



K.S.R. TALENT TEST - 2016

for **Class-10** Students of Govt. High Schools

Kanigiri Division Level Talent Test

Sponsored by: Kunduru Ramana Reddy

Exam Date:21-02-2016 Venue : GOVT.HIGH SCHOOL (BOYS) , KANIGIRI , 523230

Max. Marks : 100

No. of Questions : 100

Time : 90 Min

Instructions to the Participants

1. This question paper contains 100 multiple choice questions. Each question has four choices.
2. Each question carries 1 Mark.
3. You were given a separate answer sheet for answering the questions
4. Answer sheet contains 100 serial numbers and a blank box is provided at each number.
5. Participant should select only one of the suitable answer from the four choices and write the choice symbol (A or B or C or D) in the answer paper , only in relevant blank boxes of corresponding serial numbers.
6. Answers must be written with blue or black ink ball point pen only.
7. Answers should not be rubbed / over write. If so they would treat as wrong answer.
8. Write Hall Ticket number only on the answer sheet. You must not write your name and other information.
9. Keep silence in the Examination hall.
10. Any decision in this regard is only by the committee.

BEST OF LUCK

MATHEMATICS

1. P: All primes are not odd

Q: 2 is an even prime

Correct answer:

- A. P is true , Q is true and
Q is not the correct explanation for P
- B. P is true , Q is true and
Q is the correct explanation for P
- C. P is False , Q is true and
Q is not the correct explanation for P
- D. P is False , Q is true and
Q is the correct explanation for P

2. $2^{2+\log_2 5} = ?$

- A. 5 B. 9
C. 20 D. 10

3. If $\sec \theta + \tan \theta = 4$, then the value
of $\sec \theta - \tan \theta = ?$

- A. $\frac{1}{2}$ B. 2
C. 0.5 D. 0.25

4. If one grain of wheat be placed on the
first square of the chess board, two
grains on the second square, four on
the third, eight on the fourth and so
on. What is the sum of all grains to be
filled in the chess board up to 64th
square.

- A. $2^{64}-1$ B. 2^{63}
C. $2^{63}-1$ D. 2^{64}

5. Find the mode of the following data

2, 2.2, 3, 2.3, 3.2, 2, 2.2, 3, 3.2, 2.3,
2, 3.2, 2, 3, 3.1, 3.4

- A. 2 B. 2.3
C. 3.2 D. 2.2

6. Least Common Multiple of the
numbers 12, 15 and 21 is

- A. 420 B. 180
C. 210 D. 150

7. Find the value of 'k' so that

$x^3 - 3x^2 + 4x + k$ is exactly divisible
by $(x - 2)$

- A. -4 B. 4
C. 2 D. -2

8. If $\tan \theta = 2$, Then find the value of

$$\sqrt{\frac{(1+\sin \theta)(1-\sin \theta)}{(1+\cos \theta)(1-\cos \theta)}}$$

- A. 2 B. $\frac{1}{2}$
C. $\frac{1}{4}$ D. 4

9. The sum of five consecutive numbers
is 125. What is the second number?

- A. 31 B. 27
C. 24 D. 29

10. The sides of a triangle are 3cm,
4cm and 5cm. Find the area of the
triangle?

- A. 6 Sq. cm B. 16 Sq. cm
C. 12 Sq. cm D. 20 Sq. cm

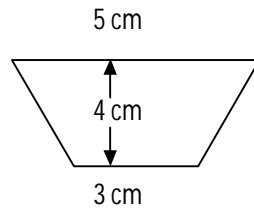
11. Set builder form of Null Set is

- A. $\{x / x \in 0\}$
- B. $\{x / x = 0\}$
- C. $\{x / x \neq x\}$
- D. $\{x / x = x\}$

12. The area of the trapezium

shown in given figure is

- A. 12 Sq. cm
- B. 18 Sq. cm
- C. 24 Sq. cm
- D. 16 Sq. cm



13. Two poles of height 6 m and 11 m stand vertically on a plane ground. If the distance between their feet is 12 m. Determine the distance between their tops.

