SEEKERS
For Your Dream Career

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TALENT SEEK - 2017

STD: VIII   MARKS: 300

Name   : _____   **Father's Name** : _____

School   : _____   **Ph. No**   : _____

E-Mail ID : _____

Address   : _____

_____

INSTRUCTIONS:

1. There are **100 questions** divided into 6 sections (*Maths, Physics, Chemistry, Biology, English & Reasoning*)

2. Each question carries **3 marks.**

3. **1 mark** will be deducted for wrong answer.

4. There is **no mark** for questions which are not attempted.

5. Do not use calculator, mathematical & physical table.
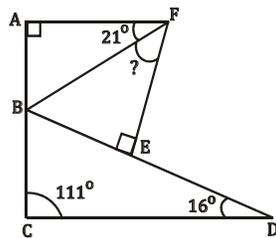
6. Time duration is **2 hours**.

MATHEMATICS

1. The value of

$$\left\{\left(\frac{1}{3}\right)^{-1}-\left(\frac{1}{4}\right)^{-1}\right\}+\left\{\left(\frac{1}{4}\right)^{-1}-\left(\frac{1}{5}\right)^{-1}\right\}$$

$$+\left\{\left(\frac{1}{5}\right)^{-1}-\left(\frac{1}{6}\right)^{-1}\right\}^{2}$$

(a) 1   (b) 3

(c) 0   (d) – 1

2. In the figure not drawn to scale, ABF and BEF are right angled triangles, find $\angle BFE$

(a) 69°

(b) 32°

(c) 33°

(d) 54°

3. If I walk at 5 Km/hr, I miss a train by 7 minutes. If however, I walk at 6 Km/hr. I reach the station 5 minutes before the departure of the train. Then the distance between my house and the station is _____.

(a) 5 Km   (b) 6 Km

(c) 7 Km   (d) 8 Km

4. Peter has a total of Rs. 590 as currency notes in the denominations of Rs. 50, Rs. 20, and Rs. 10. The ratio of the number of Rs. 50 and Rs. 20 notes is

3 : 5. If she has a total of 25 notes, how many Rs. 20 notes does she have?

(a) 5   (b) 8

(c) 10   (d) 12

5. The length of a rectangular park is 50 m and its breadth is 20 m. There is a 7 m wide path all around it on the outside. The area of path is
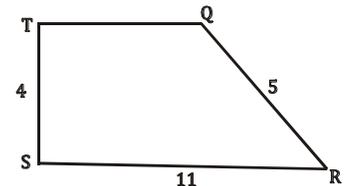
(a) 216 m^2 (b) 1000 m^2

(c) 1176 m^2 (d) 3176 m^2

6. The volume of a cubical box is 32.768 cubic metres. The length of one side of the box is _____.

(a) 3.1 m   (b) 3.2 m

(c) 3.3 m   (d) 3.4 m

7. What is the area of trapezoid QRST in square units?

(a) 22

(b) 27

(c) 38

(d) 48

8. Which property is used in the equation given below?

$$12(x+4)=12x+48$$

(a) Associate property

(b) Commutative property

(c) Distributive property

(d) Reflexive property

9. Find the value of x :

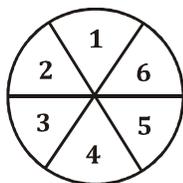$$\frac{9x+7}{2}-\left[x-\left(\frac{x-2}{7}\right)\right]=36$$

(a) 9   (b) 18

(c) 5   (d) 4

10. If $3^{x-1}+3^{x+1}=90$, then x is equal to _____.

(a) 1   (b) 3

(c) 2   (d) 0

11. A spinner consists of six equal regions as shown. If Mohit spins the spinner once, what is the probability that the arrow will land on a region numbered less than or equal to 2?

(a) $\dfrac{1}{2}$ (b) $\dfrac{1}{3}$

(c) $\dfrac{1}{6}$ (d) $\dfrac{2}{3}$

12. If $x:y=5:2$, then $(8x+9y):(8x+2y)$ is _____.

(a) $22:29$ (b) $26:61$

(c) $29:22$ (d) $61:26$

13. In a simultaneous throw of two dice what is the probability of getting a total of 7?

(a) $\dfrac{1}{6}$ (b) $\dfrac{1}{4}$

(c) $\dfrac{2}{3}$ (d) $\dfrac{3}{4}$

14. If 35 % of a number is 12 less than 50 % of that number, then the number is _____ .

(a) 40   (b) 50

(c) 60   (d) 80

15. Soha purchased an item for Rs. 9600 and sold it for loss of 5 percent. From that money she purchased another item and sold it for gain of 5 percent. What her overall gain/loss?
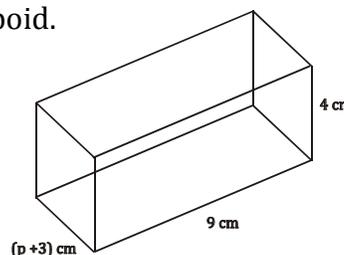
(a) Loss of Rs. 36

