THE RADIANT ACADEMY
Igniting Young Minds
Udaipur

Code - 0

SAMPLE PAPER

Academic Session : 2026-27

Class : IX

FOR STUDENTS MOVING IN CLASS (IX) IN 2026-27

(PRESENTLY STUDYING IN CLASS-VIII IN 2025-26)

Date : 2026-27 | Duration: 1.5 Hours | Max. Marks : 210

R-SAT

Radiant Scholarship cum Admission Test

Note : Make sure that you have filled your Class (Science + Mathematics) % , Mobile No., Medium of Study, Date of Birth, Category, Board of the School in Objective Response Sheet (ORS).

Candidate Name:

Application Form Number

The Radiant Academy

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Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.

Name of the Candidate:

Reg. Number :

1	9										

GENERAL INSTRUCTIONS IN EXAMINATION HALL

1. Question paper contains 70 questions of **Mathematics (1 to 25), Physics (26 to 35), Chemistry (36 to 45), Biology (46 to 55) & Mental Ability (56 to 70),** each question carry 3 mark.
2. Blank papers, clip boards, log tables, slide rule, calculators, mobile or any other electronic gadgets in any form is not allowed.
3. Write your Name and Roll No. in the space provided in the bottom of this booklet.
4. Before answering the paper, fill up the required details in the blank space provided in the answer sheet.
5. Do not forget to mention your roll number neatly and clearly in the blank space provided in the answer sheet.
6. There is no negative marks for wrong answer.
7. No rough sheets will be provided by the invigilators. All the rough work is to be done in the blank space provided in the question paper.
8. In case of any dispute, the answer filled in the OMR sheet available with the institute shall be final.

MARKING CRITERIA

No. of Questions	Type	Marks		
		Correct	Incorrect	Blank
1–70	Only one correct	Q. No. 1 to 70 (3 Mark each)	No negative marks	0

IMPORTANT

PROCEDURE OF FILLING UP THE ANSWERS IN OMR SHEET

Wrong Filling		Right Filling	
A B C D	Tick mark	A ● C D	Fully darken with HB Pencil
A B C D	Cross mark	A ● C D	Fully darken with HB Pencil
A ● C D	Half filled or semi dark	A ● C D	Fully darken with HB Pencil
○ B C D	Light filled	● B C D	Fully darken with HB Pencil

Best of Luck

1. MATHEMATICS

Straight Objective Type

This section contains 25 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

1. The value of $\left[\frac{1}{2} \div \left(\frac{-1}{3}\right)\right] \div \frac{2}{5}$ is

(A) $\frac{-15}{4}$ (B) $\frac{-4}{5}$ (C) $\frac{-3}{5}$ (D) $\frac{4}{15}$

2. If $\sqrt{b} = 4a$, then the value of $\frac{a^2}{b}$ is

(A) $\frac{1}{2}$. (B) $\frac{1}{4}$ (C) $\frac{1}{8}$. (D) $\frac{1}{16}$

3. The least possible value of A, for which 90 × A is a perfect cube is

(A) 200. (B) 300. (C) 500. (D) 600.

4. Two opposite angles of a parallelogram are (3x – 2)° and (50 – x)°. the measure of the smallest angle

(A) 37° (B) 47° (C) 143° (D) 133°

5. The product of $(x^2 – y^2)(2x + y)$ is :

(A) $2x^2 - y^3 + x^3y - 2xy$ (B) $2x^3 - y^3 + x^2y – 2xy^2$

(C) $2x^2 - y^3 + xy - 2xy^2$ (D) $2x^3 - y^3 + xy^2 - 2x^2y$

6. If $x + \frac{1}{x} = 7$, then the positive value of $x^2 + \frac{1}{x^2}$ is

(A) 51 (B) 50 (C) 49 (D) none

7. The sum of three numbers is 98. The ratio of the first to the second is $\frac{2}{3}$ and the ratio of the second to the third is $\frac{5}{8}$. The second number is

(A) 15 (B) 20 (C) 30 (D) 32

8. $|-138| - |-243| = ?$

(A) 105 (B) 381 (C) –381 (D) – 105

9. The least number to be added to 1750 to get a perfect square is

(A) 20. (B) 18. (C) 16. (D) 14.

