

Sample Paper

for Students presently in Class V

Paper 3 - NSEJS & Mathematics Olympiad

Duration : 90 minutes

Maximum Marks : 126

Please read the instructions and guidelines carefully :

Important Note : Please ensure to accurately input the details for the Class and Paper No. as indicated at the top of this sheet into the corresponding columns / fields on the OMR sheet before proceeding with the paper. Incorrectly filled information regarding the class or paper may result in inaccurate outcomes or results.

"This paper has been scientifically designed to evaluate your potential – manifested and hidden for the target examinations mentioned in various sections of the paper. Thus, your adherence to the instructions is critical in the evaluation of the same"

1. This Question paper consists of 2 sections.
2. Student should devote allotted time for each section. If a section is easy, then it is easy for everyone & was meant to be like that with a goal in mind. Do not switch over to another section if you find the section to be easy. If a section is tough, then it is tough for everyone. Please note that each section has been allocated a time limit of 45 minutes. Dedicating the full 45 minutes to finish each section successfully is essential. Opening the next section before completing the allotted time for the preceding section is not permitted. This adherence is crucial for assessing your true potential, as each section is meticulously crafted to evaluate your potential for the corresponding competitive examinations.
3. Candidate should open the seal of Section-II only after completing 45 minutes of Section-I.
4. Sheets will be given to each candidate for rough work. Candidate must fill all details on the rough sheet and submit the same to invigilator along with OMR sheet. Candidate must mention the Question No. while doing the rough work in the sheet.
5. Please note candidates are not allowed to bring any prohibited items into the exam hall such as electronic devices, mobile phones, smart watch, earphones, calculators, books, notes, formula sheets, and bags.
6. Marking scheme is given in table below:


Section	Subject	Question no.	Marking Scheme for each question	
			Correct answer	Wrong answer
SECTION – I (NSEJS) Time Allotted: 45 Minutes	PHYSICS (PART-A)	1 to 7	+3	-1
	CHEMISTRY (PART-B)	8 to 14	+3	-1
	BIOLOGY (PART-C)	15 to 21	+3	-1
SECTION – II (Mathematics Olympiad) Time Allotted: 45 Minutes	MATHEMATICS (PART-A)	22 to 42	+3	-1

Section - I

Time: 45 Minutes

PHYSICS (PART-A)

This part contains 7 Multiple Choice Questions number 1 to 7. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

- 100 Å is equal to
(A) 10^{-10} m
(C) 10^{-8} m
(B) 10^{-9} m
(D) 10^{-2} m
- Viewing from the window's of your moving car the persons outside the car seems to be
(A) moving forward
(C) moving backward
(B) at rest
(D) none of these
- A force of 7500 N can produce a pressure of 150 Pa. Then the area in _____ m^2 on which the force acts.
(A) $50 m^2$
(C) $20 m^2$
(B) $10 m^2$
(D) $25 m^2$
- Mass is the measure of
(A) inertia
(C) pressure
(B) charging
(D) all are correct
- When a ball is thrown in the air upward it comes down after some time, because of
(A) gravitational force
(B) magnetic force
(C) frictional force
(D) gravitational and magnetic force both are correct
- Work is measured in the same units as :
(A) Power
(C) Energy
(B) Force
(D) None of these
- Find net force in given situation

(A) 50 N
(C) 200 N
(B) 100 N
(D) 150 N

CHEMISTRY (PART-B)

This part contains 7 Multiple Choice Questions number 8 to 14. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

- Which of the following is one of the causes of drought?
(A) Excess rainfall
(C) Severe hot days
(B) Humid weathers
(D) Cold weather

