



RGP – RANKERS GENIUS PROGRAM

(Phase - 02)

(SCIENCE, MATH, MAT)

Set

A

Time: 1 Hour

Moving to 9th

Marks: 120

1. General Instructions:

(Paper Code: 0901)

- * This test paper consists of 60 questions in 3 sections (A, B, C)

Marking Scheme:

- Full marks: + 2 if answered correctly.
- Zero marks: 0 if not attempted or incorrect.

2. RGP College Grant Criteria:

- ✓ Students must score a minimum of 70% positive marks in RGP.
- ✓ Student must get under AIR 5,000 in JEE/NEET Examination.

3. Cash Reward Criteria:

- ✓ Exciting Cash Rewards for RGP Toppers

SENIOR WING (Student's Moving to Class XI th , XII th , Dropper JEE /NEET)	JUNIOR WING (Student's Moving to Class IX th & X th)
Overall 1 st Topper	Overall 1 st Topper
₹ 21,000/-	₹ 5,100/-
Overall 2 nd Topper	Overall 2 nd Topper
₹ 11,000/-	₹ 3,100/-
Overall 3 rd Topper	Overall 3 rd Topper
₹ 5,100/-	₹ 2,100/-
Overall 4 th – 8 th Topper	Overall 4 th – 8 th Topper
₹ 2,100/-	₹ 1,100/-
Overall 9 th – 15 th Topper	Overall 9 th – 15 th Topper
₹ 1,100/-	₹ 500/-

- ✓ Candidate who got 1st Rank in junior or senior wing in RGP (Phase – 01) will not be eligible for any cash Reward in RGP (Phase – 02).

** Rankings from 1 to 20 are determined based on the specific criteria outlined in the FAQ section of our website, www.myrankers.com.

4. Scholarship Criteria in Rankers Offline Classroom Program:

- ✓ 100% Fee Waiver – Student Scoring 90% and Above
- ✓ 80% Fee Waiver – Student Scoring 85% to 89.999%
- ✓ 60% Fee Waiver – Student Scoring 75% to 84.999%
- ✓ 50% Fee Waiver – Student Scoring 70% to 74.999%
- ✓ 40% Fee Waiver – Student Scoring 60% to 69.999%
- ✓ 20% Fee Waiver – Student Scoring 40 % to 59.999%
- ✓ 10% Fee Waiver – Student Scoring 30% to 39.999%
- ✓ 5% Fee Waiver – All the Aspirants Appearing in RGP

RGP RESULT & REWARD CEREMONY

Result Date: 26th March 2025

Check Your Result at: www.myrankers.com

Reward Ceremony Date: 27th March 2025

Student's Name: -

SCIENCE (SECTION – A)

1. Which one of the following is not a fossil fuel?
(A) Petrol (B) Natural gas (C) Charcoal (D) Coal
2. Coke is a fuel with few impurities and light carbon content. Which of the following is not a use of coke?
(A) It is used in the manufacture of producer gas.
(B) It is used as a reducing agent.
(C) It is used in the manufacture of coal gas.
(D) It is used in the manufacture of steel.
3. Producer gas is not a good fuel because
(A) it contains CO which is poisonous (B) it contains CO₂
(C) it contains CO₂ which does not burn (D) it contains N₂ which does not burn
4. In the oil wells, X forms the topmost layer, followed by Y and finally Z. X, Y and Z are, respectively.
(A) Natural gas, oil and water (B) Petroleum gas, oil and natural gas
(C) Natural gas, water and oil (D) Petroleum gas, oil and water
5. A few substances are given in the box.

