KTST (Knewton's Trend Setter Test)

KNEWTON ACADEMY
IIT/JEE/NEET/NDA/FOUNDATION

Class: VIII   **Duration: 60 Min**   **M.M: 150**

Subjects		
Mental Ability	**Mathematics**	**Science**

General Instructions:

1. The Test is of 1 hour duration.
2. This Test Consist of three sections, section-A (Mental Ability), section-B (Mathematics) & Section-C (Science).
3. All three sections Consist of 5 Marks for each question.
4. There will be only one correct choice in the given Sections for each questions.
5. Use Blue/Black Ball Point Pen only for writing particulars/making responses on side-1 and side-2 of the answer sheet. Use of Pencil is strictly prohibited.
6. No candidate is allowed to carry any textual material, printed or written, bits of papers, pagers, any electronic device, etc. Except the admit card inside the examination hall/room.
7. Rough work is to be done on the space provided for this purpose on this test booklet only.
8. On completion of the test, the candidate must handover the answer sheet to the invigilator on duty in the room/hall. Candidates are allowed to take away the test booklet with them.
9. Do not fold or make any stray marks on the Answer Sheet
10. Make sure to fill all you details properly in OMR SHEET/Answer Sheet as per the given columns.

Section- A (Mental Ability)

Direction for Question 1 & 2: B, D, F, H, K , W,

 M and T are sitting around a circle facing the centre. F is third to the left of D who is second to the left of H. B is fourth to the right of H. K is the third to the right of M who is not an immediate neighbor of F. T is not an immediate neighbor of B or D.

1. Who is to the immediate right of T?

    a. K   (b) F   (c) H   (d) Data inadequate

2. Who is second to the left of B?

    a. T   (b) D   (c) K   (d) Data inadequate

3. A man is facing North-west. He turns 90^0 in the clockwise direction and then 135^0 in the anticlockwise direction. Which direction is he facing now?

    a. North   (b) south   (c) West   (d) East

4. In the following question, one term is wrong. Find out the wrong term.

    225, 196, 169, 144, 121, 80

    (a) 80   (b) 121   (c) 169   (d) 196

5. Z, X, V, T, R, …?…,…?….
    a. O, K   (b) N, M   (c) P, N   (d) M, N

6. In a chess tournament each of six players will play every other player exactly once. How many matches will be played during the tournament?
    (a) 36   (b) 30   (c) 15   (d) 12

7. Select from the given diagrams, the one that illustrates the relationship among the given three classes:

Judge, Thief, Criminal
(i) A + B means A 'is the father of B'
(ii) A - B means A 'is the wife of B'
(iii) A × B means A 'is the brother of B'
(iv) A ÷ B means A 'is the daughter of B' If

8. Which number sequence of the following represents a correct sequence from small to big?
   a. Bungalow   (b) Flat   (c) Cottage   (d) House (e)Palace

   (a) (c),(b),(a),(d),(e)   (b) (c), (b), (d) (a), (e)

   (c) (e),(d),(a),(b),(c)   (d) (b), (c), (d), (a), (e)

9. Out of the four figures (a),(b),(c),(d) given in each problem, three are similar in a certain way. However, one figure is not like the other three. Choose the figure which is different from the rest.

10. A – C + B, which of the following statements is true?

   (a) A is the mother of B   (b) B is the daughter of A

   (c) A is the aunt of B   (d) A is the sister if B

Section- B (Mathematics)

1. Find the smallest number by which 2560 must be multiplied so that the product will be a perfect cube.

   (a) 10   (b) 25   (c) 20   (d) 35

2. Find the quotient of polynomials if $y^3 - 6y^2 + 9y - 2$ is dividend by $y - 2$.

   (a) $y^2 + 4y + 1$ (b) $y^2 - 4y + 1$ (c) $y^2 + 4y - 1$ (d) $y^2 - 4y - 1$

2. Factorise the given expression : $mn(u^2 + v^2) - uv(m^2 + n^2)$
   a. (un+vm)(um−vn)   (b) (un + vm) (um + vn)
   (c) (un−vm)(um-vn)   (d) (un −vm) (um+vn)

3. James is a milk dealer and usually mixes water in the milk. He has certain quantity of milk and mixes it with 16 liters of water and sell the mixture at Rs. 0.9 per liters. If pure milk is worth Rs. 1.08 per litre, then how much milk is there in the mixture?

   a. 50 litres   (b) 60 litres   (c) 70 litres   (d) 80 litres

4. In a college 45 % students are in Mathematics department, 30 % are in Physics department, 15 % are in Biotechnology department and rest are in Chemistry department. If there are 120 students in chemistry department, then find the total number of students in the college.

