Std 7- NSTSE Sample Test Paper

This Test Paper Contains 4 Sections.
Read every question carefully.

Mathematics (1-25)

1. When a number is reduced by 4, it becomes 80% of itself. Find the number.

(A) 20   (B) 30   (C) 40   (D) 50

2. In a $\triangle ABC$, if AB + BC = 10 cm, BC + CA = 12 cm,

CA + AB = 16 cm, what is the sum of the lengths of its sides ?

(A) 19cm   (B) 17cm   (C) 38cm   (D) 30cm

3. The present age of A is twice that of B. 30 years from now, age of A will be 1½ times that of B. Find the present ages (in years) of A and B respectively.

(A) 60,30   (B) 30,60   (C) 40,50   (D) 50,40

4. Over which of the following operations is multiplication distributed in the set of integers ?

(A) -, ÷   (B) -, X   (C) +, -   (D) X, ÷

5. What is the value of

$(a^3 - 2a^2 + 4a - 5) - (-a^3 - 8a + 2a^J + 5)$?

(A) $2a^3 + 7a^2 + 6a - 10$ (B) $2a^3 + 7a^2 + 12a - 10$

(C) $2a^3 - 4a^2 + 12a - 10$ (D) $2a^3 - 4a^2 + 6a - 10$

6. How many pieces of equal size can be cut from a rope of 30 metres long, each measuring $3\frac{3}{4}$ metres?
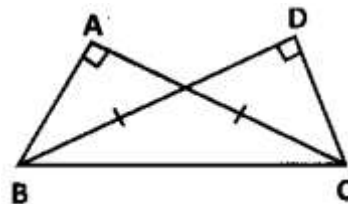
(A) 8   (B) 10   (C) 6   (D) 12

7. A shopkeeper sold two watches for Rs. 425 each, gaining 10% on one and losing 10% on the other. Which of the following is true ?

(A) He gains 1%.   (B) He loses 1%.

(C) No loss no gain   (D) He gains 10%

8. In the figure given, AC = BD and $\angle BAC = \angle CDB = 90°$.

If $\triangle ABC \cong \triangle DCB$ by R.H.S. property which of the following is required ?

(A) The measure of AB.   (B) The measure of CD.

(C) The measure of BC.   (D) AC = BD

9. In a math test, the highest marks obtained by a student in the class is twice the lowest marks plus 7. If the highest score is 87, what is the lowest score ?
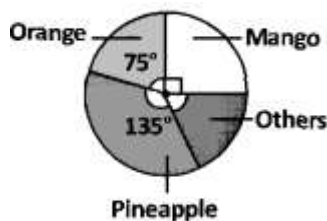
(A) 42   (B) 39   (C) 40   (D) 44

10. Between which two numbers does $\frac{11}{4}$ lie ?

(A) 1 and 2   (B) 2 and 3   (C) 3 and 4   (D) 11 and 12

11. The pie-chart depicts the results of a survey conducted to identify the favourite juice of some students.

How many students like other juices if the total number of students is 360 ?

(A) 70   (B) 80   (C) 65   (D) 60

12. A lift descends into an underground floor at the rate of 6 metres per minute. If the descent starts

from 10 metres above the ground level, how much time will it take to descend 350 metres ?

(A) 30 minutes   (B) 50 minutes

(C) 1 hour   (D) 1 hour 30 minutes

13. A book consists of 216 pages. During last week, Suresh read $\frac{3}{4}$ of the book. How many pages did he read ?

(A) 126   (8) 162   (C) 116   (D) 161

14. If the angles $(2a - 10)°$ and $(a - 11)°$ are complementary, what is the value of 'a' ?

(A) 37°   (B) 27°   (C) 17°   (D) 7°

15. Which of the following statements is incorrect ?

(A) The sum of angles in a triangle is 2 right angles.

(B) The exterior angle of a triangle is equal to the interior angle of the triangle.

(C) The hypotenuse is the longest side of a right angled triangle.
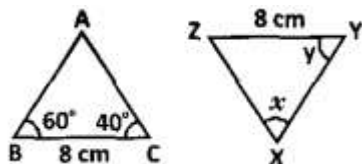
(D) All the above.