Space for Rough Work

10. Evaluate: $\sqrt[3]{\frac{0.027}{0.008}} \div \sqrt{\frac{0.09}{0.04}} - 1$.

(A) 0 (B) 1 (C) 9 (D) 4

11. ABCD is a parallelogram. The angle bisectors of $\angle A$ and $\angle D$ meet at O. The measure of $\angle AOD$ is _____.

(A) 45º (B) 90º
(C) Depends on the angles A and D (D) Not able to determine from given data

12. When simplified and expressed with negative exponents, the expression $(x + y)^{-1} (x^{-1} + y^{-1})$ is equal to

(A) $x^{-2} + 2x^{-1} y^{-1} + y^{-2}$ (B) $x^{-2} + 2^{-1} x^{-1}y^{-1} + y^{-2}$
(C) $x^{-1} y^{-1}$ (D) $x^{-2} + y^{-2}$

13. The factors of $x^2 - 10x + 25$ are :

(A) $(x - 5)^2$ (B) $(x + 5)^2$ (C) $(x - 5)(x + 5)$ (D) $(x + 25)^2$

14. For the equation $\frac{x-2}{x+4} = \frac{x-3}{x+1}$, the value of x will be

(A) -5. (B) -1. (C) 0. (D) 5.

15. Evaluate : $\frac{8-[5-(-3+2)]\div 2}{|5-3|-|5-8|\div 3}$.

(A) 2 (B) 3 (C) 4 (D) 5

16. $\sqrt{\frac{1}{16}+\frac{1}{9}}$ equal to

(A) $\frac{7}{12}$ (B) $\frac{25}{144}$ (C) $\frac{5}{12}$ (D) None of these

17. Find the value k so that 200 × k is a perfect cube.

(A) 5 (B) 2 (C) 3 (D) 7

18. The length of the diagonals of a rhombus are 16 cm and 12 cm. the side of the rhombus is :

(A) 10 cm (B) 12 cm (C) 9 cm (D) 8 cm

19. The value of $(1.5x - 2y)(1.5x + 2y + 4) - 6x + 12y$ is

(A) $2.25x^2 + 2x + 4y - 4y^2 - 3xy$ (B) $2.25x^2 + 4y - 4y^2$
(C) $2.25x^2 + 2x - 4y - 4y^2$ (D) $2.25x^2 - 2x + 4y - 4y^2 - 3xy$

20. If xy = b and $\frac{1}{x^2} + \frac{1}{y^2} = a$, then $(x + y)^2$ equals

(A) $(a + 2b)^2$ (B) $a^2 + b^2$ (C) b(ab + 2) (D) + 2b

Space for Rough Work

21. The value of x in $\frac{4x+1}{8x-4} = 2$ is

(A) 7/8. (B) 3/4. (C) 1/2. (D) 1/4.

22. A rational number between $\frac{1}{4}$ and $\frac{1}{2}$ is

(A) $\frac{3}{5}$. (B) $\frac{3}{8}$. (C) $\frac{5}{8}$ (D) $\frac{7}{8}$.

23. The value of $(501)^2 - (500)^2$ is :

(A) 1 (B) 101 (C) 1001 (D) None of these

24. If $\sqrt[3]{16\frac{16}{27}} = \frac{4}{3} \times \sqrt[3]{x}$, then x is :

(A) 7 (B) 16 (C) 10 (D) None

25. ABCD is a parallelogram and E is the mid point of BC. DE and AB when produced meet at F. Then,

(A) AF = $\frac{3}{2}$AB (B) AF = 2AB (C) AF = 3AB (D) $AF^2 = 2AB^2$

2. PHYSICS

Straight Objective Type

This section contains 10 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

26. A minus sign of force implies that the
(A) force is exerted on some other object.
(B) force is in opposite direction to that of the motion.
(C) force is in the same direction to that of the motion.
(D) gravitational force is acting on the object.

27. If you increase the number of books in your school bag :
(A) pressure increases (B) pressure decreases
(C) pressure remains same (D) none of these

28. Friction while walking on a wet polished floor when compared to a rough dry floor is :
(A) less (B) more (C) equal (D) cannot say

Space for Rough Work

29. Which of the following statements is correct?
(A) Both, sound and light waves in air are longitudinal
(B) Both, sound and light waves in air are transverse
(C) Sound waves in air are transverse and light waves are longitudinal
(D) Sound waves in air are longitudinal and light waves are transverse

30. A body is said to be under balanced forces when the resultant force acting on the body is :
(A) Unity (B) Zero (C) Infinite (D) None of these