   (a) 800   (b) 850   (c) 750   (d) 1200

5. Solution of the equation $6(3x + 2) - 5(6x - 1) = 6(x - 3) - 5(7x - 6) + 12x$ is………………

   (a) -1   (b) 1   (c) 0   (d) 2

6. Harry purchased a shirt for Rs. 2800 and sold it to his friend for Rs. 2250. Find his loss percent on the shirt.

   (a) 19.64%   (b) 18.94%   (c) 20%   (d) 21.56%

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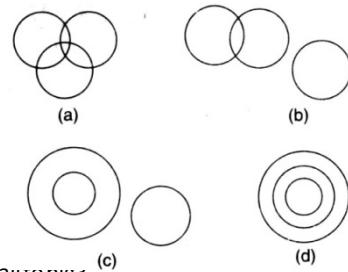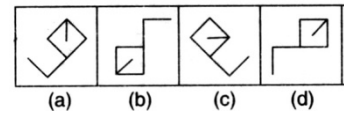**Contact:** 011-46575823 | +91-9911625728 | Instagram: Knewton_Academy | FB: KnewtonAcademyIN
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7. Find the value of 'y' such that $\dfrac{8y+34}{36}+\dfrac{y}{3}=\dfrac{14y}{24}-\dfrac{2y+32}{72}$.

   a. $\dfrac{12}{25}$
   b. $\dfrac{25}{12}$
   c. $\dfrac{48}{25}$
   d. $\dfrac{25}{48}$

8. Simplify: $\dfrac{\sqrt{1024}-\sqrt[3]{24}}{\sqrt{441}+\sqrt{96}}$

   a. $\dfrac{2}{5}$
   b. $\sqrt{\dfrac{2}{5}}$
   c. $\sqrt{\dfrac{8}{5}}$
   d. $\dfrac{4}{5}$

9. Harry and john together can level a ground in 6 days and Harry alone takes 10 days to finish the work. Find the time required by john to finish the work if he works alone.

   (a) 12 days   (b) 15 days   (c) 10 days   (d) 20 days

10. The following are the marks obtained by 50 students in Mathematics in their previous examination held in their school. Find the range of the data given below:

45	68	41	87	61	44	67	30	54	8	39	60	37	50
19	86	42	29	32	61	25	77	62	98	47	36	15	40
9	25	34	50	61	75	51	96	20	13	18	35	43	88
25	95	68	81	29	41	45	87						

a. 90   b. 75   c. 80   d. 60

Section- C (Science)

1. The process of transferring the seedlings from the nursery to the main field by hands is called:
   a. Ploughing   (b) Leveling   (c) Manuring   (d) Transplanting

2. The process of supplying water to crop plants in the fields is called:
   a. Ploughing   (b) Leveling   (c) Irrigation   (d) Transplantation

3. Which one of the following material is obtained when coal is strongly heated in the absence of air?
   a. Coke   (b) Petroleum   (c) Coaltar   (d) Both (a) and(c)

4. Why does a series of fast moving still pictures can create an illusion of movement in our eyes?
   a. The eye can focus on very rapidly changing pictures.
   b. The eye is quicker than the brain
   c. The eye can separate two images only when the interval of separation between them is one- sixteenth of a second.
   d. The optical cortex can see through the rapidly moving images.

5. Which micro-organism is matched correctly to its disease respectively?
   a. Worms cause sexually transmitted disease
   b. Bacteria cause tuberculosis
   c. Protozoa cause ringworm
   d. Fungi causes malaria

6. X appears like silk. It is strong and flexible. Non-availability of X caused riots after world war-II. The X is

a. Cotton   (b) Nylon   (c) Polyester   (d) Rayon

7. Which one of the following is the unit of frequency?
   a. Metre   (b) Hertz   (c) Second   (d) Newton

8. The time taken by a vibrating object to complete one vibration is called its:
   a. Intensity   (b) Time-period   (c) Vibration   (d) Frequency

9. Which one of the following is the hottest planet in our solar system?
   a. Mercury   (b) Venus   (c) Earth   (d) Mars

10. Which one of the following groups represents the bacterial diseases?

    a. Cholera, tuberculosis, malaria, measles
    b. Small pox, tuberculosis, malaria, typhoid
    c. Cholera, tuberculosis, typhoid, measles
    d. Cholera, anthrax, tuberculosis, thyroid

*** The End***