Graphite, lamp black, coke, coal, fullerene, sugar charcoal, gas carbon, wood charcoal, diamond

The total number of amorphous forms of carbon among the given substances is
(A) 6 (B) 5 (C) 3 (D) 1

----- *Rough Work* -----

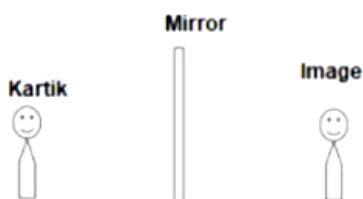
6. Which of the following statements are true?
(i) Luminous zone is the zone of complete combustion.
(ii) Dark zone is the least hot zone of a candle flame.
(iii) Incomplete combustion occurs in the non-luminous zone of candle flame.
(iv) Non-luminous zone is the hottest part of the candle flame.
(A) (i) and (iv) only (B) (ii) and (iii) only
(C) (ii) and (iv) only (D) (ii), (iii) and (iv) only
7. When the supply of oxygen is not sufficient, the fuels burn incompletely producing mainly
(A) blue flame (B) orange flame
(C) yellow flame (D) dark blue flame
8. Which of the following frequency of sound can't be heard by our ears?
(A) 38 Hz (B) 8 Hz (C) 10800 Hz (D) 6800 Hz
9. Frequency determines the _____.
(A) Pitch of Sound (B) Speed of Sound
(C) Amplitude of Sound (D) All of the above
10. Heavy trucks have broad tyres:
(A) To reduce the pressure (B) To increase the pressure
(C) To decrease the friction (D) To balance the truck on road
11. Magnesium hydroxide is found in:
(A) Milk of magnesia (B) Magnesium hydroxide
(C) Magnesium ribbon (D) Magnesium chloride

----- Rough Work -----

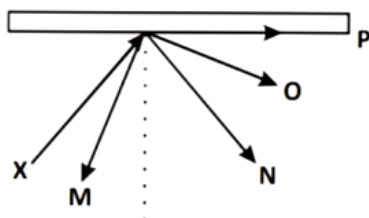
12. Sound wave is
(A) Mechanical and longitudinal wave (B) Mechanical and transverse wave
(C) Non-mechanical and longitudinal wave (D) Non-mechanical and transverse wave
13. The distance between first and third crest of a wave is 4.5 m then its wavelength is
(A) 1.5 m (B) 2.25 m (C) 2.5 m (D) 2 m
14. Velocity of the body is increased 3 times then its kinetic energy increases by
(A) 2 times (B) 3 times (C) 6 times (D) 9 times
15. Velocity of Light in Vacuum/air is _____ km/second.
(A) 30000 km/sec (B) 300000 km/metre
(C) 300000 m/sec (D) 300000 km/sec
16. What type of mixture is the sugar solution?
(A) Solid + Gas (B) Liquid + Gas
(C) Solid + Liquid (D) Solid + Liquid + Gas
17. Required time gap to hear the two different sounds is
(A) $\frac{1}{15}$ th of a second (B) $\frac{1}{30}$ th of a second
(C) $\frac{1}{25}$ th of a second (D) $\frac{1}{35}$ th of a second

----- Rough Work -----

18. Kartik stand in front of a plane mirror. The distance between Kartik and his image in the plane mirror is 20 m. How much distance should he move in order to get the distance of 15 m between herself and her image?



- (A) 7.5 m away from the mirror
(B) 2.5 m away from the mirror
(C) 7.5 m towards the mirror
(D) 2.5 m towards the mirror
19. The given diagram shows the path of a light ray X, directed at a plane mirror.



Which of the following is the correct reflected ray?

- (A) M
(B) N
(C) O
(D) P
20. A copper coin is kept immersed in a solution of silver nitrate for some time. What will happen to the coin and the colour of the solution?
- (A) Silver metal will be deposited on the coin and solution will turn blue
(B) Solution will remain colourless and coin will turn blue
(C) Both solution and the coin will turn blue
(D) Both solution and the coin will become colourless