- A. 6 m
- B. 7 m
- C. 13 m
- D. 17 m

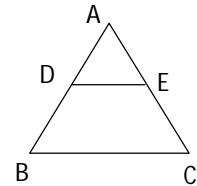
14. A bag contains 5 red balls and 6 black balls. A ball is drawn at random from the bag. What is the probability that the ball drawn is red?

- A. $\frac{1}{11}$
- B. $\frac{1}{5}$
- C. $\frac{5}{11}$
- D. $\frac{6}{11}$

15. $DE \parallel BC$ in $\triangle ABC$. and $\frac{AD}{DB} = \frac{3}{5}$.

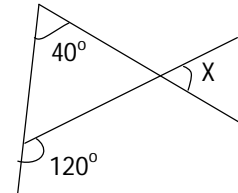
If $AC = 5.6$ cm Then $AE = \dots\dots\dots$

- A. 2.1
- B. 2.8
- C. 3.5
- D. 1.8



16. Find the angle 'X' in the given figure.

- A. 60°
- B. 100°
- C. 40°
- D. 80°

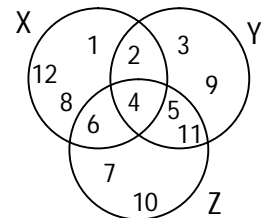


17. If 6, 4, 8 and 3 occur with frequencies 4, 2, x and 1 respectively. And the Arithmetic mean is 6.25. Then find 'x' .

- A. 5
- B. 3
- C. 2
- D. 6

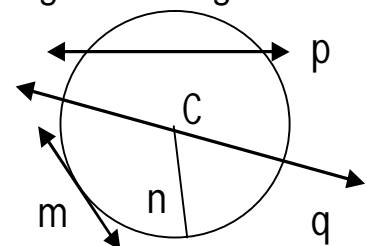
18. $X - (Y \cup Z) = \dots\dots\dots$

- A. $\{1, 12, 8\}$
- B. $\{1, 2, 4, 12, 8, 6\}$
- C. $\{2, 4, 6\}$
- D. $\{1, 12, 2, 6, 8\}$



19. Identify the Tangent in the given figure

- A. m
- B. n
- C. p
- D. q

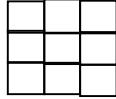


20. Ravi : 2 X 2 Square is similar to 4 X 4 Square.

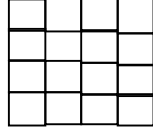
Surya: 3 X 3 Square is similar to 4 X 4 Square.



2 X 2
Square



3 X 3
Square

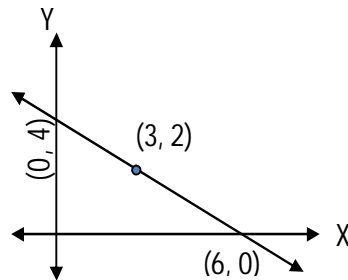


4 X 4
Square

Choose the correct choice:

- A. Ravi is correct
- B. Surya is correct
- C. Ravi and Surya both answers are correct
- D. Ravi and Surya both answers are wrong

21. Find the equation of the line shown in figure.



- A. $x + 2y = 18$
- B. $2x + y = 18$
- C. $3x + 2y = 12$
- D. $2x + 3y = 12$

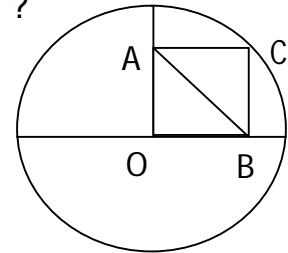
22. What is the $\frac{p}{q}$ form of $1.\bar{5}$

- A. $\frac{15}{9}$
- B. $\frac{14}{9}$
- C. $\frac{15}{99}$
- D. $\frac{9}{7}$

23. The centre of the circle is 'O'.

The radius of circle is 6 cm.

