GLOBAL EDUCATION CENTRE
Doha | Al Wakra | Al Khor

GRADE 9

Important Instructions:-

1. Immediately fill in the particulars on this page of the Test with Black/Blue Ball Point .
2. The test is of **70** minutes duration.
3. The Test consists of **65** questions.
4. The maximum marks are **210**.
5. There are three parts in the question paper I, II, III consisting of Quick Answer Types ,Logical and Analytical Reasoning and Aptitude respectively
6. **PART I** carries question of **2** marks.
7. **PART II** carries question of **4** marks.
8. **PART III** carries question of **4** marks.
9. Quick Answer Type questions will be applicable for 10 minutes.

10.Invigilators have to take Part I of paper from students after 10 minutes are over from the start

11. Candidates will be awarded marks as stated above in instruction No. 6, 7, and 8 for correct response of each question.
12. No deduction from the total score will be made if no response is indicated for an item in the answer sheet.
13. There is only one correct response for each question. Filling up more than one response in any question will be treated as wrong response
14. For writing particulars/marking responses on Side-1 and Side–2 of the Answer Sheet use only Black Ball Point Pen provided in the examination hall.
15. No candidate is allowed to carry any textual material, printed or written, bits of papers, pager, mobile phone, any electronic device, etc. except the Admit Card inside the examination room/ hall.
16. Rough work is to be done on the space provided for this purpose in the Test Booklet only. This space is given at the bottom of each page.
17. On completion of the test, the candidate must hand over the Answer Sheet to the Invigilator on duty in the Room/Hall.
18. In case of discrepancy, the candidate should immediately report the matter to the Invigilator for replacement of both the Test Booklet and the Answer Sheet.
19. Do not fold or make any stray mark on the Answer Sheet.
20. **25% negative marking for incorrect questions**.

Name of the Candidate (in Capital letters) :_____
Roll Number : in figures_____ _____
: in words_____
Name of Examination Centre (in Capital letters) :_____

Candidate's Signature

1. Invigilator's Signature :_____
2. Invigilator's Signature :_____

PART I

QUICK ANSWER TYPES

1. If $\sqrt{0.00000676} = 0.0026$ then $\sqrt{6760000}$ is?
(A) 2.6
(B) 26
(C) 260
(D) 2600

2. If $x = 7 - 4\sqrt{3}$ then find the value of $\left(x + \frac{1}{x}\right)$?
(A) 3sqrt{3}
(B) 8sqrt{3}
(C) 14
(D) 14+8sqrt{3}

3. The value of $\sqrt{10 + \sqrt{25 + \sqrt{108 + \sqrt{154 + \sqrt{225}}}}}$ is:
(A) 4
(B) 6
(C) 8
(D) 10

4. (51+52+53+……+100) is equal to?
(A) 5050
(B) 1275
(C) 3775
(D) None of the above

5. Cyperinus and Parthenium are types of?
(A) Diseases
(B) Pesticides
(C) Weeds
(D) Pathogens

6. The phenomenon by which protoplast of a cell shrinks from the wall is?
(A) Osmosis
(B) Plasmolysis
(C) Diffusion
(D) Glycolysis

7. The tissue present in the lining of kidney tubules and ducts of salivary glands is?
(a) Squamous epithelium tissue
(b) Glandular epithelium tissue
(c) Cuboidal epithelium tissue
(d) Columar epithelium tissue

8. Which of the following is a wrong Combination?
(A) $6.022 * 10^{23}$ molecules of oxygen = 32g of oxygen
(B) $6.022 * 10^{23}$ ions of sodium = 23g of sodium ions
(C) $6.022 * 10^{23}$ atoms of C = 24g of carbon
(D) $6.022 * 10^{23}$ atoms of H = 1g of hydrogen atoms

9. If selling price is doubled, the profit triples. Find the profit percent?
(A) 100%
(B) 200%
(C) 300%
(D) 400%

10. The molecular mass of X is 106. X can be?
(A) $CaCO_3$
(B) SO_3
(C) Na_2CO_3
(D) NaCl

11. Number of moles present in 28g of nitrogen atoms are?
(A) 1 mole
(B) 2.3 moles
(C) 0.5 mole
(D) 2 moles

12. A fires 5 shots to B's 3 but A kills only once in 3 shots while B kills once in 2 shots. When B has missed 27 times, A has killed:
(A) 30 birds
(B) 60 birds
(C) 72 birds
(D) 90 birds