(b) Profit of Rs. 24

(c) Loss of Rs. 24

(d) None of these

16. A sum of money invested of compound interest amounts to Rs. 800 in 3 years and to Rs. 840 in 4 years. The rate of interest per annum is _____.

(a) $2\dfrac{1}{2}\%$ (b) 4 %

(c) 5 %   (d) $6\dfrac{2}{3}\%$

17. The given figure shows a cuboid with a total surface area $202\ cm^2$. Find the volume of cuboid.

(a) $72\ cm^3$

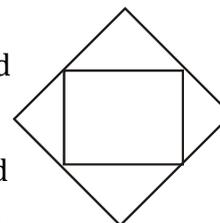(b) $36\ cm^3$

(c) $180\ cm^3$

(d) $200\ cm^3$

18. Find the square root of $6\dfrac{115}{289}$.

(a) 2.410   (b) 2.529

(c) 2.113   (d) 2.482

19. Which solid would be formed by the given net?

(a) Triangular pyramid

(b) Square pyramid

(c) Hexagonal pyramid

(d) Rectangle pyramid

20. Which of the following is not a polynomial?

(a) $x^4-\dfrac{x^5}{x^3}+2x-5$ (b) $\sqrt{2x}-x^2+5$

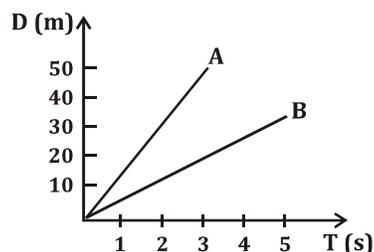(c) $x^3-\dfrac{3x^{5/2}}{\sqrt{x}}+5$ (d) x^2+5x+2

PHYSICS

21. A student was asked to pick and choose the examples of matter from the following. Which of them are correct?

(1) air   (2) water   (3) table

(4) vacuum   (5) sound

(a) 1, 2, 3   (b) 2, 3

(c) 1, 2, 4   (d) All of the above

22. 50g object occupied 20 ml of space, then its density would be_____ $\dfrac{kg}{\ell}$

(a) 25   (b) 2.5

(c) 2500   (d) 25000

23. If an iron cube of side 5cm is dropped in water, how much water would be displaced?

(a) 125 ml   (b) 500 ml

(c) 750 ml   (d) 1000 ml

24. To deposit silver on copper, which of the following solution can be used?

(a) silver nitrate

(b) sodium chloride

(c) copper sulphate

(d) copper chloride

25. If a cooker is allowed to make 3 whistle to boil rice, which of the following statements are assertion and reason

(i) In Himalayan region, it would be allowed to make more than 3 whistles

(ii) In Himalayan region, it would be allowed to make less than 3 whistle

(iii) Atmospheric pressure is low in Himalayan region

(iv) Atmospheric pressure is high in Himalayan region

(a) Statement (i) is assertion and statement (iii) is reason

(b) Statement (ii) is assertion and statement (iv) is reason

(c) Statement (i) is assertion and statement (iv) is reason

(d) Statement (ii) is assertion and statement (iii) is reason

26. Zero friction can be experienced by an object in

(a) air

(b) water

(c) will polished surface

(d) vacuum

27. Angle of incidence is equal to angle of reflection in

(a) regular surfaces

(b) irregular surfaces

(c) both (a) and (b)

(d) None of the above

28. Which of the following statements are true?

(1) image formed in our eye is real image

(2) image formed in our eye is virtual image

(3) Real images are always inverted

(4) virtual images are always erect

(a) 2 and 4   (b) 1 and 3

(c) 1 and 4   (d) 2 and 3

29. Instrument used to test whether an object is charged or not is _____

(a) Galileoscope   (b) Gyroscope

(c) Electroscope   (d) radioscope

30. Earth quakes are measured using

(a) seismic scale   (b) long ruler

(c) Richter scale   (d) Fahrenheit scale

31. If velocity of sound in water is 1500 m/s and time taken for sound to come back to receiver of SONAR is 5S, then depth of the sea is _____ km.
(a) 15   (b) 3.25
(c) 3.75   (d) 7.5

