

37. Silica and magnesium are the constituents of

(1) Rock	(2) Inner Core	(3) Outer Core	(4) Mantle
----------	----------------	----------------	------------

38. A massive earthquake hit Bhuj Town on
(1) 16th December 2001 (2) 26th January 2004
(3) 26th January 2001 (4) 16th December 2004

39. March 22 is celebrated as World
(1) Earth Day (2) Environment Day (3) Water Day (4) Soil Day

40. Ladakh is also known as
(1) Khapa-tuaregs (2) Khapa-chan
(3) Khapa-bedouins (4) Khapa-drass

41. _____ in Indian Constitution defines equality and prohibits any kind of social discrimination?
(1) Article 10 (2) Article 12 (3) Article 15 (4) Article 21

42. Which method was adopted by the women's movement to fight for women's right
(1) Violence (2) Campaigning (3) Harassment (4) War

43. A law was passed in _____ to give women who face physical and mental violence within their homes, also called domestic violence, some legal protection
(1) 2004 (2) 2005 (3) 2007 (4) 2006

44. Order of Chain of marketing
(1) Producer-Agents -Retailer- Wholesaler
(2) Agents- Producer -Wholesaler-Retailer
(3) Producer-Wholesaler-Retailer-Agents
(4) Producer-Agents-Wholesaler-Retailer

45. In recent times goods are also sold through advanced means such as
(1) Internet and Home delivery (2) Radio and newspaper
(3) Internet and Radio (4) Advertisement and TV

46. The fourteenth-century chronicler Ziyauddin Barani wrote his chronicle first in
(1) 1256 (2) 1556 (3) 1456 (4) 1356

47. Who were subordinate to the Pallava kings of Kanchipuram

(1) Pala (2) Rashtrakutas (3) Chera (4) Cholas

48. Akbar became an emperor at the age of ____ years.

(1) 15 (2) 17 (3) 20 (4) 13

49. Mundas and Santals lived in the region of

(1) Orissa and Bengal (2) Bihar and Orissa
(3) Bengal and Assam (4) Bihar and Uttar Pradesh

50. Which state was called Rajputana by the British

(1) Madhya Pradesh (2) Rajasthan (3) Punjab (4) Gujarat

51. Lilatilakam, was composed in

(1) Manipuralam (2) Manipravalam
(3) Manipurvalam (4) Manipravolam

52. What defines the introduction to our constitution?

(1) Preamble (2) Sovereignty (3) Constitution (4) None of these

53. Which is the highest law making body in our country?

(1) Rajya Sabha (2) Lok Sabha (3) Court (4) None of these

54. How many members are there in the Rajya sabha?

(1) 240 elected members (2) 233 elected members
(3) 230 elected members (4) None of these

55. Which is the Article of Constitution that states that untouchability has been abolished?

(1) Article 16 (2) Article 18 (3) Article 28 (4) Article 17

56. The law against child labour was implemented in

(1) 2001 (2) 2003 (3) 2005 (4) 2006

57. Name the term that can be given to the various layers in the soil after it is cut out like a slice of cake.

(1) Top Soil (2) Soil Horizon (3) Sub Soil (4) Soil Mixture

58. Name the term given to the commercial rearing of silk worms to supplement the income of the farmer.
(1) Horticulture (2) Viticulture (3) Sericulture (4) Pisciculture

59. _____ tribe practiced settled agriculture.
(1) Khonds (2) Santhals
(3) Labadis of Andhra Pradesh (4) Mundas of Chottanagpur plateau.

60. Which of the following is a secondary activity?
(1) Coal mining industry (2) Tourism industry
(3) fishing (4) agriculture

61. _____ continued to fight a guerilla war against British.
(1) Rani Lakshmi bai (2) Nana Saheb
(3) Tantia Tope (4) Peshwa Baji Rao II

62. Widow remarriage act was passed in the year
(1) 1826 (2) 1856 (3) 1876 (4) 1886

63. The fight for Purna Swaraj was fought under the presidentship of
(1) Mahatma Gandhi (2) Sardar Vallabhai Patel
(3) Jawaharlal Nehru (4) C. Rajagopalachari

64. Subjects such as taxes and defence were covered under _____.
(1) Union List (2) Princely List
(3) State List (4) Concurrent List

65. _____ has been called the backbone of industry.
(1) Diamond (2) Iron (3) Steel (4) Petroleum

66. Sustainable Development is
(1) A right Balance between use of resources and conservation of resources
(2) Allow the resources to be renewed
(3) Promote recycling of technological devices
(4) Allow clearing of forests to construct apartments

8021

67. _____ was the Chairman of the Drafting Committee.