31. The S.I. unit of pressure is
(A) Pascal. (B) Newton. (C) Joule. (D) Kilogram.

32. A car slips on a wet road because the friction
(A) increases. (B) decreases. (C) remains same. (D) becomes zero.

33. The speed of sound in solids as compared to liquids is
(A) faster. (B) slower. (C) moderate. (D) not comparable.

34. Which one of the following is an advantage of friction
(A) Loss of mechanical energy (B) Loss of heat
(C) Wear and tear (D) Enable to write on a sheet of paper

35. If the object makes 40 oscillations in 2 s, then its time period is
(A) 0.05 s. (B) 0.03 s. (C) 0.02 s. (D) 0.01 s.

3. CHEMISTRY

Straight Objective Type

This section contains 10 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

36. Throwing plastic bags in the water bodies make it
(A) clean. (B) unfit for drinking.
(C) suitable for irrigation. (D) suitable for water animals.

37. The metal that is widely used in making jewellery is
(A) iron. (B) zinc. (C) gold. (D) copper.

38. Making bags from used papers is
(A) fibre-wise activity. (B) wasting of paper.
(C) some creative work. (D) some pass time work.

39. The gas produced when metals react with sulphuric acid is
(A) oxygen. (B) hydrogen. (C) nitrogen. (D) carbon dioxide.

Space for Rough Work

40. Synthetic fibres are made of large units called
(A) chains. (B) molecules. (C) polymers. (D) polygonal.

41. The gas, which produces a POP sound is
(A) oxygen. (B) nitrogen. (C) hydrogen. (D) carbon dioxide.

42. The name of a synthetic fibre depends upon
(A) its uses. (B) the types of chemicals used.
(C) the manufacturing process. (D) the place of manufacture.

43. The nature of oxides of non-metals is
(A) acidic. (B) basic. (C) amphoteric. (D) neutral.

44. The fibres differ from each other in their
(A) strength. (B) colour. (C) odour. (D) physical state.

45. The lightest metal is
(A) hydrogen. (B) lithium. (C) sodium. (D) aluminium.

4. BIOLOGY

Straight Objective Type

This section contains 10 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

46. Ecological Importance of Earthworms is that :
(a) It damages roots of plants.
(b) It takes organic matter from the soil surface deeper into the soil for absorption by plants.
(c) It's castings are rich in organic matter.
(d) It serves as food for protozoa.

Which of the above statements are correct.
(A) a and c (B) b and c (C) a and b (D) a,b and c

47. The correct match of type of Algae and its example is

Coloumn - I	**Coloumn - II**
(i) Unicellular algae	(A) Volvox
(ii) Filamentous algae	(B) Sargassum
(iii) Colonial algae	(C) Chlamydomonas
(iv)Multicellular algae	(D) Spirogyra

(A) (i)-(B), (ii)-(A), (iii)-(D), (iv)-(C) (B) (i)-(C), (ii)-(D), (iii)-(A), (iv)-(B)
(C) (i)-(D), (ii)-(C), (iii)-(B), (iv)-(A) (D) (i)-(C), (ii)-(A), (iii)-(D), (iv)-(C)

Space for Rough Work

48. What is the expanded form of IUCN ?
(A) International Union for Conservation of Nature and Natural Resources
(B) Indian Union for Conservation of Nature and National Resources
(C) International Union for Culture and Nature
(D) Indian Union for Culture and Natural Resources.

49. Which of the following is not the correct pairing of structure with function :
(A) Golgi complex : Breakdown of complex molecules
(B) Mitochondria : Production of ATP
(C) Endoplasmic reticulum : Synthesis of protein
(D) Chloroplast : Photosynthesis

50. Which one of the following is the advantage of soil preparation ?
(A) It increase soil fertility (B) It makes soil compact
(C) Soil become loose for roots to penetrate (D) All of these are correct

51. Bacteria which decreases soil fertility by converting nitrates into free N_2 -
(A) Nitrifying bacteria (B) Denitrifying bacteria
(C) Nitrobacter (D) Azotobacter

52. . Chipko movement is related to -
(A) conservation of trees (B) conservation of fossils
(C) conservation of soil (D) conservation of water

53. Ribosome is composed of :
(A) DNA and proteins (B) DNA only
(C) DNA + RNA (D) RNA and proteins

54. Hot spots are those area where
(A) Endemic species is found (B) Minimum biological diversity is observed
(C) Climatic temperature is high (D) Maximum biological diversity is found

55. Bacteria which helps in the formation of curd is -
(A) Mycobacterium aceti (B) Lactobacillus (C) Rhizobium (D) All of the above

5. MENTAL ABILITY

Straight Objective Type

This section contains 15 questions. Each question has 4 choices (A), (B), (C) and (D) for its answer, out of which **ONLY ONE** is correct.