13. If a*b = 2a – 3b + ab, then 3*5+5*3 is equal to:
(A) 22
(B) 23
(C) 24
(D) 25

14. If a + b + c = 13, $a^2 + b^2 + c^2 = 69$ then find the ab+bc+ca:
(A) 10
(B) 30
(C) 50
(D) 70

15. An alpha particle contains?
(A) 4 positive charge and 2 mass unit
(B) 2 positive charge and 4 mass unit
(C) 2 positive charge and 2 mass unit
(D) 4 positive charge and 4 mass unit

16. Insert the missing number?
7,26,63,124,215,342, (….)
(A) 391
(B) 421
(C) 481
(D) 511

17. Insert the missing number?
8,7,11,12,14,17,17,22, (….)
(A) 20
(B) 22
(C) 24
(D) 27

18. Find the odd 1 man out?
2,5,10,17,26,37,50,64
(A) 50
(B) 37
(C) 26
(D) 64

19. A clock is set right at 8 a.m. The clock gains 10 minutes in 24 hours will be the true time when the clock indicates 1 p.m. on the following day?
(A) 48 min. past 12.
(B) 46 min. past 12.
(C) 45 min. past 12.
(D) 47 min. past 12.

20. At what time between 5 and 6 o'clock are the hands of a 3 minutes apart?
(A) 24min
(B) 12min
(C) 13min
(D) 14min

21. A wave in slinky travelled to and fro in 5 sec the length of the slinky is 5m. What is the velocity of wave?
(A) 10m/s
(B) 5m/s
(C) 2m/s
(D) 25m/s

22. A football and a stone has same mass
(A) Both have same inertia
(B) Both have same momentum
(C) Both have different inertia
(D) Both have different momentum

23. The average weight of boys in a class is 30 kg and the average weight of girls in the same class is 20kg. If the average weight of the whole class is 23.25 kg, what could be the possible strength of boys and girls respectively in the same class?

(A) 14 and 16
(B) 13 and 27
(C) 17 and 27
(D) None of these

24. A man travelled a distance of 80 km in 7 hours partly on foot at the rate of 8 km per hour and partly on bicycle at 16 km /hr. Find the distance km travelled on foot?

(A) 80
(B) 16
(C) 56
(D) 32

25. The gravitational force between two objects is F. If masses of both the objects are halved without altering the distance between them, then the gravitational force would become

(A) F/4
(B) F /2
(C) F
(D) 2F

PART II
Aptitude

26. Find the missing number in place of the question mark?

5	11	96
9	13	88
8	17	?

(A) 225
(B) 165
(C) 185
(D) 250

27. I have a horse. Do you know what color it is? Allan said, "I guess it is not black". Brian said, "It is either brown, or gray". Charlie said "I know it is brown". I said, "At least one of you is right and at least one of you is wrong." What is the color of my horse if the color is one of the above?

(A) Brown
(B) Black
(C) Gray
(D) None

28. Six point are chosen on two parallel lines x and y, as follows: 4 points are on line x and two points are on line y. How many triangles with their vertices among the given points are there?

(A) 16
(B) 8
(C) 15
(D) 12

29. Mango : Fruit : : Potato : ?
(a) Root
(b) Fruit
(c) Stem
(d) Flower

30. PALE : LEAP : : POSH : ?
(A) HSOP
(B) POHS
(C) SHOP
(D) None of these

31. If A = 2 M = 26 Z = 52 then BET = ?
(A) 44
(B) 54
(C) 64
(D) 72

32. By selling 45 lemons for Rs 40, a man loses 20%. How many should he sell for Rs 24 to gain 20% in the transactions?
(A) 16
(B) 18
(C) 20
(D) 22

33. b _ a _ bab _ ab _ a
(A) baba
(B) babb
(C) abab
(D) abba

34. How many 4's are there preceded by 7 but not followed by 3?
5 9 3 2 1 7 4 2 6 9 7 4 6 1 3 2 8 7 4 1 3 8 3 2 5 6 7 4 3 9 5 8 2 0 1 8 7 4 6 3
(A) Four
(B) Three
(C) Six
(D) Five

35. If South-East becomes North-East becomes west and so on. What will west become?
(A) North-East
(B) North-West
(C) South-East
(D) South-West

36. The greatest number which on dividing 1657 and 2037 leaves remainders 6 and 5 respectively, is?
(A) 123
(B) 127
(C) 235
(D) 305

37.