9. Which of the following is an aeroplane fuel?
(A) Kerosene (B) Petrol
(C) Oxygen (D) Hydrogen
10. Water _____ flows from a higher to a lower level
(A) Always (B) Sometimes
(C) Never (D) None of these
11. Petroleum and natural gas are found between which type of rock.
(A) Igneous (B) Sedimentary
(C) Metamorphic (D) Both (A) and (C)
12. Which is not a property of air?
(A) Air has weight (B) Air exerts pressure
(C) Air occupies space (D) Air is a biotic component of environment
13. Humidity means the amount of _____ in air
(A) Snow (B) Soil
(C) Sunlight (D) Water vapours
14. Global warming is caused due to
(A) Carbon dioxide (B) Methane
(C) Chlorofluoro carbons (D) All of these

BIOLOGY (PART-C)

*This part contains 7 Multiple Choice Questions number 15 to 21. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

15. From which part of the plant can sugarcane be grown?
(A) Roots (B) Stems
(C) Leaves (D) None of these
16. _____ is the longest bone in the body.
(A) Humerus (B) Fibula
(C) Radius (D) Femur
17. Which among the following is not a source of roughage?
(A) Fresh fruits (B) Cereals
(C) Butter (D) Vegetables
18. Which is called as a body building food?
(A) Proteins (B) Fats
(C) Carbohydrates (D) all of these
19. Canning, dehydration and pickling are methods of _____ food.
(A) preservation (B) none of these
(C) garnishing (D) cooking
20. Sprouting consists of germinating
(A) fruit (B) Root
(C) seeds (D) all of these
21. Obesity, Diabetes and high blood pressure are _____ diseases.
(A) lifestyle (B) deficiency
(C) both (A) and (B) (D) all of these

Section – II

Time: 45 Minutes

MATHEMATICS – (PART – A)

This part contains 21 Multiple Choice Questions number 22 to 42. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

22. An exterior angle of a triangle is 120° and one of the interior opposite angles is 50° . Then the other two angles of the triangle are
 (A) $80^\circ, 70^\circ$ (B) $70^\circ, 90^\circ$
 (C) $70^\circ, 60^\circ$ (D) $80^\circ, 80^\circ$
23. In covering 156 km a car consumes 6 litres of petrol. How many kilometres will it go in 8 litres of petrol?
 (A) 208 km (B) 185 km
 (C) 205 (D) 268 km
24. The sides of a triangle are in the ratio 1 : 3 : 6 and its perimeter is 120 cm. The length of its shortest side is
 (A) 18 cm (B) 22 cm
 (C) 16 cm (D) 12 cm
25. Find the value of $|-6| - |-3| + |-5| + |3|$
 (A) 9 (B) 11
 (C) 13 (D) 17
26. What least number should be replaced for * so that the number 6 8 2 0 3 * 3 is exactly divisible by 9?
 (A) 6 (B) 7
 (C) 5 (D) 8
27. Find the sum of the following $\left(\frac{1}{2} + \frac{1}{6} + \frac{1}{12} + \frac{1}{30} + \frac{1}{42} + \frac{1}{56} + \frac{1}{72} + \frac{1}{90} + \frac{1}{110} + \frac{1}{132}\right)$
 (A) $\frac{11}{12}$ (B) $\frac{13}{15}$
 (C) $\frac{87}{89}$ (D) $\frac{219}{213}$
28. The value of the given expression $\frac{3}{5}$ of $\frac{4}{9}$ of $\frac{27}{8}$ of $\frac{25}{6}$ of 308 is
 (A) 1235 (B) 1195
 (C) 1155 (D) 1305
29. The HCF of the fraction of $\frac{36}{25}, \frac{48}{25}, \frac{72}{75}$
 (A) $\frac{12}{75}$ (B) $\frac{4}{25}$
 (C) $\frac{36}{25}$ (D) 36

