



YADURISE

Yaduvanshi Renowned Intellectual Search Exam

Class - 9th

Reg. No./ Student ID Name.....

PART - I PHYSICS

- If two forces of 5N each are acting along X and Y axis then the magnitude and direction of resultant is
(A) $5\sqrt{2}, \frac{\pi}{3}$ (B) $5\sqrt{2}, \frac{\pi}{4}$ (C) $-5\sqrt{2}, \frac{\pi}{3}$ (D) $-5\sqrt{2}, \frac{\pi}{4}$
- The speed of a boat is 5 km/h in still water. If it crosses a river of width 1km along the shortest possible path in 15 minutes, then velocity of the river's water is
(A) 1km/h (B) 2km/h (C) 3km/h (D) 4km/h
- A bomb is dropped from an aeroplane moving horizontally at constant speed, if air resistance is taken into consideration, then the bomb
(A) falls on earth exactly below the aeroplane (B) falls on earth behind the aeroplane
(C) falls on the earth ahead of the aeroplane (D) flies with aeroplane
- An aeroplane is moving with horizontally velocity 'u' at a height 'h'. The velocity of packet dropped from it on the earth's surface will be
(A) $\sqrt{u^2 - 2gh}$ (B) 2gh (C) $\sqrt{2gh}$ (D) $\sqrt{u^2 + 2gh}$
- A bag of mass M hangs by a long thread and a bullet (mass m) comes horizontally with velocity v and get caught in the bag. Then for the combined system (bag + bullet)
(A) Momentum is $\frac{mMv}{(M + m)}$ (B) Kinetic energy is $\frac{1}{2}Mv^2$
(C) Momentum is $\frac{mv(M + m)}{M}$ (D) Kinetic energy is $\frac{m^2v^2}{2(M + m)}$
- The angle for which maximum height and horizontal range are same for a projectile is
(A) 32° (B) 48° (C) 76° (D) 84°
- The angular velocity of second's hand in a watch is
(A) 0.82 rad/s (B) 0.105 rad/s (C) 0.21 rad/s (D) 0.052 rad/s
- Two forces P and Q acting on a body make an angle of 60° between them. Then, the angle between the equilibrant and one of the forces is
(A) 120° (B) 30° (C) 60° (D) 150°
- Two bodies are moving in opposite direction with speed 'v'. What is the magnitude of their relative velocity.
(A) 0 (B) v (C) v/2 (D) 2v
- A bird weighs 2 kg and is inside a cage of 1 kg. If it starts flying then the weight of the bird and cage assembly is
(A) 4 kg (B) 3 kg (C) 2.5 kg (D) 1.5 kg
- A ball of mass 0.1 kg coming with a speed of 40 m/s strikes a bat and returns in opposite direction with a speed of 30 m/s. Then the impulse is
(A) 4 kg m/s (B) 3 kg m/s (C) 1 kg m/s (D) 7 kg m/s
- A man is standing on a spring platform. Reading of spring balance is 60 kgf. If man jumps outside from the platform then reading of spring balance will

- (A) increases (B) remain same (C) decrease to zero (D) be first (A) and then (C)
13. A car, when passes through a convex bridge, exerts a force on it, which is equal to
 (A) Mg (B) $\frac{Mv^2}{r}$ (C) $Mg + \frac{Mv^2}{r}$ (D) $Mg - \frac{Mv^2}{r}$
14. A car sometime overturns, while taking a turn when it overturns, it is
 (A) the inner wheel, which leaves the ground first
 (B) the outer wheel, which leaves the ground first
 (C) both the wheels leave the ground simultaneously
 (D) either wheel, which leaves the ground first
15. Two cars of unequal masses are having similar tyres. If they are moving at the same initial speed, the minimum stopping distance
 (A) is smaller for the heavier car (B) is smaller for lighter car
 (C) is same for both the cars (D) can not be predicted