16. Find a rational number between $\frac{3}{4}$ and $\frac{9}{11}$.

(A) $\frac{1}{2}$ (B) $\frac{13}{11}$ (C) $\frac{69}{88}$ (D) $\frac{1}{4}$

17. Which of the following statements is correct ?

(A) The difference of any two sides is less than the third side.

(B) A triangle cannot have two obtuse angles.

(C) A triangle cannot have an obtuse angle and a right angle.

(D) All the above.

18. $\triangle$ ABC is congruent to $\triangle$ XYZ. Find the measures of $\angle$ x and $\angle$ y respectively.

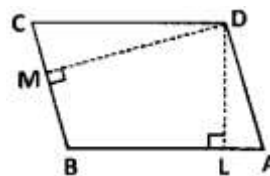(A) 80°, 60°   (B) 60°, 40°

(C) 80°, 40°   (D) 60°, 80°

19. When the circumference and area of a circle are numerically equal, what is the diameter numerically equal to ?

(A) Area   (B) Circumference   (C) 2π (D) 4

20. When a certain number, 'm' is divided by 5 and added to 8, the result is equal to thrice the number subtracted from 4. What is the value of 'm' ?
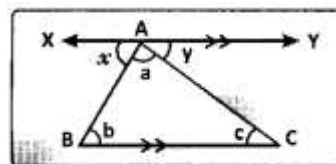
(A) 2   (B) $\frac{4}{3}$ (C) $\frac{-}{3}$ (D) $\frac{-}{4}$

21. In the given figure, ABCD is a parallelogram. DL $\perp$ AB and DM $\perp$ BC. If AB = 18 cm, BC = 12 cm and DM = 10 cm, find DL.

(A) $6\frac{1}{2}$ cm   (B) 6 cm   (C) $6\frac{2}{3}$ cm   (D) $6\frac{3}{4}$ cm

22. Through the vertex A of $\triangle$ ABC, a line XY is drawn parallel to BC.

Which of the following is correct ?

(A) b = y   (B) c = x   (C) a = b   (D) a + b + c = x + a + y

23. Of the following, which is greater than $\frac{1}{2}$?

(A) $\frac{2}{5}$ (B) $\frac{4}{7}$ (C) $\frac{4}{9}$ (D) $\frac{5}{11}$

24. Neev's collection contains US, Indian and British stamps. If the ratio of US to Indian stamps is 5 : 2 and the ratio of Indian to British stamps is 5 : 1, what is the ratio of US to British stamps ?

(A) 10:5   (B) 15 : 2   (C) 20 : 2   (D) 25 : 2

25. The diameter of a wheel of a cycle is 70 cm. It moves slowly along a road. What distance will it cover in 24 complete revolutions ?

(A) 5820cm (B) 5280cm (C) 5028cm (D) 5082cm

Physics (26-50)

26. The image formed in a plane mirror is

(A) a real image. (B) an inverted image.

(C) at the same distance behind the mirror as the object is in front of it.

(D) slightly smaller than the object is.

27. A man starts out for his office at 6.30 a.m. every morning. Travelling at 60 km/h, he reaches his office at 7 a.m. How far is his office from his home ?

(A) 7 km (B) 15 km (C) 30 km (D) 45 km

28. Identify an application of heat radiation.

(A) Oil storage tanks are painted with aluminium paint.

(B) Pipes on solar water heaters are painted black.

(C) Pipes at the back of refrigerator are painted black. (D) All of the above.

29. Which of these shows electrical energy being used to create a magnet ?

(A) Toasting bread in an electric toaster

(B) Using a solar panel

(C) Switching on a fluorescent lamp

(D) Passing electricity through wires wound around an iron bar

30. The diagram shows the image of a wristwatch in a plane mirror.

What is the correct time ?

(A) 1.20 (B) 4.05 (C) 7.55 (D) 8.05

31. A body is said to have a uniform motion if it covers

(A) unequal distances in equal intervals of time.

(B) unequal distances in unequal intervals of time.

(C) equal distances in equal intervals of time.

(D) none of the above.