(1) Rajendra Prasad	(2) T T Krishnamachari
(3) S C Sinha	(4) B R Ambedkar

68. The Constitution states that there should be no _____ exercise of power.

(1) Mediatory	(2) arbitrary	(3) illegal	(4) custom
---------------	---------------	-------------	------------

69. The President appoints _____ members of Rajya Sabha.

(1) 12	(2) 15	(3) 14	(4) 20
--------	--------	--------	--------

70. The type of soil is determined by

(1) landforms	(2) soil erosion	(3) water sources	(4) Globalisation
---------------	------------------	-------------------	-------------------

MATHEMATICS

71. The sum of rational numbers $-3/16$ and $5/12$ is _____

(1) $-7/48$	(2) $11/48$	(3) $13/48$	(4) $1/3$
-------------	-------------	-------------	-----------

72. _____ is the multiplicative identity for rational numbers.

(1) 1	(2) 0	(3) -1	(4) $1/2$
-------	-------	--------	-----------

73. Zero has _____ reciprocal.

(1) 1	(2) 2	(3) 3	(4) No
-------	-------	-------	--------

74. Solve: $(5/2)x + (3/2) = 6/4$

(1) $x = 1$	(2) $x = 2$	(3) $x = 3$	(4) $x = 0$
-------------	-------------	-------------	-------------

75. If $A = -7$ then the value of $A^2 - 3A$

(1) 28	(2) -28	(3) -70	(4) 70
--------	---------	---------	--------

76. There are 2 Red, 3 Blue and 5 Black balls in a bag. A ball is drawn from the bag without looking in to the bag. What is the probability of getting a blue ball?

(1) $3/5$	(2) $2/5$	(3) $3/10$	(4) $10/3$
-----------	-----------	------------	------------

77. There are _____ non-square numbers between the squares of 5 and 6.

(1) 11	(2) 12	(3) 13	(4) 10
--------	--------	--------	--------

78. How many zeros will be there in the cube root of the number 8000000?

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

79. The product of two integers is 4 less than 49. If one of the integers is (- 9) the other integer is

(1) 5	(2) 40	(3) -45	(4) -5
-------	--------	---------	--------

80. Avanti's present age is Y years and her mother's age is 4 years less than 3\times times her age, then her mother's present age
 (1) $(3Y-4)$ years (2) $(4-3Y)$ years (3) $(3Y+4)$ years (4) $(4Y+4)$ years

81. A sum of money at simple interest amounts to ₹ 5500 in 1 year and to ₹ 6600 in 2 years. Find the sum
 (1) ₹ 4400 (2) ₹ 4200 (3) ₹ 4300 (4) ₹ 4100

82. In a cricket match, India has scored 104 runs for 2 wickets by the end of the 20 overs. If they maintain the same run rate without losing any more wickets. What would be their final score at the end of 50 overs?
 (1) 156 for 2 (2) 208 for 2 (3) 260 for 2 (4) 312 for 2

83. Which of the following is / are two-dimensional figure?
 a. Square b. Circle c. Cube d. Cuboid
 (1) a,b only (2) a, b, c only (3) b, c, d only (4) All of them

84. Which of these can be expressed as a power of 5?
 (1) 2^2+3^2 (2) $5+5+5+5+5+5$ (3) $4\times 4\times 4\times 4\times 4$ (4) $(7-2) \times (7-2) \times (7-2)$

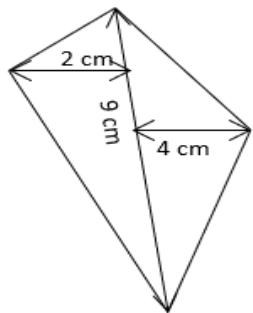
85. A rhombus is symmetrical about
 (1) Each of its two lines joining the mid-points of opposite sides.
 (2) Each of its two diagonals
 (3) Both (1) & (2)
 (4) None of these.

86. The marked price of an article is Rs. 60 and it is sold at Rs.45, then the discount rate will be
 (1) 25% (2) 35% (3) 15% (4) None of these

87. Subash covers a distance of 1200 meters in 10 minutes. What is the speed of Subash?
 (1) 1.2 kmph (2) 7.2 kmph (3) 12 kmph (4) 72 kmph

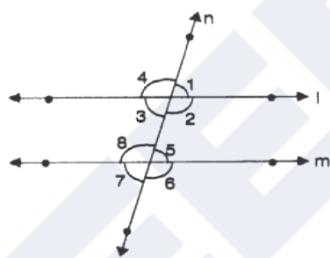
88. The ratio of Ritu's income to her savings is 4:1. The percentage of money saved by her is
 (1) 20% (2) 25% (3) 40% (4) 80%

89. Find the area of the given quadrilateral.



(1) 26 cm^2 (2) 27 cm^2 (3) 29 cm^2 (4) 25 cm^2

90. In the following figure, a transversal cuts two parallel lines l and m respectively and the angles thus formed are marked. If $\angle 1$ is an acute angle, then, which of the following statements is false?



(1) $\angle 1 + \angle 2 = 180^\circ$ (2) $\angle 2 + \angle 5 = 180^\circ$ (3) $\angle 3 + \angle 8 = 180^\circ$ (4) $\angle 2 + \angle 6 = 180^\circ$

FOR ROUGH WORK ONLY

8021

CAREERS³⁶⁰