----- *Rough Work* -----

21. Viruses are form of:
(A) Vitamins (B) DNA and RNA
(C) Proteins (D) Proteins and nucleic acids
22. Stigma is:
(A) Male organ of the flower (B) Part of a flower pistil
(C) A part of companion cells (D) None of the above
23. In *Hydrilla* the pollination is taken place through:
(A) Wind (B) Water (C) Insect (D) None of the above
24. Cell sap is:
(A) A dilute solution of minerals and some organic substance in the vacuole
(B) A dilute solution of minerals in water absorbed by the plant from the soil
(C) Exudate from the cell
(D) A solution of different organic substance dissolved in the cytoplasm
25. The sex of a child is determined:
(A) Six to seven weeks after conception
(B) At the time of fertilization of the ovum
(C) In the third month of pregnancy
(D) At the time of the sperm's entry
26. Fruit development without fertilization is called:
(A) apogamy (B) porogamy (C) polycarpy (D) parthenocarpy
27. The dry fruit chilgoza is obtained from:
(A) cycas (B) deodar (C) cyprus (D) pine

----- *Rough Work* -----

28. Aquaculture is the:
(A) water content of organisms (B) loss of water by plants
(C) water portion of the biosphere (D) use of water for farming
29. The two most prevalent ions in the marine habitat are:
(A) K^+ , Cl^- (B) Na^+ , Cl^- (C) Na^+ , Mg^{++} (D) Na^+ , SO_4^{--}
30. We lose consciousness if blood flow to the brain is cut off for more than:
(A) 2 sec. (B) 5 sec. (C) 15 to 20 sec. (D) 5 min.

----- *Rough Work* -----

MATH (SECTION – B)

31. The square root of $\frac{(3\frac{1}{4})^4 - (4\frac{1}{3})^4}{(3\frac{1}{4})^2 - (4\frac{1}{3})^2}$ is
 (A) $1\frac{7}{12}$ (B) $1\frac{1}{12}$ (C) $5\frac{5}{12}$ (D) $7\frac{1}{12}$
32. How many digits are required for numbering the pages of a book having 300 pages?
 (A) 299 (B) 492 (C) 789 (D) 792
33. If $\sqrt{0.01} + \sqrt{0.0064} = x$, then $x^2 + x + 1 = \underline{\hspace{1cm}}$?
 (A) 1.39 (B) 13.9 (C) 0.39 (D) 0.3
34. What must be subtracted from $x^4 - x^3 + x^2 - 4x + 8$ to get $x^3 + x^2 + x - 1$?
 (A) $x^4 - 2x^3 - 5x + 9$ (B) $x^4 - x^3 + x^2 + 4x - 8$
 (C) $x^4 + x^2 - 4x + 8$ (D) $x^4 - x^3 - x^2 + 4x - 8$
35. If perpendicular distance of a point P from the x -axis be 3 units along the negative direction of the y -axis, then the point P has
 (A) x -coordinate = -3 (B) y -coordinate = -3
 (C) y -coordinate = 3 (D) none of these

----- Rough Work -----

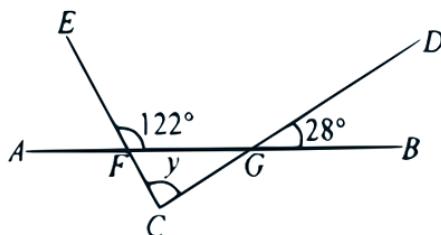
36. Three different containers contain different quantities of mixtures of milk and water, whose measurements are 403 kg, 434 kg and 465 kg. What biggest measure must be there to measure the different quantities exactly?

(A) 1 kg (B) 7 kg (C) 31 kg (D) 41 kg

37. Three rational numbers lying between $-\frac{3}{4}$ and $\frac{1}{2}$ are

(A) $-\frac{1}{2}, 0, \frac{3}{4}$ (B) $-\frac{1}{4}, \frac{1}{4}, \frac{3}{4}$ (C) $-\frac{1}{4}, 0, \frac{1}{4}$ (D) $-\frac{5}{4}, 0, \frac{1}{4}$