32. Which statement about heat radiation is true ?

(A) No media is involved.

(B) No transfer of heat energy.

(C) Vacuum can prevent heat radiation.

(D) All of the above.

33. Identify a device used to measure electric current in a circuit.

(A) Speedometer (B) Ammeter

(C) Voltameter (D) Battery

34. Which statement about light is incorrect ?

(A) Light is a form of energy.

(B) Light travels in a straight line.

(C) Light obeys the laws of reflection.

(D) Light cannot penetrate through solids.

35. The table given below shows the freezing and boiling points of four liquids.

	Mercury	Alcohol	Pentane	Water
Freezing point	-39° C	-112° C	-180° C	0°C
Boiling point	357° C	78° C	36.5° C	100° C

Which liquid can be used in a thermometer to measure temperature between -50° C and 50° C ?
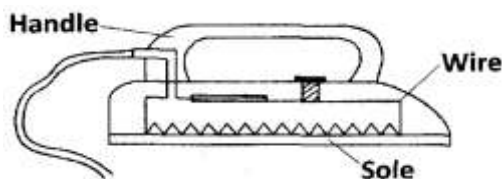
(A) Mercury (B) Alcohol (C) Pentane (D) Water

36. A car parked in a parking lot is an example of a body in/at

(A) rest. (B) motion.

(C) uniform acceleration. (D) uniform speed.

37. Identify a part in a circuit that changes electrical energy into another form of energy.

(A) Energy source (B) Wire

(C) Switch (D) Load (bulb etc.,)

38. In a container, water and ice are found to be in thermal equilibrium. What is most likely to be the temperature of the water ?

(A) Less than 0°C (B) Around-4°C

(C) 4°C (D) Exactly 0°C

39. The image formed by a plane mirror cannot be

(A) virtual. (B) smaller than the object.

(C) erect. (D) same size as the object.

40. When the switch of an electric beli is on, then electric current in it

(A) flows and stops in succession.

(B) flows continuously.

(C) first flows in one direction and after some time in other direction.

(D) flows in the beginning and then stops forever.

41. Which thermometer makes use of the expansion and contraction of liquid when temperature changes?

(A) Bimetallic thermometer

(B) Mercury thermometer

(C) Liquid crystal thermometer

(D) Thermocouple thermometer

42. Which mirror/lens can form a real image of an object ?

(A) Plane mirror (B) Convex mirror

(C) Convex lens (D) Concave lens

43. The second's hand of a clock is 5 cm long. The speed of the tip of this hand is

(A) 0.52 cm/s (B) 5.2 cm/s

(C) 52.0 cm/s (D) none of these

44. The diagram below shows the parts of an electric iron.

The sole is usually made of steel. Which property is the most important in its use ?

(A) Resistant to rusting (B) Strong and hard

(C) Conducts heat well (D) Conducts electricity well

45. A student was trying to build a railway track.

He should leave gaps in the railway tracks to allow for

(A) expansion on hot days.

(B) expansion on cold days,

(C) contraction on cold days.

(D) contraction on hot days.

46. The cheetah is the fastest land animal which can attain a maximum speed of 112 km/h. Express this speed in m/s.

(A) 11 m/s (B) 21 m/s (C) 31.1 m/s (D) 41 m/s

47. The amount of heat produced in a wire depends on its

(A) length. (B) thickness.

(C) material. (D) all of the above

48. A spherical mirror with its reflecting surface on the outside is a

(A) plane mirror. (B) concave mirror.

(C) convex mirror. (D) both (A) and {B)

49. A boy rides a bicycle and travels at 50 km/h for 2 hours. The remaining 30 km is covered at 60 km/h. What is the average speed of the bicycle ?

(A) 55 km/h (B) 50 km/h (C) 52 km/h (D) 65 km/h

50. Which situation does not produce heat ?

(A) Sharpening a knife (B) Rubbing hands

(C) Taking a shower (D) Striking two stones

Chemistry (51-70)

51. Which natural disaster is characterized by thunder and lightning ?

(A) Drought   (B) Flood

(C) Thunderstorm   (D) Cyclone

52. In an experiment, 10 grams of HCl is mixed with 10 grams of NaOH. The reaction produces 10 grams of water. How much NaCl is produced from the reaction ?