3C	27D	9E
7I	21K	3M
4D	?	7J

(A) 11E
(B) 28G
(C) 35I
(D) 48F

38. Two pipes A and B can fill a tank in 15 minutes and 20 minutes respectively. Both the pipes are opened together but after 4 minutes, pipe A is turned off. What is the total time required to fill the tank?
(A) 10 min. 20 sec.
(B) 11 min. 45 sec.
(C) 12 min. 30 sec.
(D) 14 min. 40 sec.

39. If the diagonal of a rectangle is 17cm long and its perimeter is 46 cm. Find the area of the rectangle?

(A) 110
(B) 120
(C) 130
(D) 140

40. Pointing to a lady, a man said, "The son of her only brother is the brother of my wife. "How is the lady related to the man?

(A) Mother's sister
(B) Grandmother
(C) Mother-in-law
(D) None of these

Subject Based
Math

41. If the length of rectangle is increased by 10% and width of rectangle is decreased by 10% then area

(A) remains constant
(B) increases by 1%
(C) decreases by 1%
(D) increases by 10%

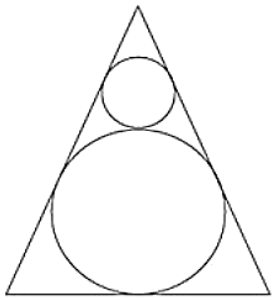
42. Ram deposits Rs. P with a bank at r% compound interest and sees it reach Rs.16P in 2 years. If he had invested the same amount at r% simple interest for 2 years, what would be the amount?

(A) 6P
(B) 7P
(C) 5P
(D) 8P

43. x, y, z are integer that are side of an obtuse-angled triangle. If xy = 4, find z.

(A) 2
(B) 3
(C) 1
(D) More than one possible value of z exists

44. Two circles are placed in an equilateral triangle as shown in the figure. What is the ratio of the area of the smaller circle to that of the equilateral triangle?



(A) $\pi : 36\sqrt{3}$
(B) $\pi : 18\sqrt{3}$
(C) $\pi : 27\sqrt{3}$
(D) $\pi : 42\sqrt{3}$

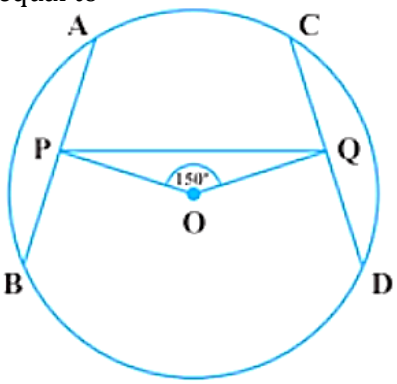
45. A number when divided by 18 leaves a remainder 7. The same number when divided by 12 leaves a remainder n. How many values can n take?

(A) 2
(B) 0
(C) 1
(D) 3

46. When Sourav increases his speed from 20 Km/hr to 25 Km/hr, he takes one hour less than the usual time to cover a certain distance. What is the distance usually covered by him?

(A) 125 Km
(B) 100 Km
(C) 80 Km
(D) 120 Km

47. In fig. 10.2 AB and CD are two equals chords of a circle with centre O. OP and OQ are perpendiculars on chords AB and CD. Respectively If $\angle POD = 150°$, $\angle APQ$ is equal to



(A) 30°
(B) 75°
(C) 15°
(D) 60°

48. In a cylinder, radius is doubled and height doubled Surface area will?

(A) Become 2 times
(B) Become 8 times
(C) Remains same
(D) Become ½ times

49. The points (other than origin) for which abscissa is equal to the ordinate will lie in

(A) I quadrant only
(B) I and II quadrants
(C) I and III quadrants
(D) II and IV quadrants

50. The area of the figure formed by joining the mid-points of the adjacent sides of a rhombus with diagonals 12 cm and 16 cm is

(A) 48 cm^2
(B) 64 cm^2
(C) 96 cm^2
(D) 192 cm^2

Chemistry

51. Four substances were thoroughly mixed with water separately to obtain mixtures A, B, C and D. Some of their properties are given below:

(I) Path of a beam of light passing through it was visible in A, B and D but invisible in C.
(II) On leaving undisturbed, the particles of the substance settle down in A but not in B, C and D.
(III) The solute particles are visible to naked eye in A but invisible in B, C and D.

Which of the following is correct about A, B, C and D?

(A) A, B and D are colloids, C is a solution.
(B) A is a suspension, B and D are colloids, C is a solution.
(C) A is a colloid. B, C and D are solutions.
(D) A is a suspension. B, C and D are colloids.

