



THE RADIANT[®] ACADEMY

STAR (STUDENT TALENT ACADEMIC REWARD)

CLASS -IX

SAMPLE PAPER

Time: 90 Min.

Max. Marks: 90

GENERAL INSTRUCTIONS

TEST PATTERN					
Time	Total No. of Questions	Subject/Question Segregation	Type	Total Marks : 90	
				Correct	Negative
90 Minutes	1-90	Physics (1-10) Chemistry (11-20) Biology (21-30) Mathematics (31-55) Social Science (56-65) Mental Ability (66-80) English (81-90)	Objective Question	1 Mark	0.25 Mark

1. A student has to write his/her answers in the OMR sheet by darkening the appropriate bubble with the help Of Ball pen only as the correct answer(s) of the question attempted.
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 & 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 OMR sheet.
5. **In case of any dispute, the answer sheet available with the institute shall be final.**
6. **In case of tie the younger in age will get top rank**

NAME OF THE CANDIDATE :ROLL NO. :
I have read all the instructions and shall abide by them I have verified the identity, name and roll number of the candidate.

.....
Signature of the Candidate

.....
Signature of the Invigilator

THE RADIANT ACADEMY

Corporate Office: 7-8, Samta Nagar, Hiran Magri, Sector - 3, Udaipur (Rajasthan) - 313001

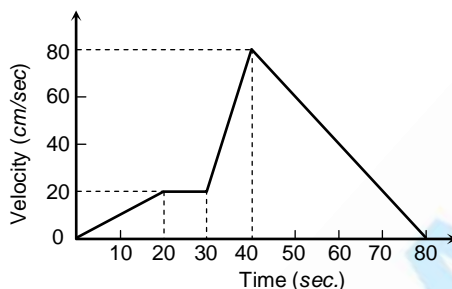
Mob.: +91-9001053989, 9461172001 | Email: info@theradiantacademy.com | Website: www.theradiantacademy.com

1. PHYSICS

Straight Objective

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.

1. If a car covers $2/5^{\text{th}}$ of the total distance with v_1 speed and $3/5^{\text{th}}$ distance with v_2 then average speed is
(A) $\frac{1}{2}\sqrt{v_1v_2}$ (B) $\frac{v_1+v_2}{2}$ (C) $\frac{2v_1v_2}{v_1+v_2}$ (D) $\frac{5v_1v_2}{3v_1+2v_2}$
2. The $v-t$ graph of a moving object is given in figure. The maximum acceleration is



- (A) 1cm/sec^2 (B) 2cm/sec^2 (C) 3cm/sec^2 (D) 6cm/sec^2
3. A machine gun fires 20 bullets per second into a target. Each bullet weighs 150 gms and has a speed of 800 m/sec. Find the force necessary to hold the gun in position
(A) 800 N (B) 1000 N (C) 1200 N (D) 2400 N
4. If a force of 250 N act on body, the momentum acquired is 125 kg-m/s. What is the period for which force acts on the body
(A) 0.5 sec (B) 0.2 sec (C) 0.4 sec (D) 0.25 sec
5. The volume of a packet of 500 g is 350 cm^3 . what will be the mass of water displaced by this packet?(density of water is 1 g/cm^3)
(A) 350 g (B) 440 g (C) 670 g (D) 500 g
6. Pressure at a point in the liquid is
(A) Same in all directions (B) greater in upward direction
(C) Greater in the downward direction (D) None of above
7. Two bodies weighing 50 kg and 10 kg kept at a distance 5 m apart. If the distance between them is increased by 5m, then gravitational force between them
(A) will decrease by 25% (B) will decrease by 50%
(C) will decrease by 75% (D) will increase by 25%
8. The weight of an object in the coal mine, sea level, at the top of the mountain are W_1, W_2 and W_3 respectively, then
(A) $W_1 < W_2 > W_3$ (B) $W_1 = W_2 = W_3$ (C) $W_1 < W_2 < W_3$ (D) $W_1 > W_2 > W_3$
9. A body of mass m kg is lifted by a man to a height of one metre in 30 sec. Another man lifts the same mass to the same height in 60 sec. The work done by them are in the ratio
(A) 1 : 2 (B) 1 : 1 (C) 2 : 1 (D) 4 : 1
10. A ball is released from certain height. It loses 50% of its kinetic energy on striking the ground. It will attain a height again equal to
(A) One fourth the initial height (B) Half the initial height
(C) Three fourth initial height (D) None of these

2. 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.