OABC is a square. Find the length of AB diagonal ?



- A. 6.4 cm
- B. 6 cm
- C. 5.8 cm
- D. 5.5 cm

24. $ax^3 + bx^2 + cx + d = 0$ is a polynomial with roots 1, 2 and 3.

Then the values of a, b, c and d are

- A. 1, -6, 11, -7
- B. 1, 6, 11, 7
- C. 1, 6, -11, 6
- D. 1, 6, 6, 13

25. Find the median for the following data

Class Interval	Frequency
0 – 10	5
10 – 20	4
20 – 30	3
30 – 40	5

- A. 18.75
- B. 19.12
- C. 17.98
- D. 19.01

26. If $\theta = 30^\circ$, then $\text{Sin}^2 \theta + \text{Cos}^2 \theta = ?$

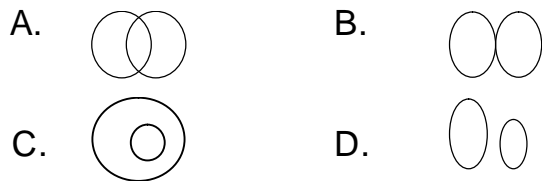
- A. $\frac{\sqrt{3}}{4}$
- B. $\frac{1}{2}$
- C. 1
- D. $\frac{3}{2}$

27. Radius of a circle is 5 cm. A tangent is drawn to the circle from a point 'P' which is at 13 cm distance from its centre. Then the length of the tangent is

- A. 14 cm B. 13.5 cm
C. 16 cm D. 12 cm

28. Set X is a sub set to Set Y.

Identify the relevant diagram.



29. Match the following:

- | Group-A | Group-B |
|-------------|----------------------------|
| 1. Cone | a. S^3 |
| 2. Cylinder | b. $\frac{1}{3} \pi r^2 h$ |
| 3. Sphere | c. $\pi r^2 h$ |
| 4. Cube | d. πr^3 |

Correct answer:

- A. 1 – b , 2 – c , 3 – d , 4 - a
B. 1 – a , 2 – b , 3 – c , 4 - d
C. 1 – b , 2 – d , 3 – a , 4 - c
D. 1 – b , 2 – a , 3 – c , 4 – d

30. The sum of the two digits in a number is 6. If the digits are inter changed, the difference between original number and resultant number is 36. Then find the sum of the two digits ?

- A. 15 B. 24
C. 42 D. 6

PHYSICAL SCIENCES

31. Temperature of a substance 'X' is 45°C. Temperature of substance 'Y' is 45°C. Temperature of substance 'Z' is 60°C. Then which of the following statement is correct?

- A. X, Y, Z are in thermal equilibrium
B. X and Y are in thermal equilibrium
C. Y and Z are in thermal equilibrium
D. Data is insufficient

32. Can we collect the shadow of the flame of a burning candle on the wall ?

- A. Yes, It is always possible
B. No, It is impossible
C. Some times it is possible
D. None of these

33. Conditions:

- (i) Light travels from Denser medium to Rarer medium
(ii) Incident angle is greater than critical angle
(iii) Angle of refraction is greater than 90°

Which of the above conditions should satisfy if there occurs Total internal Reflection?

- A. (i) and (ii) B. (ii) and (iii)
C. (i), (ii) and (iii) D. (i) and (iii)

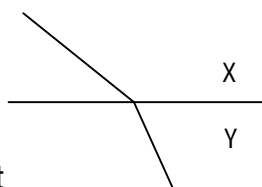
34. Kalpana made an experiment with a mirror. She can not collect the image on the screen at any time.

