RANKERS
JEE | NEET | FOUNDATION

RGP – RANKERS GUARANTEED PROGRAM

Set 1

(SCIENCE, MATH & MAT)

Time: 1 Hour | **Studying in class 8th & Moving to 9th** | **Marks: 120**

(Paper Code: 0901)

1. General Instructions:

* *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:

- ✓ Students must score a minimum of 70% positive marks in their respective papers.
- ✓ Exciting Cash Rewards for RGP Toppers
  - 1st Topper – ₹ 21,000/-
  - 2nd Topper – ₹ 11,000/-
  - 3rd – 5th Topper – ₹ 5,100/-
  - 6th – 10th Topper – ₹ 2,100/-

  Students Scoring Rank from 11th – 20th will get Exciting Rewards.

4. Scholarship Criteria in Rankers Offline Classroom Program:

(100% FEE WAIVER – 1ST TOPPER) and must getting above 70% marks.

- ✓ 80% Fee Waiver – Student Scoring 80% and above.
- ✓ 60% Fee Waiver – Student Scoring 70% to 79.999%.
- ✓ 50% Fee Waiver – Student Scoring 60% to 69.999%.
- ✓ 40% Fee Waiver – Student Scoring 50% to 59.999%.
- ✓ 20% Fee Waiver – Student Scoring 30 % to 49.999%
- ✓ 10% Fee Waiver – All the Aspirants Appearing in RGP.

Student's Name: - .....

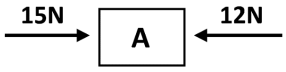
School Name: - .....

Class: - ..... Mob. No. .....

Student's Signature: - ..... Invigilator's Signature: - .....

Science (Section – A)

1. Look at the figure and give answer



What is the total amount of force acting on object 'A'?
(a) 27 N (b) 0 N (c) 3 N (d) 15 N

2. Which sound waves are used in monitoring of earth quakes?
(a) Infrasonic (b) Ultrasonic (c) Supersonic (d) None of these

3. Aluminium and iron are both metals. But Aluminium is preferred as the leaves of an electroscope. The reason is:
(a) Iron is a poor conductor of electricity
(b) Aluminium is lighter than Iron
(c) Aluminium is more conductive than Iron
(d) None of the above

4. Aditi needs a strong electrolyte. Which of the following would be the most suitable for her?
(a) Sulphuric acid (b) Nitric acid (c) Tap water (d) Ascetic acid

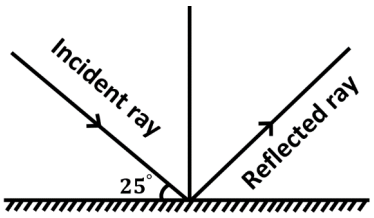
5. The metal found in liquid state is:
(a) Iron (b) Gold (c) Aluminium (d) Mercury

6. Look at the given figure. Find the angle between incident ray and reflected ray:
(a) 65°

(b) 130°

(c) 90°

(d) 25°



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7. The frequency of incident light is 3×10^{18} Hz. The frequency after reflection will:
(a) Increase (b) Decrease (c) Remain same (d) Double

8. Black gold is actually:
(a) Diamond
(b) Petroleum
(c) Gold which become black on burning
(d) Gold sold in black market

9. An object is vibrating with a frequency of 15 Hz. Which of the following is true?
(a) It does not produce sound
(b) It produces sound which we can hear
(c) It produces sound which we cannot hear
(d) It produces sound which we can hear if we strain our ears

10. Which of the following statement is not correct with reference to tides?
(a) The strong gravitational pull exerted by the Sun and the Monn on the Earth's surface cause the tides.
(b) On the full Moon and new Moon days, when the Sun, the Moon and the Earth are in the same line, the tides are lowest.
(c) Tidal ebb helps in navigation.
(d) High tides also help in fishing.

11. The image formed by a convex mirror is
(a) Always erect
(b) Always virtual
(c) Always diminished
(d) All of these

12. To move a car
(a) Equal and opposite forces must be applied internally
(b) Forces must be applied in the same direction internally
(c) Equal and opposite forces should be applied externally
(d) Forces must be applied in the same direction externally

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13. Which of the following are incorrect statements about non-metals?
(A) Non-metals are good conductors of electricity
(B) Generally, non-metals do not react with water.
(C) Non-metals are electropositive.
(D) Non-metals have greater affinity towards electrons.
(a) (A) and (c) (b) (B) and (D) (c) (A) and (B) (d) (C) and (D)

14. Which of the following is NOT a chemical change?
(a) Burning of coal (b) Evaporation of water
(c) Rusting of iron (d) Curdling of milk

15. Which of the following metals is kept in Kerosene?
(a) Iron (b) Phosphorous (c) Sodium (d) Chromium

16. In our solar system asteroids lie between the orbits of
(a) Earth and Jupiter (b) Mars and Jupiter
(c) Jupiter and Saturn (d) Mars and Saturn