PART - II CHEMISTRY

16. Which of the following represents largest pressure
 (A) 1 atmosphere (B) 1 bar
 (C) 10 pounds per square inch (D) 1000 pascals
17. In order to increase the volume of a gas by 10% the pressure of the gas should be
 (A) decrease by 10% (B) decrease by 1% (C) increase by 10% (D) increase by 1%
18. An LPG cylinder containing 15 kg butane at 27°C and 10 atm. pressure is leaking. After one day its pressure decreased to 8 atm. The quantity of the gas leaked is
 (A) 1 kg (B) 2 kg (C) 3 kg (D) 4 kg
19. Which one of the following gases has the highest critical temperature.
 (A) Nitrogen (B) Ammonia (C) Water vapours (D) Carbon dioxide
20. If a gas expands at constant temperature, it indicates that
 (A) Kinetic energy of the molecules decreases
 (B) Pressure of the gas decreases
 (C) Kinetic energy of molecules remains the same
 (D) No. of molecules of the gas increases
21. When milk is churned, cream separates out because of the
 (A) Cohesive force (B) Gravitational force (C) Frictional force (D) Centrifugal force
22. Which one of the following is not a mixture
 (A) Brass (B) Air (C) 22 Carat Gold (D) Water
23. Which is not shown by sols
 (A) Adsorption (B) Tyndall effect (C) Flocculation (D) Paramagnetism
24. Cod liver oil is:
 (A) Fat dispersed in water (B) Water dispersed in fat
 (C) Water dispersed in oil (D) Fat dispersed in fat
25. Solutions which distill without change in composition or temperature are called
 (A) Azeotropic mixture (B) Amorphous (C) Supersaturated (D) Ideal
26. A sample of 100 g red ink contains 0.4 red pigment. Concentration of the ink in ppm will be
 (A) 0.00039×10^2 (B) 3.9×10^2 (C) 39×10^2 (D) 0.39×10^2
27. Two oxides of a metal contain 36.4% and 53.4% of oxygen by mass respectively. If the formula of first oxide is M_2O then that of the second is
 (A) M_2O_3 (B) MO (C) MO_2 (D) M_2O_5
28. Which one of the following sets of compounds correctly illustrates the law of reciprocal proportions
 (A) P_2O_3 , PH_3 , H_2O (B) P_2O_5 , PH_3 , H_2O (C) N_2O_5 , NH_3 , H_2O (D) N_2O , NH_3 , H_2O
29. The total number of electrons in 18 mL of water

- (A) 6.02×10^{23} (B) 6.02×10^{25} (C) 6.02×10^{24} (D) $6.02 \times 18 \times 10^{23}$
30. 0.1 mole of chromium sulphide contain (valency of Cr = +3, valency of sulphide = -2)
 (A) 0.3 g atom of Cr^{+3} and 0.2 g atom of S^{-2} (B) 0.1 g atom of Cr^{+3} and 0.1 g atom of S^{-2}
 (C) 0.2 g atom of Cr^{+3} and 0.3 g atom of S^{-2} (D) 0.3 g atom of Cr^{+3} and 0.3 g atom of S^{-2}

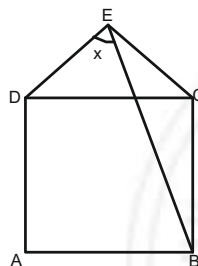
PART - III BIOLOGY

31. Lysosomes are produced by
 (A) Mitochondria (B) Endoplasmic reticulum
 (C) Golgi bodies (D) Leucoplast
32. Middle lamella is mainly composed of
 (A) Calcium pectate (B) Phosphoglycerides (C) Muramic acid (D) hemicellulose
33. Plasmodesmata take part in
 (A) Synchronous mitotic divisions (B) Cytoplasmic streaming
 (C) Movements of substances between cells (D) Locomotion in unicellular organisms
34. Ribosomes are granules formed of
 (A) rRNA + tRNA (B) mRNA + tRNA (C) rRNA + Proteins (D) mRNA + Protein
35. Protoplast is a cell
 (A) without plasma membrane (B) with out nucleus
 (C) undergoing division (D) with out cell wall
36. Lacunate collenchyma occurs in stem of
 (A) leucas (B) cucurbita (C) sunflower (D) sambucus
37. In Barley stem, vascular bundles are
 (A) open and scattered (B) closed and scattered
 (C) closed and radial (D) open and in a ring
38. Which of the following structures is ectodermal in origin
 (A) Kidneys (B) Brain (C) Lungs (D) Notochord
39. Match List-I with List-II and select the correct answer using the codes given below the lists:
- | List-I(Meristem) | List-II(Structure) | | | |
|-------------------------|--------------------|--------------|----------|----------|
| A. Apical meristem | 1. | Cambium | | |
| B. Lateral meristem | 2. | Internodes | | |
| C. Intercalary meristem | 3. | Root apex | | |
| D. Secondary meristem | 4. | Cork cambium | | |
| Codes | A | B | C | D |
| (A) | 3 | 1 | 2 | 4 |
| (B) | 1 | 2 | 4 | 3 |
| (C) | 3 | 4 | 2 | 1 |
| (D) | 4 | 3 | 1 | 2 |
40. Which one of the following is wrongly matched
 (A) Troponin – fibrous protein (B) Red muscle – myoglobin
 (C) Tendon – connective tissue (D) Myosin – contractile protein
41. The term glycocalyx is used for
 (A) A layer present between cell wall and membrane of bacteria
 (B) Cell wall of bacteria
 (C) Bacterial cell glycol-engineered to possess N-glycosylated proteins
 (D) A layer surrounding the cell wall of bacteria
42. Which of the following is a viral disease of poultry
 (A) Coryza (B) New Castle disease (C) Pasteurellosis (D) Salmonellosis