(A) 9 grams   (B) 10 grams   (C) 11 grams   (D) 12 grams

53. Fruits, such as apples, once they are cut often turn brown after sometime. To prevent this, people often submerge cut apples into a bowl of salt water. What does the bowl of salt water do to the apples ?

(A) Salt water absorbs the brown pigments in the apples.

(B) Prevents the oxidation process of the apples.

(C) The salt hydrolyses the melanin.

(D) None of the above.

54. A neutralisation reaction

(A) includes an acid and a base.

(B) produces a salt.   (C) forms water.

(D) all of the above.

55. Air exerts pressure in

(A) all directions. (B) downward direction only.

(C) upward direction only.   (D) sideways only.

56. Which of the experiments given below involves a chemical change ?

	Experiment	Observation
(A)	Mixing sugar and water	The sugar dissolves in the water.
(B)	A piece of toast is placed in a toaster for 10 minutes	The toast hardens and turns black.
(C)	Cooking oil is poured on top of a glass of water	The cooking oil does not dissolve and floats on the water.
(D)	A pan of water in left under a heat	After some time, all the water disappears.

57. Which chemical is classified as a corrosive substance ?

(A) Saltwater(B) Dilute acid(C) Crude oil(D) Ethanol

58. Which power is generated from water ?

(A) Nuclear power   (B) Thermonuclear power

(C) Thermal power   (D) Hydroelectric power

59. Identify the correct statement.

(A) Burning of coal does not produce a new substance.(B) Rust is hydrated Fe_2O_3.

(C) The fizz that comes out when a soda bottle is opened is due to a chemical change.

(D) Respiration is a physical process.

60. Which state of India is most likely to be hit by a cyclone ?

(A) Punjab   (B) Madhya Pradesh

(C) Andhra Pradesh   (D) Jammu and Kashmir

61. The compound that produces hydroxyl ions (OH^-) in water are called

(A) alkalies. (B) bases.(C) acids.(D) none of these

62. Which term is not associated with cyclones ?

(A) Strong winds   (B) Heavy rains

(C) Tidal waves   (D) Volcanic eruptions

63. What is the best method to prevent rusting ?

(A) Painting   (B) Greasing

(C) Galvanization   (D) Precipitation

64. A solution reacts with crushed egg-shells to give a gas that turns lime-water milky, the solution contains

(A) NaCl   (B) HCl   (C) KCl   (D) None of these

65. Which of the following undergoes a chemical change ?

(A) Cooling a sodium chloride solution which forms solids

(B) Heating a zinc strip until it forms a liquid

(C) Put an iron nail in tap water for several days

(D) Heating fodine crystals in a closed container

66. The fact that, increased wind speed results in reduced air pressure principle was given by

(A) Galileo   (B) Bernoulli   (C) Newton   (D) Einstein

67. A solution turns red litmus blue, its pH is likely to be

(A) 1   (B) 4   (C) 5   (D) 10

68. Which of the given methods does not result in conservation of water ?

(A) Using drip irrigation   (B) Recycling of water

(C) Cutting vegetation to decrease water lost by transpiration

(D) Planting more trees

69. What is true of the 'eye' of a cyclone?

(A) It is an area of high pressure

(B) It is an area of low pressure

(C) It has lots of clouds and rains

(D) It has high temperature

70. In a combination reaction, how many products are formed ?

(A) Two only   (B) One or two only

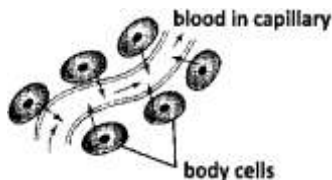(C) One only   (D) Number cannot be specified

Biology (71-90)

71. The gas that is diffusing out of the body cells into the blood capillary contains more.
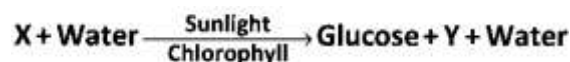
(A) Carbon dioxide

(B) Hydrogen

(C) Oxygen

(D) Carbon monoxide

blood in capillary
body cells

72. The equation given below represents the process of photosynthesis.

$$X + Water \xrightarrow[Chlorophyll]{Sunlight} Glucose + Y + Water$$
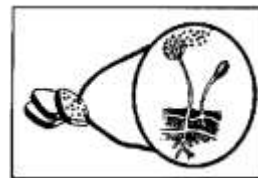
Identify X and Y.