17. The relation between focal length (f) and radius of curvature (R) is
(a) $2R = f$ (b) $R = \frac{f}{2}$ (c) $R = 2f$ (d) $R = 4f$

18. Twinkling of stars is due to
(a) Reflection (b) Refraction
(c) Dispersion (d) Total internal reflection

19. A body moving with a speed 30 m/s increases its speed to 50 m/s in 4 s then its acceleration is
(a) 5 m/s^2 (b) 4 m/s^2 (c) 20 m/s^2 (d) -5 m/s^2

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20. The atomic mass of an atom which is having 13 protons and 14 neutron is
(a) 40 (d) 14
(c) 27 (d) 182

21. Photosynthesis occurs in which cellular organelles:
(a) Mitochondria (b) Ribosome
(c) Golgi body (d) Chloroplast

22. Who is the father of green revolution?
(a) Dr. Ramachandran (b) Dr. M. S Swaminathan
(c) Dr. Lal Ji (d) Aristotle

23. A flagellum is present at one end of a protozoan. It is:
(a) Planaria (b) Paramecium
(c) Hydra (d) Leishmania

24. Which of the following organisms is used as a biopesticide?
(a) Azolla (b) Anabaena
(c) Rhizobium (d) Trichoderma

25. The decomposers in an ecosystem convert
(a) Inorganic substance into organic substance
(b) Simpler substance into complex substance
(c) Solar energy into chemical energy
(d) Organic substance into inorganic substance

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26. The lipids and proteins essential for the formation of cell membrane are synthesized in:
(a) Golgi bodies (b) Mitochondria
(c) Endoplasmic reticulum (d) Lysosomes

27. A cell will plasmolysed, if it is placed in
(a) Hypertonic solution (b) Hypotonic solution
(c) Isotonic solution (d) Concentration of water molecules does not matter

28. Which one of the following is known as energy currency of cell?
(a) Adenosine diphosphate (b) Adenosine triphosphate
(c) Pyruvate (d) Glucose

29. Cell organelles that are involved in the waste disposal system of the cell are:
(a) Golgi apparatus (b) Lysosomes
(c) Chromosomes (d) Ribosomes

30. Mitochondria and chloroplasts are similar because
(a) Both have nuclei
(b) Both have 80s ribosomes
(c) Both have DNA
(d) Both have single membrane envelope

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MATH (Section – B)

31. If $(-3)^{m+1} \times (-3)^{5m} = (-3)^{13}$, then the value of m is:
(a) 3 (b) 2
(c) 1 (d) 4

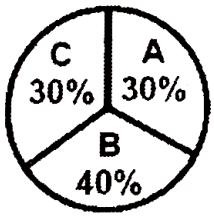
32. $(x-y)(x+y) - (y-z)(y+z) + (z-x)(z+x)$ is equal to:
(a) 0 (b) $2y^2 - 2z^2$
(c) $2z^2 - 2y^2$ (d) $2x^2 + 2y^2 + 2z^2$

33. What is the difference between the central angles, for sector B and sector C?
(a) 36°

(b) 72°

(c) 9°

(d) 81°

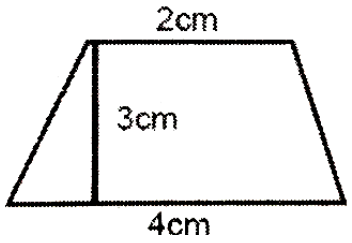


34. The area of trapezium is:
(a) 9 cm^2

(b) 6 cm^2

(c) 7 cm^2

(d) 24 cm^2



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35. The angle sum of a convex polygon with number of sides 7 is:
(a) 900° (b) 1080°
(c) 1440° (d) 720°

36. The factorisation of $ab - a - b + 1$ is:
(a) $(a-1)(b-1)$ (b) $(a+1)(b+1)$
(c) $(a-1)(b+1)$ (d) $(a+1)(b-1)$

37. A horse eat 18 kg of maize corn in 12 days, how much does he eat in 9 days?
(a) 11.5 kg (b) 12.5 kg
(c) 13.5 kg (d) 14.5 kg

38. 1 cm^3 =
(a) 1000 mm^3 (b) 100 mm^3
(c) 10 mm^3 (d) 1/1000 mm^3

39. What is the value of $5x^{25} - 3x^{32} + 2x^{-12}$ at $x = -1$?
(a) 0 (b) -6
(c) 4 (d) -10

40. The ratio 4 : 25 converted to percentage is:
(a) 8% (b) 4%
(c) 16% (d) 25%

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41. The one's digit of the cube of the number 123 is:
(a) 3 (b) 6
(c) 9 (d) 7

42. How many corners does a triangular pyramid have?
(a) 1 (b) 2
(c) 3 (d) 4

43. Of the following, the linear equation in one variable x is:
(a) $\frac{4}{x} = \frac{x}{4}$ (b) $\frac{1}{x} + \frac{1}{x-1} = 1$
(c) $\frac{x}{2} + \frac{x}{3} + \frac{1}{4}$ (d) $x^2 + 2x + 5 = 0$