43. Pusa lerma is an improved variety of
 (A) Rice (B) Maize (C) Wheat (D) Mustard
44. The WBC found in the largest number are
 (A) Basophils (B) Acidophils (C) Lymphocytes (D) Neutrophils
45. Who gave the idea that every plant cell is totipotent?
 (A) P.R. White (B) E.C. Cocking (C) F.C. Steward (D) G. Haberlandt

PART - IV MATHEMATICS

46. If $x = 2 - 2^{\frac{1}{3}} + 2^{\frac{2}{3}}$ then value of $x^3 - 6x^2 + 18x + 18$ is
 (A) 22 (B) 33 (C) 40 (D) 45
47. The bisector of $\angle A$ and $\angle B$ of triangle ABC meet at P and PQ, PR are parallel to AC and BC resp. where Q and R lies on AB. If the perimeter of ΔPQR is 30 cm, then length of AB:
 (A) 60 cm (B) 30 cm (C) 90 cm (D) 15 cm
48. The least value of $2x^2 - 4x + 3y^2 - 18y + 31$ is:
 (A) 3 (B) -1 (C) 0 (D) 2
49. If $2^{32} + 1$ is Divisible by a given number then which of the following also divisible by that number:
 (A) $2^{16} + 1$ (B) $2^{16} - 1$ (C) $2^{13} + 7$ (D) $2^{96} + 1$
50. If $5^{2a} = 9^{3b} = 135^{2c}$, then the value of $\frac{1}{2} \left(\frac{a-c}{ac} \right)$ is equal to:
 (A) $\frac{1}{2b}$ (B) $\frac{1}{6b}$ (C) $\frac{2}{3b}$ (D) $\frac{3}{2b}$
51. Which is greatest number amongst $2^{\frac{1}{2}}, 3^{\frac{1}{3}}, 8^{\frac{1}{8}}, 9^{\frac{1}{9}}$.
 (A) $9^{\frac{1}{9}}$ (B) $8^{\frac{1}{8}}$ (C) $3^{\frac{1}{3}}$ (D) $2^{\frac{1}{2}}$
52. What is the sum of all possible values of n for which $n^2 + 20n + 12$ is a perfect square:
 (A) 13 (B) 3 (C) 16 (D) none of these
53. In the figure given below, equilateral triangle EDC surmounts square ABCD. Find the angle DEB represented by X.



- (A) 60 (B) 15 (C) 30 (D) 45
54. If $x^2 - 3x + 1 = 0$ then value of $x^5 + \frac{1}{x^5}$.
 (A) 87 (B) 123 (C) 135 (D) 201
55. The smallest among the surds $\sqrt{10} - \sqrt{5}$, $\sqrt{19} - \sqrt{14}$, $\sqrt{22} - \sqrt{17}$ and $\sqrt{8} - \sqrt{3}$ is.
 (A) $\sqrt{10} - \sqrt{5}$ (B) $\sqrt{19} - \sqrt{14}$ (C) $\sqrt{22} - \sqrt{17}$ (D) $\sqrt{8} - \sqrt{3}$

56. If largest angle in a triangle is 70° , what is least possible value of the smallest angle of the triangle?
 (A) 69° (B) 1° (C) 40° (D) 41°
57. If the sum of the interior angles of a regular polygon measures upto 1440 degrees, how many sides does the polygon have?
 (A) 10 (B) 8 (C) 12 (D) 9
58. The remainder when x^{1999} is divided by $x^2 - 1$ is
 (A) $-x$ (B) $3x$ (C) x (D) None of these
59. If $(x - 5)(y + 6)(z - 8) = 1331$, then the minimum value of $x + y + z$ is
 (A) 40 (B) 33 (C) 19 (D) not unique
60. The value of $\sqrt[3]{\frac{4}{9}} - \sqrt[3]{\frac{2}{9}} + \sqrt[3]{\frac{1}{9}}$ is
 (A) $\frac{1}{\sqrt[3]{3}}$ (B) $\sqrt[3]{3}$ (C) $\frac{\sqrt[3]{3}}{\sqrt[3]{2} + 1}$ (D) $\frac{3}{\sqrt[3]{2} + 1}$

PART - V
I.Q. (INTELLIGENCE QUOTIENT)

Note:- Choose any one of I.Q. (INTELLIGENCE QUOTIENT) or G.A. (GENERAL AWARENESS) in Part - V.