38. In the given figure (not drawn to scale), AFGB, CFE and CGD are straight lines. Find y .



(A) 90° (B) 86° (C) 94° (D) 92°

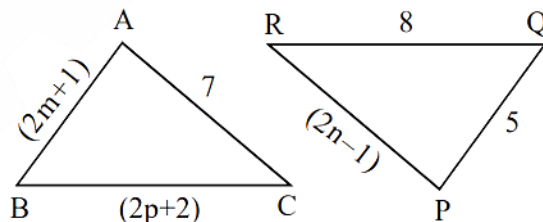
39. On dividing Rs. 7200 among A, B and C in the ratio $\frac{1}{3} : \frac{1}{6} : \frac{1}{4}$ then B's share is

(A) Rs. 1600 (B) Rs. 2400 (C) Rs. 3200 (D) Rs. 1200

----- Rough Work -----

40. The speed of a train is $75\frac{1}{3}$ km/hr. What is the distance travelled by train in $1\frac{3}{5}$ hrs?
 (A) $12\frac{8}{15}$ km (B) $1200\frac{8}{15}$ km (C) $120\frac{8}{15}$ km (D) $47\frac{1}{2}$ km

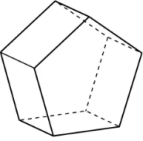
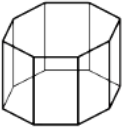
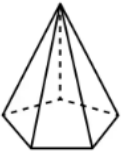
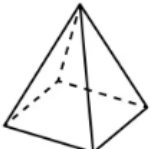
41. In the given figure, $\triangle ABC$ is congruent to $\triangle PQR$. Then, find the value of $(m+2n+3p)$.



- (A) 8 (B) 10 (C) 17 (D) 19
42. The compound interest on Rs 4000 for one year at 5% p.a payable half-yearly is:
 (A) Rs. 400 (B) Rs. 405 (C) Rs. 200 (D) Rs. 202.50
43. Express $(-2)^{-3} \div m^{-3}$ in the form of $\left(\frac{a}{b}\right)^3$.
 (A) $\frac{-m}{2^3}$ (B) $\left[\frac{m}{-2}\right]^3$ (C) $\frac{(m)^3}{2^3}$ (D) $-\left[\frac{2}{m}\right]\left[\frac{-2}{m}\right]$

----- Rough Work -----

44. Select the INCORRECT match.

	Shape	Faces	Vertices	Edges
(A)		7	10	15
(B)		10	16	24
(C)		7	7	14
(D)		5	5	8

45. The area of a rectangle is given by $6x^2y + 4y^2x$ and the width of the rectangle is given by $2xy$. Find the perimeter of rectangle.

(A) $6x + 8y + 2xy$

(B) $3x + 4y + 2xy$

(C) $8x + 6y + 4xy$

(D) $6x + 4y + 4xy$

----- Rough Work -----

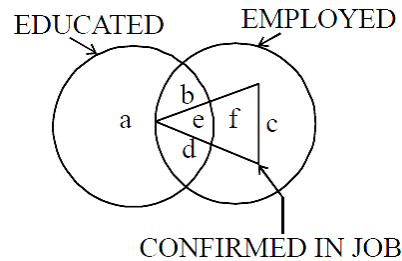
MAT (SECTION – C)

46. Four friends were playing a game of cards, Seethe was to the right of Maithili and Uma to the left of Gouri. Which of the following was a pair of partners?
 (A) Maithili and Gauri (B) Uma and Seethe
 (C) Maithili and Seethe (D) Uma and Maithili
47. In a certain code CAT is written as SATC and DEAR as SEARD. How is SING written in that code?
 (A) SSING (B) INGS (C) SINGE (D) SINGS
48. If a man walks to his office at $\frac{5}{4}$ of his usual rate, he reaches office 30 minutes early than usual. What is his usual time to reach office.
 (A) 2 hr (B) $2\frac{1}{2}$ hr (C) 1 hr 50 min (D) 2 hr 15 min
49. The following question accompanied by three statements I, II and III. We have to determine which statements is/are sufficient to answer the question.
 What is the sum of two numbers?
I. The bigger of these two numbers is 6 more than the smaller number.
II. 40% of the smaller number is equal to 30% of the bigger number.
III. The ratio between half of the bigger number and one-third of the smaller number is 2 : 1.
 (A) Only II and III are sufficient.
 (B) Only I and II are sufficient.
 (C) I and either II or III is sufficient.
 (D) All I, II and III together are sufficient.
50. In the following numbers series, how many even numbers are immediately preceded by 6 as well as immediately followed by 3?
 6 6 5 6 8 3 9 4 3 6 7 3 6 4 3 2 8 6 4 6 8 2 6 6 3
 (A) 1 (B) 2 (C) 3 (D) 4