32. Pitch of the sound corresponds to _____
(a) speed   (b) amplitude
(c) frequency   (d) none of these

33. Which of these planets do not have moons?
(a) Mercury   (b) Venus
(c) Jupiter   (d) both (a) and (b)

34. $45^{\circ}C =$ _____ $^{\circ}F$
(a) 113   (b) 57
(c) – 12   (d) 157

35. When two objects attain thermal equilibrium, the heat flow between the objects
(a) continues   (b) stops
(c) increases   (d) none of these

36. Which of the following statements are correct
(1) convex lens is used as magnifying glass
(2) concave lens produces only vertical images
(3) convex lens can produce real and virtual images
(a) only 1   (b) 1 and 3
(c) 2 and 3   (d) All of these

37. Which of the following statements are Assertion and Reason
(1)Dentists use concave mirror to examine teeth
(2) Dentist use convex mirror to examine teeth

(3) Chosen mirror can produce erect and enlarged image
(4) Chosen mirror can produce erect and diminished image
(a) statement 1 is assertion and 4 is the reason
(b) Statement 2 is correct and statement 4 is the reason
(c) Statement 1 is correct and statement 3 is reason
(d) Statement 2 is correct and statement 3 is reason

38. Following graph represents

(a) Object A and B are moving with same speed
(b) Object A is moving with higher speed than object B
(c) Object B is moving with higher speed than object A
(d) None of the above

39. If frequency of pendulum is 50 Hz, then how much time does it take to complete 10 oscillations and how many oscillations it would have made in 3 s?
(a) 0.02, 15   (b) 0.2, 150
(c) 5, 250   (d) 3, 200

40. If an object is taken above earth surface to an height, then its weight will
(a) decrease   (b) increase
(c) remain same (d) become infinity

CHEMISTRY

41. Mixtures does not have
    (a) A range of boiling points
    (b) A range of melting points
    (c) exact concentrations
    (d) It was mixed in proper ratio

42. Oil and water is an example of
    (a) miscible
    (b) impure substance may also form crystals
    (c) filtrate
    (d) suspension

43. An isotone of $_{32}Ge^{76}$
    (i) $_{32}Ge^{77}$ (ii) $_{33}As^{77}$
    (iii) $_{34}Se^{77}$ (iv) $_{34}Se^{78}$
    (a) Only (i) & (ii) (b) Only (ii) & (iii)
    (c) Only (ii) & (iv) (d) (ii), (iii) & (iv)

44. Which is not true with respect to cathode rays?
    (a) A stream of electrons
    (b) Charged particles
    (c) Move with speed as that of light
    (d) Can be deflected in magnetic fields

45. Mass of one mole of electrons is
    (a) $9.1 \times 10^{-28} g$ (b) $0.55\ mg$
    (c) $9.1 \times 10^{-24} g$ (d) 1.008 mg

46. Which of the following process is not a physical change?
    (a) Glowing of electrical heater
    (b) Freezing of water
    (c) Carbon cycle
    (d) Rain cycle

47. A substance which act as a catalytic poisons and retard the efficiency of a catalyst are called _____.
    (a) positive catalyst
    (b) negative catalyst
    (c) inhibitors
    (d) promoters

48. Hydrogen was discovered by _____.
    (a) Thomson   (b) Newland
    (c) Lavoisier   (d) Henry Cavendish

49. Salt water freezes at _____ $^{\circ}$C at 760 mm Hg pressure.
    (a) at $0^{\circ}C$ (b) below $0^{\circ}C$
    (c) above $0^{\circ}C$ (d) not freeze

50. Which of the following coal is considered to be the most superior in quality?
    (a) Peat   (b) Lignite
    (c) Anthracite   (d) Bituminous

51. Which of the following polymer is used for non-stick pan coating, bearings, gas kets etc.,
    (a) Teflon   (b) Prc
    (c) Polyethylene (d) Nylon

52. Main constituent of marsh gas is
    (a) Ethane   (b) Acetylene
    (c) Methane   (d) None

53. Which of the following is true about amorphous solid?
    (a) Particles are arranged in orderly manner
    (b) They do not have sharp melting points
    (c) Diamond is an example
    (d) When broken alone we get particles with sharp edges