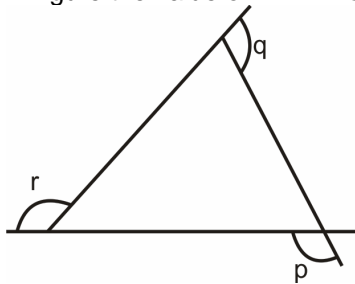
30. The sum of two numbers is 36 and their HCF and LCM are 3 and 105 respectively. The sum of the reciprocals of the two numbers will be
- (A) 13 (B) $\frac{9}{11}$
 (C) $\frac{7}{35}$ (D) $\frac{4}{35}$
31. The largest of the fractions $\frac{2}{5}, \frac{6}{11}, \frac{3}{4}, \frac{5}{7}$ is
- (A) $\frac{2}{5}$ (B) $\frac{3}{4}$
 (C) $\frac{6}{11}$ (D) $\frac{5}{7}$
32. The sum of the first 35 terms of the series $\frac{1}{2} + \frac{1}{3} - \frac{1}{4} - \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{2} - \frac{1}{3} - \frac{1}{4}$
- (A) $-\frac{1}{2}$ (B) $\frac{1}{4}$
 (C) $-\frac{1}{4}$ (D) 0
33. The value of given expression $\frac{\frac{a^2 + b^2}{a^2 - b^2} - \frac{a^2 - b^2}{a^2 + b^2}}{\frac{a + b}{a - b} - \frac{a - b}{a + b}}$ is
- (A) $\frac{-ab}{a^2 + b^2}$ (B) $\frac{a^2}{a^2 + b^2}$
 (C) $\frac{b^2}{a^2 + b^2}$ (D) $\frac{ab}{a^2 + b^2}$
34. The value of $4 - \frac{5}{1 + \frac{1}{3 + \frac{1}{2 + \frac{1}{4}}}}$
- (A) $\frac{1}{2}$ (B) $\frac{1}{8}$
 (C) $\frac{1}{5}$ (D) None of these
35. In four consecutive prime numbers that are in ascending order, then product of the first three is 385 and that of last three is 1001. The largest given prime number is
- (A) 11 (B) 19
 (C) 13 (D) 17
36. The unit digit in $(2137)^{754}$ is
- (A) 3 (B) 1
 (C) 7 (D) 9

37. The number of whole numbers between the smallest whole number and the greatest 2-digit number is
 (A) 88 (B) 99
 (C) 101 (D) 98

38. The value of given expression $\frac{(0.55)^2 + (0.07)^2 + (0.027)^2}{(0.055)^2 + (0.007)^2 + (0.0027)^2}$ is
 (A) 100 (B) 10
 (C) 1 (D) 1000

39. The number of prime factors in the expression $(6)^{10} \times (7)^{15} \times (13)^{27}$ is
 (A) 78 (B) 3
 (C) 6 (D) 4

40. In figure the value of $\angle P + \angle Q + \angle R$ is



- (A) 360° (B) 180°
 (C) 540° (D) None of these
41. 15 liters of mixtures contains 20% alcohol and the rest of water. If 3 liters of water is to be mixed with it, the percentage of alcohol in the new mixture would be
 (A) 15% (B) $16\frac{2}{3}\%$
 (C) 17% (D) $12\frac{1}{2}\%$
42. The remainder when 7^7 is divided by 4 is
 (A) 3 (B) 6
 (C) 9 (D) 5

DRONACHARYA

360° DIAGNOSTIC & SCHOLARSHIP EXAM

Sample Paper

for Students presently in Class V

Paper 3 - NSEJS & Mathematics Olympiad

ANSWER KEY

1.	C	2.	C	3.	A	4.	A
5.	A	6.	C	7.	A	8.	C
9.	A	10.	A	11.	B	12.	D
13.	D	14.	D	15.	B	16.	D
17.	C	18.	A	19.	A	20.	C
21.	A	22.	C	23.	A	24.	D
25.	B	26.	C	27.	A	28.	C
29.	A	30.	D	31.	B	32.	C
33.	D	34.	B	35.	C	36.	D
37.	B	38.	A	39.	D	40.	A
41.	B	42.	A				