(A) X - O_2, Y - CO_2 (B) X - CO_2, Y - O_2

(C) X - C, Y - H_2 (D) X - O_2, Y - H_2

73. Identify the given figure.

(A) Green plant   (B) Fungi

(C) Protozoa   (D) Bacteria

74. Which of the following correctly represents the main organs like "P" for (circulatory), "Q" for (digestive) and "R" for (respiratory) respectively ?

	P	Q	R
(A)	Kidneys	Liver	Heart
(B)	Liver	Stomach	Kidneys
(C)	Heart	Stomach	Lungs
(D)	Lungs	Kidneys	Stomach

75. Silk is for cocoon and wool is for

(A) stem of cotton plant.   (B) hair of rabbit.

(C) fleece of sheep.   (D) skin of goat.

76. Which of the following systems is responsible for producing enzymes that aid in break down of substances that are to be absorbed for the body's growth and repair?

(A) Respiratory system   (B) Digestive system

(C) Circulatory system   (D) Nervous system

77. Identify X and Y.

> X - Produces antibodies,
> Y - Helps in blood clotting

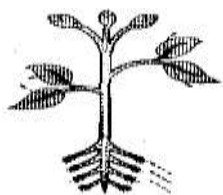(A) X - Platelets, Y-WBC   (B) X-RBC, Y-Platelets

(C) X-Plasma, Y-Platelets   (D) X-WBC, Y-Platelets

78. In man, exchange of gases occurs in

(A) bronchioles.   (B) bronchus.

(C) trachea.   (D) alveoli.

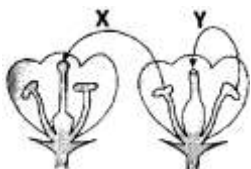79. The figure given below shows how water is transported through a plant.

Which part of the leaf controls the rate of loss of water to the air ?

(A) Epidermis   (B) Stomata

(C) Vascular bundles   (D) Cuticle

80. An animal is observed in the polar region. Which of the following adaptive characteristics may found in that animal ?

(A) Growth of thin and less hairy skin.

(B) Sharp beaks and strong claws.

(C) Growth of thick fur on its skin.

(D) Light weight wings to fly.

81. Identify the processes 'X' and 'Y' in the figure given below.

(A) X-cross pollination Y-self pollination

(B) X-self pollination Y-cross pollination

(C) X-Dispersal Y-Fertilisation of two cells

(D) X-Germination, Y-Dispersional

82. Which of the following is the correct sequence of double circulation of blood in human beings ?

(A) Heart $\rightarrow$ Lungs $\rightarrow$ Organs $\rightarrow$ Heart $\rightarrow$ Organs

(B) Heart $\rightarrow$ Organs $\rightarrow$ Lungs $\rightarrow$ Heart $\rightarrow$ Lungs

(C) Heart $\rightarrow$ Lungs $\rightarrow$ Heart $\rightarrow$ Organs $\rightarrow$ Heart

(D) Lungs $\rightarrow$ Heart $\rightarrow$ Lungs $\rightarrow$ Hearts $\rightarrow$ Organs

83. Which organism is described in the information given below ?

(i) Respire anaerobically
(ii) Used to make wine
(iii) Reproduces by budding

(A) Potato   (B) Grapes   (C) Yeast   (D) Mucor

84. Which organism does not belong to the group of unicellular organisms ?

(A) Amoeba   (B) Paramecium (C) Euglena   (D) Sponge

85. Observe the figures given below.

Which characteristic is common to all the three of them?

(A) They have opposable thumb.

(B) They have scales for body covering.

(C) They live both on land and in water.

(D) They use both their hind limbs and forelimbs to walk.