The mirror used by Kalpana is

- A. Concave mirror
- B. Convex mirror
- C. either concave mirror or Plane mirror
- D. either convex mirror or plane mirror

35. Identify the denser medium

- A. Medium - X
- B. Medium - Y
- C. Data is insufficient
- D. None of these

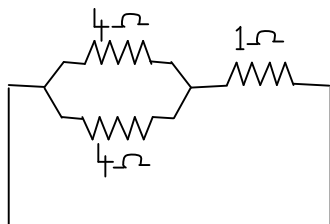


36. If a magnet is cut in a shape of a triangle, then it has

- A. One magnetic pole
- B. Two magnetic poles
- C. Three magnetic poles
- D. We can not say

37. Find the resultant resistance in the circuit

- A. 9Ω
- B. 5Ω
- C. 1.5Ω
- D. 3Ω



38. The focal length of Plano-concavo lens having refractive index 'n' and radius of curvature 'R' is

- A. $f = R$
- B. $f = \frac{R}{1-n}$
- C. $f = \frac{R}{n-1}$
- D. $f = \frac{1-n}{R}$

39. Match the following:

Group-A

Group-B

- | | |
|------------|-----------------|
| 1. Clouds | a. Condensation |
| 2. Rain | b. Evaporation |
| 3. Camphor | c. Freezing |
| 4. Ice | d. Sublimation |

Correct answer:

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

40. An ice cube is placed in a cup of water. Even a single drop of water is added to it, the water will over flow. If the ice cube was melted in that situation, then

- A. Water over flows from the cup
- B. Water does not over flow from cup
- C. We can not say
- D. None of these

41. This is not the balance chemical equation

- A. $C_3H_8 + 5 O_2 \rightarrow 3 CO_2 + 4 H_2O$
- B. $Fe_2O_3 + 2 Al \rightarrow 2 Fe + Al_2O_3$
- C. $C_2H_6 + 5 O_2 \rightarrow 2 CO_2 + 3 H_2O$
- D. $6 CO_2 + 6 H_2O \rightarrow C_6H_{12}O_6 + 6 O_2$

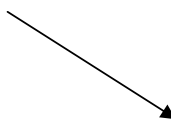
42. The metal that reacts with hydrochloric acid and liberates hydrogen gas is

- A. Zinc
- B. Magnesium
- C. both A and B
- D. None

43. What is the atomic number of Barium (Ba) in the given II A group elements.

- A. 55
- B. 56
- C. 38
- D. 81

Be
Mg
Ca
Sr
Ba
Ra



44. The four quantum numbers of an electron in an atom are as follows

n	l	m_l	m_s
3	1	0	$\frac{1}{2}$

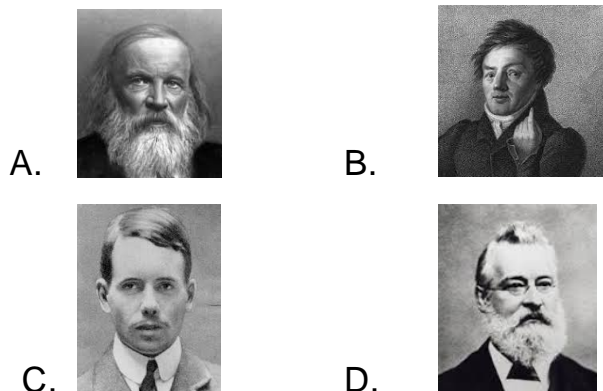
The electron present in sub shell.

- A. 3p
- B. 2p
- C. 2s
- D. 3d

45. This is used in antacid tablets

- A. Strong acid
- B. Strong base
- C. Weak acid
- D. Weak base

46. Identify Mendeleev's photograph



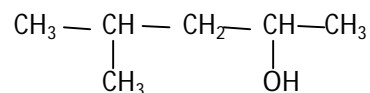
47. (i) Air is essential for rusting of Iron
(ii) Water is essential for rusting of Iron

Choose the correct answer from the following:

- A. (i) is true, (ii) is true
- B. (i) is true, (ii) is false
- C. (i) is false, (ii) is true
- D. (i) is false, (ii) is false