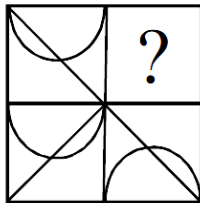
----- Rough Work -----

51. I went 15 m to the north, then I turned west and covered 10 m, then turned south and covered 5 m, and then turned east and covered 10m. In which direction am I from the starting point?
 (A) East (B) West (C) North (D) South

52. Read the figure and find the region representing person who are educated and employed but not confirmed.



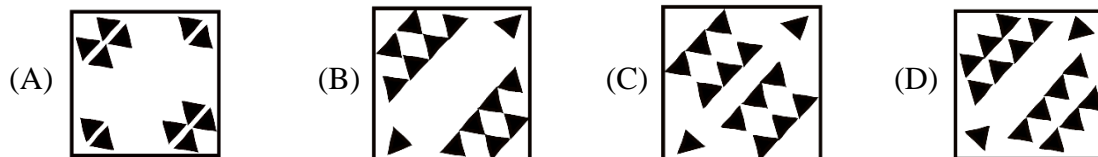
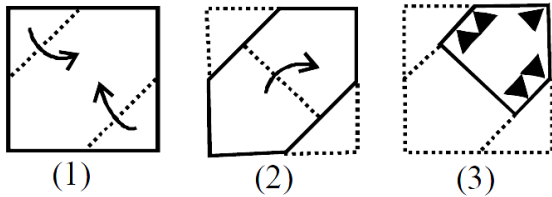
- (A) a & f (B) b & e (C) b & d (D) d & e
53. A part of the figure is missing. Find out from the given options (A, B, C and D) the right figure to fit in the missing place.



- (A) (B) (C) (D)

----- Rough Work -----

54. A set of three figures 1, 2 and 3 showing a sequence of folding of a piece of paper. Fig. (3) shows the manner in which the folded paper has been cut. These three figures are followed by four answer figures from which you have to choose a figure which would most closely resemble the unfolded form of fig. (3).



55. In a class of 60, where girls are twice that of boys, Kamal ranked seventeenth from the top? If there are 9 girls ahead of Kamal, how many boys are after him in rank?
 (A) 3 (B) 7 (C) 12 (D) 23
56. Choose odd pair of the words :
 (A) Volume : Litre (B) Time : Seconds
 (C) Length : Metre (D) Pressure : Barometer

----- Rough Work -----

57. A man said to a lady "Your mother's husband's sister is my aunt." How is the lady related to man?

- (A) Daughter (B) Grand-daughter (C) Mother (D) Sister

58. Out of nine cells of a square one cell is left blank and in the rest of the cell's numbers are written which follow some rule. Get the rule and find out the proper option for the blank cell (?)

91	64	73
84	76	61
25	60	?

- (A) 66 (B) 68 (C) 69 (D) 71

59. At what angle are the hands of a clock inclined at 30 minutes past 6 ?

- (A) $7\frac{1}{2}^\circ$ (B) $11\frac{1}{2}^\circ$ (C) 15° (D) 23°

60. If your birth day 30th June, 2003 falls on monday, on what day of the week does your birth day fall in the year 2005 ?

- (A) Sunday (B) Tuesday (C) Wednesday (D) Thursday

----- *Rough Work* -----