11. Which of the following is not an example of matter?
(A) Air (B) Felling of cold (C) Dust (D) None of these
12. Which of the following is rigid?
(A) Solid (B) Liquid (C) Gas (D) Both (B) and (C)
13. Which of the following will respond to sublimation
(A) Common salt (B) Sugar (C) Comphor (D) Potassium nitrate
14. Latent heat of vaporisation of water is
(A) 2.25×10^2 J/Kg (B) 22.5×10^5 J/Kg (C) 3.34×10^5 J/Kg (D) 33.4×10^2 J/Kg
15. Boiling point of alcohol is 78°C . What will be the temperature in Kelvin scale?
(A) 373 K (B) 351 K (C) 375 K (D) 78 K
16. One atmosphere is equal to
(A) 1.01×10^5 Pa (B) 3.46×10^4 Pa (C) 1 Pa (D) 10 Pa
17. Which of the following is not a compound?
(A) Marble (B) Washing soda (C) Quick lime (D) Brass
18. The particle size of solute in true solution is of the order of
(A) 10^{-6} m (B) 10^{-7} m (C) 10^{-8} m (D) 10^{-9} m
19. Fog is an example of
(A) Foam (B) Emulsion (C) Aerosol (D) Gel
20. 100 gm of an aqueous solution of sugar contains 40% sugar by mass. How much water should be evaporated to get 50% sugar solution by mass?
(A) 10 gm (B) 20 gm (C) 0.0 gm (D) 40 gm

3. 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.

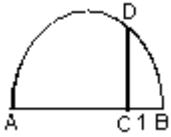
21. Areolar connective tissue is found :
(A) Around blood vessels & nerves (B) Between skin & muscles
(C) In the bone marrow (D) All of the above
22. Name the stain which is commonly used to study plant cells.
(A) Methylene blue (B) Cotton blue (C) Safranin (D) Acetocarmine
23. Intestine absorbs the digested food materials what type of epithelial cells are responsible for that?
(A) Stratified squamous epithelium (B) Columnar epithelium
(C) Spindle fibres (D) Cuboidal epithelium
24. A person met with an accident in which two long bones of hand were dislocated. Which among the following may be the possible reason ?
(A) Tendon break (B) Break of skeletal muscle
(C) Ligament break (D) Areolar tissue break
25. Bone matrix is rich in
(A) fluoride & calcium (B) Calcium & phosphorus
(C) calcium & potassium (D) phosphorus & potassium

26. In binomial nomenclature first name refers to
 (A) Order (B) Class (C) Genus (D) Species
27. How many subkingdom are divided in plants by Eichler
 (A) 1 (B) 2 (C) 3 (D) 4
28. The Bryophyta lack true
 (A) Root (B) Stem (C) leaves (D) All
29. Gymnosperms are characterized by
 (A) Winged seed (B) Naked seed (C) Multiple sperm (D) Mature sperm
30. Which of the following belong to division Pteridophyta
 (A) Funaria (B) Cycas (C) Riccia (D) Fern

4. MATHEMATICS

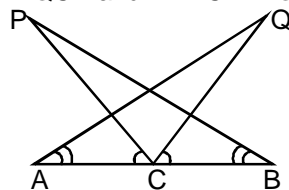
Straight Objective Type

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.

31. Which of the following pair is coprime.
 (A) (7,8) (B) (13,7) (C) (8,15) (D) All of these
32. Decimal form of $\frac{37}{300}$ is :
 (A) $0.\overline{123}$ (B) $0.\overline{123}$ (C) $0.1\overline{23}$ (D) None of these
33. Solve : $4.\overline{26} + 4.\overline{26} =$
 (A) $8.\overline{529}$ (B) $8.5\overline{29}$ (C) $8.5\overline{29}$ (D) 8.529
34. The decimal expansion of $\frac{6}{1250}$ will terminate after how many place of decimal?
 (A) 3 (B) 4 (C) 5 (D) 1
35. Which of the following rational numbers have terminating decimal expansion ?
 (A) $\frac{11}{7000}$ (B) $\frac{91}{21000}$ (C) $\frac{343}{2^3 5^3 7^3}$ (D) None of these
36. In the given figure AB is diameter and AC = 4 unit and BC = 1 unit and CD \perp AB then find value of CD.