Direction (61-64) In a certain code language if

“JOIN YADUVANSHI NARNAUL BRANCH” is coded as Z # 5, Z # 9, Z @ 6, R # 3

“AND BUILD YOUR CAREER” is coded as R @ 4, Z @ 2, L # 3, Z # 5

“BEST RESULT NTSE” is coded as V # 3, V # 5, V # 3

“FUTURE WITH CLAT” is coded as Z # 3, V # 5, R # 3

61. Then what is code for “CHAMPION”?
 (A) Z # 7 (B) T # 7 (C) Z @ 7 (D) T @ 7
62. Then what is code for “YADUVANSHI”?
 (A) Z # 5 (B) Z @ 6 (C) Z # 9 (D) R # 3
63. Then what is code for “NARNAUL”?
 (A) Z # 9 (B) Z @ 6 (C) R # 5 (D) R # 3
64. Then what is code for “ALWAYS”?
 (A) Z # 5 (B) Z @ 5 (C) B @ 5 (D) I # 5

Direction(65): Find the odd number/letters/number pair from the given responses.

65. (A) Uttar Pradesh - Sugarcane (B) Kolkata - Jute
 (C) Punjab - Coal (D) Gujarat-Cotton

66.

29		
16	13	
27	9	33

38		
21	17	
35	16	43

55		
30	25	
?	?	?

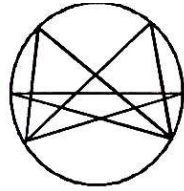
 (A) 65, 36, 63 (B) 53, 24, 63 (C) 49, 32, 53 (D) 51, 25, 61

67.

C	576	M	196	E	?
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 (A) 484 (B) 540 (C) 465 (D) 303

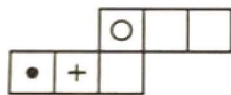
68. Find the number of triangles in the following figure?



- (A) 22 (B) 23 (C) 25 (D) More than 25
69. At what time between 4 and 5 O' clock, will the hands of the clock overlap?
- (A) 4 hours $21\frac{9}{11}$ minutes (B) 4 hours $22\frac{9}{11}$ minutes
- (C) 4 hours $20\frac{9}{11}$ minutes (D) 4 hours 20 minutes

Directions (70) : One or two statements are given followed by some conclusions. You have to consider the two statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

70. **Statement:** Some elephants are horses.
Ashwa is a horse.
- Conclusions:** I. Ashwa is an elephant.
II. Ashwa is not an elephant.
- (A) Only conclusion I follows. (B) Only conclusion II follows.
(C) Neither conclusion I nor II follows. (D) Either conclusion I or II follows.
71. When Anuj saw Manish, he recalled, "He is the son of the father of my daughter's mother." Who is Manish to Anuj?
- (A) Brother-in-law (B) Father (C) Cousin (D) Uncle
72. $14, 43.5, 264 ? 76188$
- (A) 3168 (B) 3174 (C) 1587 (D) 1590
73. $6, 24, 60, 120, 210, 336, ?, 720$
- (A) 496 (B) 502 (C) 504 (D) 498
74. Choose one which is different from the rest three.
- (A) Yen (B) Lira (C) Dollar (D) Ounce
75. How many times are the hands of a clock perpendicular in a day?
- (A) 42 (B) 48 (C) 44 (D) 46
76. How many times does 29th date will be used in consecutive 400 years?
- (A) 4497 (B) 4261 (C) 97 (D) 100
77. The sheet of paper shown in the figure (x) given on the left hand side, in each problem, is folded to form a box. Choose from amongst the alternatives (A), (B), (C) and (D), the boxes that are similar to the box that will be formed



(X)



(A)



(B)



(C)



(D)

(a) A only

(b) A, B and C only

(c) B and C only

(d) A, B, C and D

Directions (Questions to 78-80): Read the following information carefully and answer the question given below it:

Eight students A, B, C, D, E, F, G and H are planning to enjoy car racing. There are only two cars and following are the conditions:

- (i) One car can accommodate maximum five and minimum four students

- (ii) A will sit in the same car in which F is sitting but H is not in the same car.
 (iii) B and C can't sit in the same car in which F is sitting.
 (iv) F will sit in the car of four people only along with A and E but certainly not with G.
78. If H and G are sitting in the same car, who are other two students sitting in the same car?
 (A) B and C (B) C and D (C) E and B (D) None of these
79. If E and A are sitting in the same car, which of the following statements is true?
 (A) Five students are sitting in the same car (B) B is sitting in the same car.
 (C) F is not sitting in the same car. (D) G is not sitting in the same car
80. Which of the following statements is superfluous for the above sitting arrangements?
 (A) Only (i) (B) Only (ii) (C) Only (iii) (D) Only (iv)

G.A. (GENERAL AWARENESS)

61. Which one State in India becomes the first to launch single emergency number 112 ?
 (A) Himachal Pradesh (B) Punjab (C) Haryana (D) West Bengal
62. Which Nation has amended its weapons bill to ensure right to possession of Kirpans by Sikhs?
 (A) Australia (B) US (C) UK (D) Canada
63. India's longest rail-road bridge Bogibeel Bridge has been built over which river?
 (A) Ganga (B) Brahmaputra (C) Kaveri (D) Alaknanda
64. Which of the following states has become the India's first state to have four International Airports?
 (A) Kerala (B) Maharashtra (C) West Bengal (D) Tamil Nadu
65. Bharat Ratna award was established in which year?
 (A) 1952 (B) 1953 (C) 1954 (D) 1955
66. What is the correct Chronological order of Tennis grand slam tournament?
 1. Australian Open 2. French Open 3. Wimbledon 4. US Open
 (A) 1,2,4,3 (B) 1,3,2,4 (C) 1,4,3,2 (D) 1,2,3,4
67. Indian Army Day is celebrating every year on 15th January. On this day Recognition of Lieutenant General _____'s taking over as the first Commander-in-Chief of the Indian Army from General Sir Francis Butcher, the last British Commander-in Chief of India.
 (A) K. M. Cariappa (B) Arjan Singh (C) Sam Manekshaw (D) Jagjit Singh Arora
68. Who among the following won Men's Singles title in Australian Open-2019?
 (A) Rafael Nadal (B) Petra Kvitova (C) Pete Sampras (D) Novak Djokovic
69. What is the name of the Rover of Chandrayaan-2?
 (A) Pragyan (B) Vikram
 (C) Moon Mineralogy Mapper (D) Gagan
70. Who was named ICC Women's Cricketer of the Year?
 (A) Harmanpreet Kaur (B) Poonam Yadav (C) Mithali Raj (D) Smriti Mandhana
71. A robot named Bandicoot has been introduced for drainage-cleaning purpose in _____.
 (A) Chennai (B) Kolkata (C) Mumbai (D) New Delhi
72. Which country has launched the world first fully fledged 5G mobile network?
 (A) Japan (B) South Korea (C) China (D) USA
73. Which of the following cricket teams has won the 2019 Irani Cup?
 (A) Mumbai (B) Rest of India (C) Vidarbha (D) Karnataka
74. 'Sampriti 2019' is the joint military exercise of India and which country?
 (A) Bhutan (B) Myanmar (C) Iran (D) Bangladesh
75. "Web- Wonder Women" Campaign is related to
 (A) Recognising the achievements made by women led start-ups.
 (B) Acknowledge the efforts of women doctors serving in rural areas.
 (C) Celebrating women who have impacted society through social media
 (D) Making women as brand ambassadors for schemes related to women.
76. Recently Vice President M Venkaiah Naidu released a postage stamp to commemorate the 750th birth anniversary of which person?

- (A) Sri Vedanta Desikan (B) Sri Ravi Jai Shankar
(C) Sri Vaishnava (D) Sri Ram Charan
77. Which State government has declared 2019 as the 'Year of Water'?
(A) Maharashtra (B) Rajasthan (C) Haryana (D) Karnataka
78. Sirsi Supari, which got GI tag, is associated to which of the following states?
(A) Karnataka (B) Himchal Pradesh (C) Jammu & Kashmir (D) Andhra Pradesh
79. Which country is host to the U-17 Women's World Cup in 2020?
(A) France (B) South Korea (C) Spain (D) India
80. Who is the recipient of the 2019 Abel Prize for mathematics?
(A) Karen Uhlenbeck (B) John Nash (C) Robert Langlands (D) Jacques Tits