Directions : (56 to 57) Find the missing numbers.

56. 2, 8, 18, 32, ?
(A) 62 (B) 60 (C) 50 (D) 46

Space for Rough Work

57. 94, 166, 258, ?, 4912
(A) 3610 (B) 1644 (C) 1026 (D) 516

Directions : (58 to 59) Which sequence of letters when placed at the blanks one after the other will complete the given letter series ?

58. _ b c _ _ b b _ a a b c
(A) acac (B) babc (C) abab (D) aacc

59. _ b c c _ ac _ a a b b _ a b _ c c
(A) aabca (B) abaca (C) bacab (D) bcaca

Directions : (60 to 61) Find the missing term.

60. X, A, D, G, J, ?
(A) N (B) O (C) M (D) P

61. Z, L, X, J, V, H, T, F, ?, ?
(A) R, D (B) R, E (C) S, E (D) Q, D

Directions : (62) Find the missing term in the given figure.

62.

3	8	10	2	?	1
6	56	90	2	20	0

(A) 0 (B) 3 (C) 5 (D) 7

63. If × means ÷, – means ×, ÷ means + and + means –, then **(3 – 15 ÷ 19) × 8 + 6** = ?
(A) 8 (B) 4 (C) 2 (D) –1

Directions : (64) Arrange the given words in alphabetical order and tick the one that comes first.

64. (A) Grammar (B) Granary (C) Gradient (D) Grand

65. If **REASON** is coded as 5 and **BELIEVED** as 7, what is the code number for **GOVERNMENT**?
(A) 6 (B) 8 (C) 9 (D) 10

66. Sanjay went 70 metre in the East before turning to his right. He went 10 metre before turning to his right again and went 10 metre from this point. From here he went 90 metre to the North. How far was he from the starting point ?
(A) 80 metre (B) 100 metre (C) 140 metre (D) 260 metre

Space for Rough Work

Directions : (67) Study the information carefully and then choose the correct alternative to answer the questions.
Five friends A, B, C, D and E are sitting on a bench.
(1) A is sitting next to B.
(2) C is sitting next to D.
(3) D is not sitting with E.
(4) E is on the left end of the bench.
(5) C is on second position from the right.
(6) A is on the right side of B and to the right side of E.
(7) A and C are sitting together.

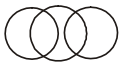
67. Where is A sitting ?
(A) Between B and D (B) Between D and C (C) Between C and E (D) Between B and C

68. If Nishant is the brother of Brijesh, Mitali is the sister of Nishant, Jai is the brother of Purnima, Purnima is the daughter of Brijesh. Who is the uncle of Jai?
(A) Brijesh (B) Mitali (C) Nishant (D) Purnima

Directions : (69) Five students A, B, C, D & E of a class secured distinction in four subjects English, Science, Maths and Sanskrit as: A and C secured distinction in English and Science. B, C and E secured distinction in Science and Sanskrit, while A, D and E Secured distinction in English and Maths then find out the correct alternatives for each question.

69. The student who secured distinction in all the four subjects is –
(A) A (B) E (C) C (D) D

Directions : (70) Each question below has three items having certain relationship among them. The same relationship is expressed by sets of circles, each circle representing one item irrespective of its size. Match the items with right set of circles.

70. Man, Husband, daughter
(A) (B) (C) (D) 

Space for Rough Work

THE RADIANT ACADEMY

Igniting Young Minds

Answer Key
R-SAT (Sample Paper)
ACADEMIC SESSION : 2026-27
Class-IX

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	A	D	B	A	B	D	C	D	D	A	B	C	A	D	C
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	A	A	B	C	B	B	C	A	B	B	A	A	D	B
Ques.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	A	B	A	D	A	B	C	A	B	C	C	B	A	A	B
Ques.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	C	B	A	A	D	B	A	D	D	B	C	A	A	C	C
Ques.	61	62	63	64	65	66	67	68	69	70					
Ans.	A	C	C	C	C	B	D	C	B	A					