 (A) 4 (B) 8 (C) 2 (D) 1
37. The sum of any two irrational numbers is
 (A) always an irrational number (B) always a rational number
 (C) always an integer (D) sometimes rational, sometimes irrational
38. Which of the following number is irrational ?
 (A) $\sqrt{16} - 4$ (B) $(3 - \sqrt{3}) (3 + \sqrt{3})$
 (C) $\sqrt{5} + 3$ (D) $-\sqrt{25}$

39. If x is not a perfect square and \sqrt{x} is an irrational number, then x is :
 (A) rational (B) irrational (C) 0 (D) positive real
40. Between two rational numbers
 (A) there is no rational number
 (B) there is exactly one rational number
 (C) there are infinitely many rational numbers
 (D) there are only rational numbers and no irrational numbers
41. $X=3$ and $Y=-2$ is a solution of the equation $4px-3y=12$, then the value of p is
 (A) 0 (B) $\frac{1}{2}$ (C) 2 (D) 3
42. Which of the following is the equation of a line parallel to y -axis?
 (A) $Y = 0$ (B) $X + Y = Z$ (C) $Y = X$ (D) $X = a$
43. If X represents the age of father and Y represents the present age of the son, then the statement for 'present age of father is 5 more than 6 times the age of the son' in terms of mathematical equation is
 (A) $6X + Y = 5$ (B) $X = 6Y + 5$ (C) $X + 6Y = 5$ (D) $X - 6 = 5$
44. Any point of the form $(a, -a)$ always lie on the graph of the equation
 (A) $x = -a$ (B) $y = a$ (C) $y = x$ (D) $x + y = 0$
45. The graph of the equation $2x + 3y = 6$ cuts the x -axis at the point
 (A) $(0, 3)$ (B) $(3, 0)$ (C) $(2, 0)$ (D) $(0, 2)$
46. If the arithmetic mean of 5, 7, 9, x is 9 then the value of x is :
 (A) 11 (B) 15 (C) 18 (D) 16
47. If the difference of mode and median of a data is 24, then the difference of median and mean is :
 (A) 12 (B) 24 (C) 8 (D) 36
48. A number is selected from numbers 1 to 27. The probability that it is prime is :
 (A) $\frac{2}{3}$ (B) $\frac{1}{6}$ (C) $\frac{1}{3}$ (D) $\frac{2}{9}$
49. The probability of guessing the correct answer to a certain question is $x/2$. If the probability of not guessing the correct answer to this question is $2/3$, then x equals :
 (A) 3 (B) $2/3$ (C) $1/3$ (D) 2
50. If the first day of an ordinary year is Thursday, then probability that the last day of the year is Thursday will be
 (A) 0 (B) $\frac{1}{3}$ (C) $\frac{1}{2}$ (D) 1
51. P is point on side BC of $\triangle ABC$ such that AP bisects $\angle BAC$. Then:
 (A) $BP = CP$ (B) $BA = BP$ (C) $BP > BA$ (D) $CP < CA$

52. In the given figure $AC = CB$, $\angle PCA = \angle QCB$ and $\angle PBC = \angle QAC$, then the true statement is :



- (A) $PB > QA$ (B) $\angle CPB \neq \angle CQA$ (C) $PC \neq QC$ (D) $\triangle PCB \cong \triangle QCA$

53. The value of $\sqrt[5]{(32)^{-3}}$ is:
 (A) $\frac{1}{8}$ (B) $\frac{1}{16}$ (C) $\frac{1}{32}$ (D) None of these
54. Simple form of $\frac{\sqrt{5}-2}{\sqrt{5}+2} + \frac{\sqrt{5}+2}{\sqrt{5}-2}$ is
 (A) $9 + \sqrt{5}$ (B) 18 (C) $18 + \sqrt{5}$ (D) 9
55. What is the value of $2.\bar{6} - 1.\bar{9}$?
 (A) $0.\bar{6}$ (B) $0.\bar{9}$ (C) $0.\bar{7}$ (D) 0.7

5. SOCIAL SCIENCE

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.

56. The Eastern most longitude of India is-
 (A) $97^{\circ} 25'E$ (B) $68^{\circ} 7'E$ (C) $77^{\circ} 6'E$ (D) $82^{\circ} 32'E$
57. A neighbouring country but not a part of Indian subcontinent is
 (A) Pakistan (B) Bangladesh (C) Nepal (D) China
58. Which of the following is a neighbouring state of China-
 (A) Himachal Pradesh (B) Uttaranchal (C) Sikkim (D) All of the above
59. Surplus produce in the market is supplied by
 (A) small and landless farmers (B) small and medium farmers
 (C) farmers having land holdings (D) large and medium farmers
60. The major benefits of the Green Revolution were experienced mainly in
 (A) northern India. (B) southern India. (C) western India. (D) eastern India.
61. People in Palampur mainly feed their buffaloes by
 (A) Jowar. (B) gram. (C) grass. (D) leaves.
62. Small farmers borrow money for cultivation from
 (A) traders. (B) family members. (C) banks. (D) moneylenders.
63. Wages are paid to the workers in the form of cash and
 (A) benefits. (B) incentive. (C) bonus. (D) kind.
64. Most abundant factor of production is
 (A) land. (B) labour. (C) capital. (D) entrepreneur.
65. Two crops that increased India's agriculture production in the era of Green Revolution were
 (A) cereals and rice. (B) paddy and maize. (C) wheat and maize. (D) wheat and rice.