86. Which of these plants undergo vegetative reproduction ?

(A) Tomato, lady's-finger, onion, cauliflower.

(B) Potato, ginger, onion, sugarcane.

(C) Cauliflower, onion, potato, tomato.

(D) Lady's-finger, onion, ginger, sugarcane.

87. Which of the following layers of soil provides shelter for many living organisms ?

(A) A-Horizon   (B) B-Horizon

(C) C-Horizon   (D) None of these

88. In which part of the alimentary canal does the complete digestion and absorption of food takes place ?

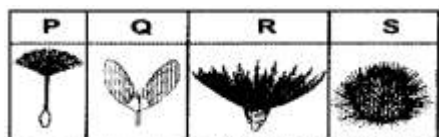(A) Large intestine   (B) Small intestine

(C) Oesophagus   (D) Stomach

89. Match the given organisms with their locomotory organs and select the correct answer.

a. Earthworm	1. Cilia
b. Euglena	2. Tentacles
c. Paramoecium	3. Body segments
d. Hydra	4. Flagella

(A) a-2, b-3, c-1, d-4   (B) a-3, b-2, c-4, d-1
(C) a-3, b-4, c-1, d-2   (D) a-2, b-1, c-4, d-3

90. Which seed is NOT dispersed by wind?

(A) P   (B) Q   (C) R   (D) S

General Awareness

91. What is the national game of China ?
(A) Hockey   (B) Tennis   (C) Table Tennis   (D) Judo

92. What is the purpose of 'Give it Up' campaign, launched by P.M. Narendra Modi ?
(A) Rich people to surrender their black money.
(B) Surrender the LPG subsidy.
(C) Rich people to give up a percentage of money to the government.
(D) Give away royalty of ancestral wealth to government.

93. Who composed the National Song of India ?
(A) Rabindranath Tagore   (B) Bankim Chandra Chatter]!
(C) Mohammad Iqbal   (D) Jai Shankar Prasad

94. The given logo belongs to which company ?

(A) Vodafone   (B) Volkswagen
(C) Tayota   (D) BMW

95. Which of these minerals is called the 'fool's gold'?

(A) Eluorite   (B) Silica   (C) Pyrite   (D) Galena

96. Durand Cup is associated with which sport ?
(A) Swimming   (B) Football
(C) Table Tennis   (D) Hockey

97. Which state accomplished India's first river-linking project, linking rivers Godavari and Krishna ?
(A) Andhra Pradesh   (B) Telangana
(C) Tamil Nadu   (D) Karnataka

98. What does the acronym NASA stand for ?
(A) North America Space Administration
(B) National Air Force and space Administration
(C) National Art and Sculpture Administration
(D) National Aeronautics and Space Administration

99. The famous tagline "Technology that touches life" belongs to which company ?
(A) Hitachi   (B) HCL   (C) Lenovo   (D) Acer

100. Who is the present President of Russia ?
(A) Vladimir Putin   (B) Boris Yeltsin
(C) Dmitry Medvedev   (D) Francois Hollande

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Good, better, best. Never let it rest. 'Til your good is better and your better is best.

St. Jerome

SOULAY

1. A	2. A	3. A	4. C	5. C	6. A	7. B	8. C	9. C	10. B
11. D	12. C	13. B	14. A	15. B	16. C	17. D	18. A	19. D	20. D
21. C	22. D	23. B	24. D	25. B	26. C	27. C	28. D	29. D	30. B
31. C	32. A	33. B	34. Del	35. B	36. A	37. D	38. D	39. B	40. A
41. B	42. C	43. A	44. C	45. A	46. C	47. D	48. C	49. C	50. C
51. C	52. B	53. B	54. D	55. A	56. B	57. B	58. D	59. B	60. C
61. B	62. D	63. C	64. B	65. C	66. B	67. D	68. C	69. B	70. D
71. A	72. B	73. B	74. C	75. C	76. B	77. D	78. D	79. B	80. C
81. A	82. C	83. C	84. D	85. A	86. B	87. A	88. B	89. C	90. D
91. C	92. B	93. B	94. B	95. C	96. B	97. A	98. D	99. B	100. A