48. The IUPAC name of the compound

with given structure is



- A. 2-Methyl, Pent, an, 4-ol
- B. 2-Methyl, Pent, an, 2-ol
- C. 4-Methyl, Pent, an, 2-ol
- D. 2-Hydroxy, 4-Methyl, Pent, an, e

49. Formula of Sodium ethoxide

- A. CH_3COONa
- B. $\text{C}_2\text{H}_5\text{ONa}$
- C. $\text{C}_2\text{H}_5\text{COONa}$
- D. HCOONa

50. This is not the true statement

- A. Carbon dioxide helps to stop fire
- B. Caesium is a metal
- C. Hydrogen is used as fuel
- D. Oxygen burns

BIOLOGICAL SCIENCES

51. This is not related to AIDS

- A. December First
- B. Red Ribbon
- C. Both A and B
- D. None of the above

52. Dental formula

- A. $\frac{2}{2}, \frac{1}{1}, \frac{2}{2}, \frac{3}{3}$
- B. $\frac{2}{2}, \frac{2}{2}, \frac{1}{1}, \frac{3}{3}$
- C. $\frac{2}{2}, \frac{3}{3}, \frac{1}{1}, \frac{3}{3}$
- D. $\frac{3}{3}, \frac{1}{1}, \frac{2}{2}, \frac{3}{3}$

53. The symptoms of a person with deficiency of Vitamin - K

- A. Night blindness
- B. Diarrhoea
- C. Loss of memory
- D. Blood Clotting takes more time

54. Raddish shows vegetative propagation through

- A. Stem
- B. Leaves
- C. Root
- D. None of these

55. Kolleru lake is located in between Districts.

- A. West Godavari & VisakhaPatnam
- B. SPSR Nellore and Ananthapuram
- C. Krishna and West Godavari
- D. Prakasam and SPSR Nellore

56. TMC means

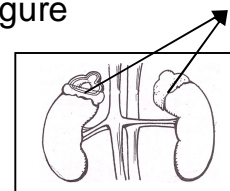
- A. Trillion Million Cubic feet
- B. Trillion Million Cubic meter
- C. Thousand Million Cubic feet
- D. Thousand Million Cubic meter

57. BM Birla Science centre is located in

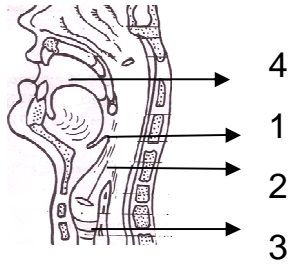
- A. Tirupathi
- B. Vijayawada
- C. Hyderabad
- D. Nellore

58. The hormone related to these glands shown in the figure

- A. Testosterone
- B. Thyroxin
- C. Adrenalin
- D. paratharmone



59. The symbol indicates the Epiglottis



- A. 1 B. 2
C. 3 D. 4

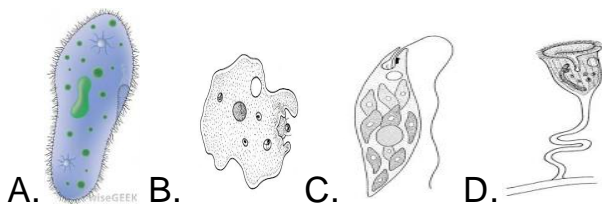
60. If we keep P^H paper in a solution, it changed into green colour. It is