54. Write the following ions in descending order based on reactivity series.

$K^+ \quad Ca^{2+} \quad Mg^{2+} \quad Na^+$

(a) $K^+ > Ca^{2+} > Na^+ > Mg^{2+}$

(b) $Na^+ > K^+ > Mg^{2+} > Ca^{2+}$

(c) $Ca^{2+} > Mg^{2+} > K^+ > Na^+$

(d) $Mg^{2+} > Ca^{+2} > Na^+ > K^+$

55. One ampere hour charge is equivalent to _____

(a) 36 coulombs

(b) 360 coulombs

(c) 3600 coulombs

(d) 36000 coulombs

56. Fullerene has a molecular weight equal to

(a) 12 g   (b) 48 g

(c) 720 g   (d) 24 g

57. Which one is the best extinguisher for fires involving electrical equipment?

(a) Water   (b) CO_2

(c) Blanket   (d) Sand

58. In ammonia, what is the valency of nitrogen?

(a) 1   (b) 5

(c) 3   (d) 2

59. The green deposition on the copper coins are due to formation of

(a) $CuCO_3$ (b) $Cu(OH)_2$

(c) $CuCO_3 \cdot Cu(OH)_2$ (d) None of these

60. Rutherford's atomic model suggest the existence of _____.

(a) Atom   (b) Nucleus

(c) α-particle   (d) Mesons

BIOLOGY

61. The part of the cell which allows substances inside and outside the cell, helps in transmitting information inside the cell is _____.

(a) cell wall   (b) plasma membrane

(c) Golgi bodies (d) nucleus

62. The lizard will have the ability to grow its tail even after it is cut, similarly a planaria also can become two in number after it is cut into two. This type of ability is called _____.

(a) Fragmentation (b) Budding

(c) Regeneration   (d) Propagation

63. Which of the following is true?

(a) All viruses are prokaryotes

(b) All fungi are prokaryotes

(c) Coccus bacteria are rod shaped

(d) All the above are true

64. Statement: Dry fish is made by soaking in salt water and drying.

Reason: Salt is antimicrobial and a good preservative.