6. 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.

Direction (66 to 70) : Find the missing term.

66. 14, 316, 536, 764, ?
(A) 981 (B) 1048 (C) 8110 (D) 9100
67. 12, 12, 6, 18, 4.5 ?
(A) 22.5 (B) 24 (C) 20 (D) 8
68. 2, 7, 24, 77, ?
(A) 230 (B) 238 (C) 240 (D) 242
69. 1, 2, 3, 5, 8, 13, ?
(A) 22 (B) 20 (C) 21 (D) 17
70. 6834, 6151, 5536, 4983, ?
(A) 4983 (B) 4485 (C) 4480 (D) 4442

Directions : (71 to 75) Find the wrong terms.

71. MDH, NFE, OHC, PED, QBF
(A) MDH (B) NFE (C) OHC (D) QBF
72. 5, 8, 11, 14, 16, 20
(A) 11 (B) 14 (C) 20 (D) 16
73. G 4 T, J 10 R, M 20 P, P 43 N, S 90 L
(A) G 4 T (B) J 10 R (C) M 20 P (D) P 43 N
74. ZLA, BMY, CNW, FOU, HPS
(A) ZLA (B) BMY (C) FOU (D) CNW
75. 3, 1, 4, 5, 10, 14, 23
(A) 5 (B) 10 (C) 14 (D) 23
76. B is to the South-West of A, C is to the east of B and South east of A, and D is to the North of C in line with B and A. In which direction of A is D located ?
(A) North (B) East (C) South-East (D) North-East
77. While facing east you turned to your left and walk 10 m, then turned to your left and walk 10 m and now you turn 45° towards your right and go straight to cover 25 m. Now in which direction are you from your starting point ?
(A) North-East (B) South-West (C) South-East (D) North-West
78. A and B start walking from the same point. A goes North and covers 3 kms, then turns right and covers 4 kms. B goes West and covers 5 kms, then turns right and covers 3 kms. How far apart are they from each other ?
(A) 10 kms (B) 9 kms (C) 8 kms (D) 5 kms
79. A boy rode his bicycle northwards, then turned left and rode one km and again turned left and rode 2 km. He found himself exactly one km west of his starting point. How far did he ride northwards initially
(A) 1 km (B) 2 km (C) 3 km (D) 5 km
80. Six students are sitting in a row. K is sitting between V and R. V is sitting next to M. M is sitting next to B who is sitting on the extreme left and Q is sitting next to R. Who are sitting adjacent to V ?
(A) R and Q (B) B and M (C) K and R (D) M and K

7. ENGLISH

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.

Fill in the blanks with the correct answer selecting from the given options.

81. She just the telegram.
(A) did, receive (B) had, received (C) was, receiving (D) has, received
82. He from Mumbai on Monday last.
(A) return (B) returns (C) returned (D) was returning
83. A large number of voters still along straight party line.
(A) vote (B) votes (C) voted (D) is voting
84. Few left alive after the flood.
(A) were (B) is (C) may (D) have
85. We have invited friends.
(A) any (B) both (C) some (D) neither
86. trees have been cut down.
(A) Very (B) Many (C) Much (D) A little
87. She thought that she be wrong.
(A) might (B) may (C) can (D) can
88. A servant disobey his master.
(A) ought to (B) may (C) must not (D) should
89. My aunt said to me, "I will get a new car for you today."
(A) My aunt asked me if she would get a new car for me that day.
(B) My aunt told me that she would get a new car for me that day.
(C) My aunt suggested me to get a new car for me that day.
(D) My aunt advised me to get a new car for me that day.
90. Father said to me, "Did you deposit my money in the bank?"
(A) Father told me that I had deposited his money in the bank.
(B) Father requested me to deposit his money in the bank.
(C) Father asked me if/whether I had deposited his money in the bank.
(D) Father prohibited me to deposit his money in the bank.

CLASS : IX
SAMPLE PAPER

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	D	D	D	A	A	A	C	A	B	B	B	A	C	B	B
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	A	D	D	C	B	C	C	C	D	A	A	D	A	D	B
Ques.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	D	C	C	B	C	C	D	C	D	C	B	D	B	D	B
Ques.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	B	A	C	B	D	D	D	A	B	A	A	D	C	D	A
Ques.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	A	D	D	A	D	D	A	B	C	B	C	D	B	D	B
Ques.	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Ans.	D	D	B	B	D	D	C	A	A	C	B	A	C	B	C