52. Somebody wanted to calculate the number of moles of oxygen atoms comprising of 9.033×10^{23} number of its atoms. The person further thought to calculate its mass and to find the number of moles of hydrogen atoms required to combine completely with this amount of oxygen to form water. The number of moles of oxygen atoms, their mass (in grams) and the number of moles of hydrogen atoms are?

(A) 1.5,3 and 24 respectively
(B) 15,18 and 3 respectively
(C) 0.15,27 and 3 respectively
(D) 1.5, 24 and 3 respectively

53. The compound containing both ionic and covalent bond is?

(A) $AlBr_3$
(B) CaO
(C) $MgCl_2$
(D) NH_4Cl

54. Which of the following is a feasible reaction?

(A) $Ba(s)+K_2SO_4\,(aq) \rightarrow BaSO_4\,(aq)+2K\,(s)$

(B) $Zn(s)+2\,AgNO_3\,(aq) \rightarrow Zn(NO_3)_2\,(aq)+2Ag\,(s)$

(C) $Mg(s)+Na_2SO_4\,(aq) \rightarrow MgSO_4\,(aq)+2Na(s)$

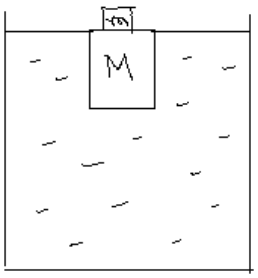
(D) $Cu(s)+MgSO_4\,(aq) \rightarrow CuSO_4\,(aq)+Mg\,(s)$

55. At 298 K and 1 atm pressure, a gas mixture contains equal masses of He, H_2, O_2 and NH_3 which of the following is correct for their average molecular Velocities?

(A) $He > H_2 > NH_3 > O_2$
(B) $He < H_2 < O_2 < NH_3$
(C) $H_2 < He < NH_3 < O_2$
(D) $O_2 < NH_3 < He < H_2$

Physics

56. A block of mass m is kept on a block of mass M placed inside a liquid such that when the whole system is stable, the block of mass M is completely immersed in the liquid as shown. If the density of liquid is double of that of the lower block, the ratio of masses m and M is?



(A) 1
(B) 2
(C) 4
(D) 8

57. A ball is dropped from height 2m. When it reaches bottom, it collides with ground to lose half of its kinetic energy and then moves further up. What is the maximum height is reaches after the collision?
(A) 1m
(B) 2m
(C) 3m
(D) 4m

58. A gun of mass 2kg shoots a bullet of mass 50 gm with speed 200m/s in gravity free space. The distance travelled by gun in two seconds due to recoil is?
(A) 2m
(B) 5m
(C) 10m
(D) 20m

59. A wave of frequency 1kHz and wavelength 20cm is used in SONAR. The sent signal is received back in 2s. How far is the object from the ship?
(A) 200m
(B) 400m
(C) 800m
(D) 1.6km

60. If a body thrown upwards reaches a height of 1m on surface of Earth, how much above the surface would it go on surface of moon?
(A) 1/6m
(B) 1m
(C) $\sqrt{3}m$
(D) 6m

BIOLOGY

61. It is a type of cropping pattern which makes better use of the natural resources of sunlight, land and water and ensures maximum utilization of the nutrients supplied, as crops grow in pattern have different nutrient requirements. Identify it?
(A) Mixed cropping
(B) Intercropping
(C) Crop rotation
(D) Norflok rotation

62. Which of the following muscles are involuntary in action?
(A) Muscles of limbs
(B) Muscles of heart
(C) Muscles of iris
(D) Both (B) & (C)

63. The slow growing large coloured patches on the bark of trees which are result of symbiotic relationship between cyanobacteria and fungi are?
(A) Mosses
(B) Lichens
(C) Ferns
(D) None of these

64. AIDS is a disease caused by retrovirus, an RNA virus which brings about?
(A) Reduction in the number of helper T-cells
(B) Reduction in the number of killer T-cells
(C) Autoimmunity
(D) Non production of interferons

65. Species X are chlorophyllous plants which are autotrophic in their mode of nutrition & may be green, yellow, orange & red colour etc. Species X belongs to Y which are nonvascular plants and have unicellular and non-jacketed sex organs. In the above passage Y is?
(A) Bryophyta
(B) Thallophyta
(C) Pteridophyta
(D) Gymnosperms