(a) Statement is correct, Reason is correct

(b) Statement is correct, Reason is wrong

(c) Statement is wrong, reason is correct

(d) Statement is wrong, reason is wrong

65. Mitochondria is the power house of cell. Which of the following is false about mitochondria?

(a)There are 1000-2000 mitochondria per cell

(b) Mitochondria is helpful in synthesizing energy

(c) Mitochondria has its own DNA

(d) Mitochondria is not a membrane bound organelle

66. The dough on leaving closed rises in volume. The reason for this is _____.

(a) The bacteria takes air and causes rising

(b) CO_2 is evolved in the fermentation and that causes rising

(c) Water is released by breaking sugar and that increases the volume

(d) None of the above

67. Which of the following is a Rabi crop?

(a) Paddy   (b) Cotton

(c) Wheat   (d) Turmeric

68. The bacteria which is responsible for converting Ammonia into nitrites in soil is

(a) Rhizobium

(b) Nitrosomonas

(c) Pseudomonas

(d) None of the above

69. Which of the following method of irrigation can be used in an area that has scarce water availability?

(a) Sprinkler irrigation

(b) Drip irrigation

(c) Rain water irrigation

(d) None of the above

70. There are four bacteria in a plate. After 4 rounds of binary fission, how many bacteria can be found in the plate?

(a) 32   (b) 8   (c) 64   (d) 128

71. Which of the following is a bacteria disease?

(a) Polio   (b) Typhoid

(c) Dengue   (d) SARS

72. Which of the following is true about digestive system?

(a) The herbivores have longer intestines than humans

(b) Humans have longer intestines than herbivores

(c) Both (a) and (b) are false

(d) Both (a) and (b) are true

73. Which of the following is an antibiotic?

(a) Streptomycin   (b) Erythromycin

(c) Penicillin   (d) All of the above

74. Which of the following is true about photosynthesis?

(a) It is a catabolic process

(b) It is an anabolic process

(c) It is a process in which chlorophyll is used as a catalyst

(d) Photosynthesis will not happen in plants with red leaves

75. Which of these is likely to be a function of centriole?

(a) To hold the fibres of spindle

(b) To send messages to the nucleus to divide

(c) To divide the cytoplasm

(d) To cause the chromosome to become shorter & thicker

76. Which flora will you not find in Panchmarhi Biosphere Reserve?

(a) Jamun   (b) Mango

(c) Sal   (d) Cactus

77. In which of the following season pulses and vegetables are grown?
    (a) Winter (b) Summer
    (c) Rainy (d) Autumn

78. Which of the following sequences explains how deforestation leads to desertification?
    (a) Desertification → Decrease in water holding capacity → Infiltration rate reduced → Desertification
    (b) Deforestation → Soil erosion → Removal of top layer of soil → Lower layer has less humus and less fertility → Gradually fertile land changes into desert
    (c) Deforestation → Reduces rates of infiltration → Decreases water capacity → Desertification
    (d) Deforestation → Lower layer exposed → Less fertile → Soil erosion → Gradually leads to desertification

79. Coral reefs are formed by _____.
    (a) diatoms (b) zooplanktons
    (c) polyps (d) algae

80. Why do some young people get acne and pimple on the face at the time of Adolescence?
    (a) Due to increased activity of estrogen
    (b) Due to increased activity of sweat glands and sebaceous glands
    (c) Decreased activity of sweat and sebaceous glands
    (d) Increased activity of pituitary glands

ENGLISH

Fill in the blanks with the most appropriate preposition.

81. I will meet you _____ Dadar station.
    (a) to (b) by
    (c) at (d) for

82. Synonym of the word "Commence".
    (a) to end (b) to begin
    (c) nearing finish (d) to run

83. I daily wait for his call, but he _____ not call.
    (a) do (b) does
    (c) done (d) is

84. The opposite of Goblin
    (a) Angel (b) Hermit
    (c) Traveller (d) Pilot

85. I take exercise daily. Change to Passive
    (a) Exercise are taken daily by me
    (b) Exercise is taken daily by me
    (c) Exercise is being taken daily by me
    (d) Exercise is been taken daily by me

86. Be careful there is a hive of bees on tree (which word is a collective noun?
    (a) tree (b) there
    (c) hive of bees (d) careful

87. They said to me "Will you join us in party" . Change to indirect speech
    (a) They said to me would you join us in party
    (b) They asked me if I would join them in a party
    (c) They asked me will you join them in a party
    (d) They asked me would I joined them in a party

Idioms & Phrases

88. With one foot to the grave

(a) To visit a grave yard

(b) To be very close to death

(c) To sit with one foot dangling in the grave

(d) To look for a grave

89. "To Whom she was talking about?" – Find the interrogative pronoun in this sentence

(a) was   (b) she

(c) to   (d) whom

90. Antonym of the word abundant is

(a) wide

(b) accidental

(c) wrong, left

(d) Scarce

LOGICAL REASONING

91. How many parallelograms are there in the following figure?

(a) 8

(b) 10

(c) 12

(d) None of these

92. 7 : 42 : : 9 : ?

(a) 75   (b) 65

(c) 46   (d) 72

93. EIKR : HMPX : : GKMT : ?

(a) KORY   (b) JORZ

(c) JNSZ   (d) INQZ

94. If '+' means 'multiplied by' , '−' means 'divided by' , '×' means 'plus', and '÷' means 'minus', then $(18 + 10 \times 20) - 8 \div 6 = ?$

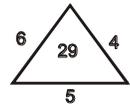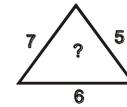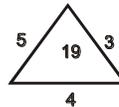(a) 92   (b) 35

(c) 26   (d) 19

95. $(0.2 + 0.3) \times 0.2 \times 0.3 = ?$

(a) 0.3   (b) 0.03

(c) 0.003   (d) 0.0003

96. 1, 2, 3, 6, 9, 18, _____, 54.

(a) 18   (b) 27

(c) 36   (d) 42

97.

Triangle 1	Triangle 2	Triangle 3
5, 19, 3, 4	7, ?, 5, 6	6, 29, 4, 5

(a) 25   (b) 37

(c) 41   (d) 47

98. 65 % of 240 + ? % of 150 = 210

(a) 46   (b) 45

(c) 36   (d) 32

In these questions, select the correct missing arithmetic operations.

99. 5 – 3 – 3 – 2 = 26

(a) +, ×, +   (b) ×, +, ×

(c) −, +, ×   (d) +, +, +

100. Bread : Yeast : : curd : ?

(a) Fungi   (b) Bacteria

(c) Germs   (d) Virus