44. Which of the following is the cube root of -64/243?
(a) $\frac{7}{4}$ (b) $\frac{-7}{4}$
(c) $\frac{4}{7}$ (d) $\frac{-4}{7}$

45. If an article sold for ₹ 100, then there is a gain of ₹ 20, which of the following is gain per cent?
(a) 25% (b) 22%
(c) 20% (d) 16%

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MAT (Section – C)

46. Deepak is brother of Ravi. Reena is sister of Atul. Ravi is son of Reena. How is Deepak related to Reena?
(a) Son (b) Brother
(c) Nephew (d) Father

47. If the day before yesterday was Saturday, what day will fall on the day after tomorrow?
(a) Friday (b) Thursday
(c) Wednesday (d) Tuesday

48. There are twenty people working in an office. The first group of five works between 8.00 A.M. and 2.00 P.M. The second group of ten works between 10.00 A.M. and 4.00 P.M. And the third group of five works between 12 noon and 6.00 P.M. There are three computers in the office which all the employees frequently use, During which of the following hours the computers are likely to be used most?
(a) 10.00 A.M – 12 noon (b) 12 noon – 2.00 P.M.
(c) 1.00 P.M. – 3.00 P.M. (d) 2.00 P.M. – 4.00 P.M.

49. In a certain language FASHION is coded as FOIHSAN. How is PROBLEM coded in that code?
(a) PELBORM (b) ROBLEMP
(c) PRBOELM (d) RPBOELM

50. Kailash walks 3 km to East and turns South and walks 4 km. Again tuns West and walks 6 km. How far is he from the starting point?
(a) 7 km (b) 5 km
(c) 6 km (d) 3 km

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51. After Interchanging + and -, 8 and 7, which one of the following becomes correct?
(a) $8 - 7 + 3 \times 5 = 35$ (b) $8 \times 2 + 7 - 6 = 9$
(c) $7 \times 8 + 6 - 9 = 25$ (d) $6 + 8 \times 2 - 7 = 0$

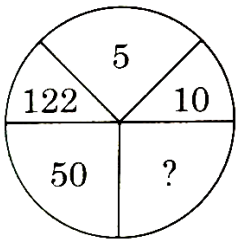
52. What comes in place of question marks?

(a) 25

(b) 27

(c) 23

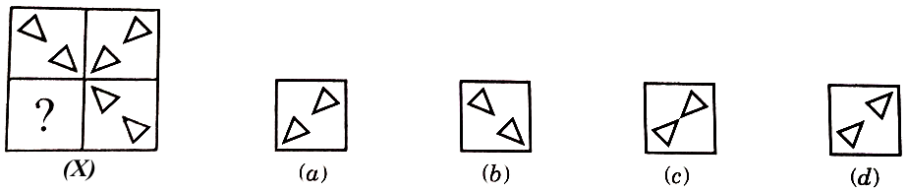
(d) 26



53. FAK IEM LIO ?
(a) OMQ (b) OPQ (c) MNO (d) NOP

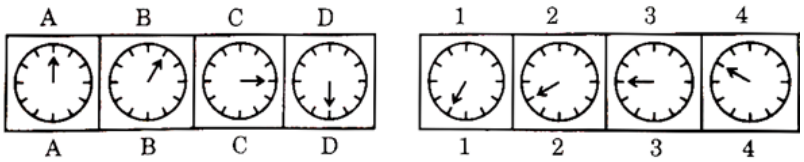
54. bc, cde, de, efg, fg?
(a) ghi (b) fgh (c) hij (d) ijk

55. What comes next in place of question marks.



56. What comes next in problem figure

PROBLEM FIGURES ANSWER FIGURES



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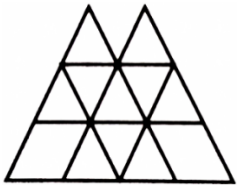
57. Count number of triangle in the given figure

(a) 16

(b) 18

(c) 14

(d) 15



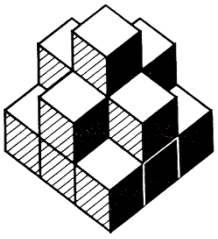
58. Count the number of cubes in the given figure.

(a) 8

(b) 9

(c) 12

(d) 15



59. In the following alphabets, which letter is eighth to the right of the fourteenth letter from the right end?

Z A B C D E F G H I J K L M N O P Q R S T U V W X Y

(a) H (b) R (c) S (d) T

60. **Direction:** Read the following statements carefully to answer the questions:

I. X is older than L.

II. M and N are of equal age.

III. Z is younger than N.

IV. Y is older than X.

Which statement(s) indicate(s) that N is older than Z?

(a) II and III (b) III only (c) III and IV (d) None of these

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