- A. Strong acid
B. Weak acid
C. Strong base
D. Weak base

61. Energy is stored in

- A. Nucleus
B. Ribosomes
C. Cell wall
D. Mitochondria

62. Identify Paramecium



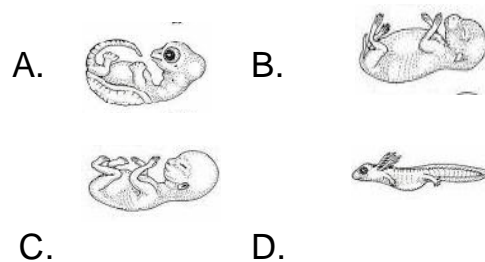
63. Choose virus from the following

- A. AIDS
B. HIV
C. both A & B
D. None of these

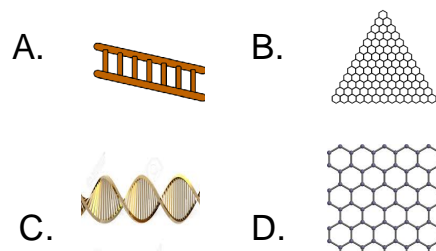
64. Average length of pregnancy in Cow

- A. 63 days
B. 280 days
C. 330 days
D. 500 days

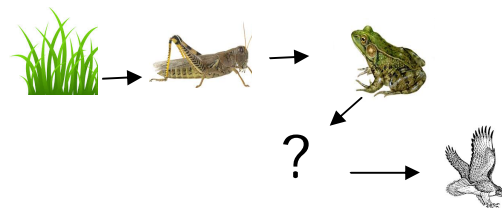
65. Identify Embryo of Tortoise



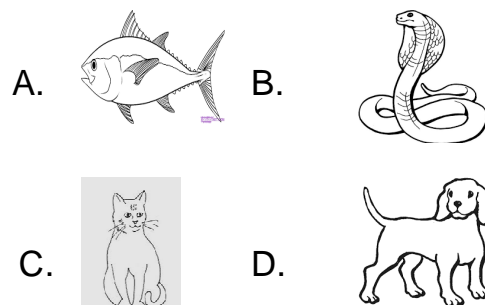
66. Structure of DNA



67. Identify the missing organism in the given Food Chain



Choose the correct answer:



68. Scientific name of Neem tree

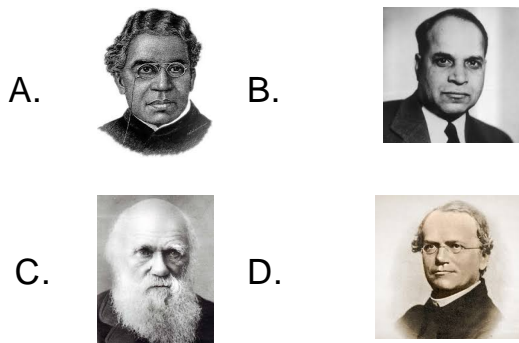
- A. Azadirachta Indica
- B. Papaver Somniferum
- C. Cinchona affinalis
- D. Datura Stramonium

69. Excretory system in Arthropoda

Organisms

- A. Flame cells
- B. Kidneys
- C. Malpighian tubes
- D. None of the above

70. Identify Gregor mendel



SOCIAL STUDIES

71. This is not the Metropolitan City

- A. Kolkatha
- B. Hyderabad
- C. Chennai
- D. Ahmedaad

72. Match the following

Group-A

- 1. Stalin
- 2. Hitler

Group-B

- a. USSR
- b. Germany

Correct answer:

- A. 1 – b , 2 – a
- B. 1 – a , 2 – b
- C. 1 – a , 2 – a
- D. 1 – b , 2 – b

73. The longest canal in India is located

in the region of

- A. Thar Desert
- B. Gondwana Land
- C. Indo Gangetic plain
- D. Deccan Plateau

74. The first largest peninsular river is

- A. Godavari
- B. Kaveri
- C. Mahanadi
- D. Krishna

75. Chipko movement related to

- A. Arvind Kejriwal
- B. Anna Hazare
- C. Medha Patkar
- D. Sundarlal Bahuguna

76. IBRD

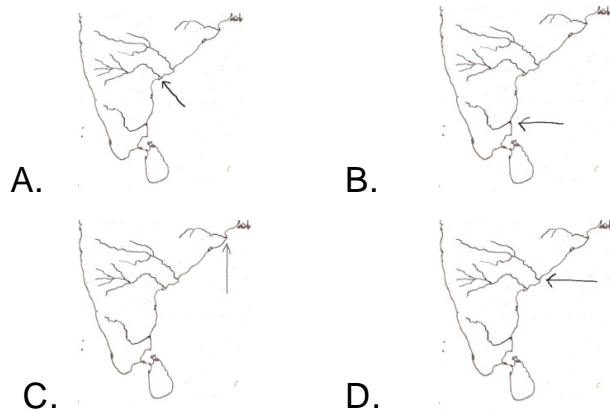
- A. Indian Bank for Regional Development
- B. International Bank for Reconstruction and Development
- C. International Bank for Reconstruction of Drought areas
- D. Indian Bank for Rural Development

77. Which is correct ?

(BMI = Body Mass Index)

- A. $\frac{\text{Height in metres}}{\text{Weight in Kgs}^2}$
- B. $\frac{\text{Weight in Kgs}^2}{\text{Height in metres}}$
- C. $\frac{\text{Weight in Kgs}}{\text{Height in metres}^2}$
- D. $\frac{\text{Weight in Kgs}}{\text{Height in metres}^3}$

78. In each map the arrow mark indicates a river in India. Identify the Kaveri river



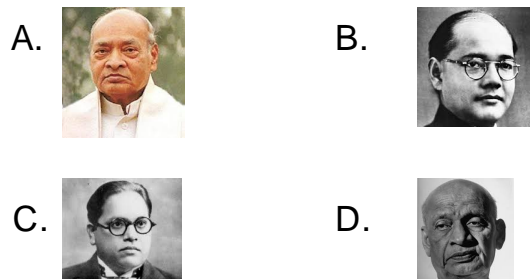
79. Find the different item from the following as per Organised sector. (Odd man Out)

- A. Teachers
- B. Lawyers
- C. Vegetable vendors
- D. Doctors

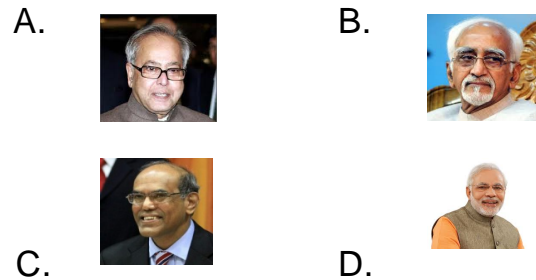
80. Shillang is the capital of

- A. Arunachal Pradesh
- B. Meghalaya
- C. Sikkim
- D. Manipur

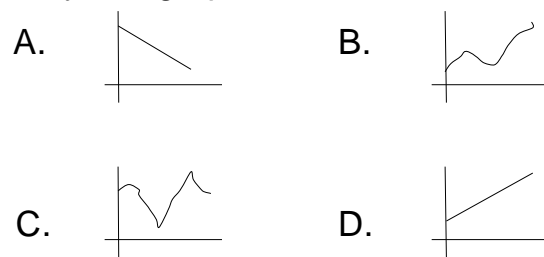
81. Identify the Photograph of Netaji Subhash Chandra Bose



82. The first citizen of India (At Present)



83. The population in India from 1951 to 2011 can be represented by this graph.



84. Population in India according to 2011 census

- A. 120 crores
- B. 121 crores
- C. 125 crores
- D. 127 crores

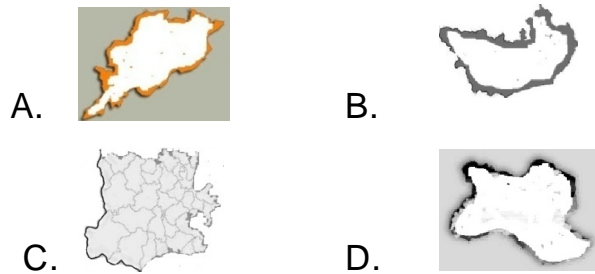
85. Quit India movement began in

- A. Mar 1940
- B. Aug 1942
- C. Jan 1931
- D. Nov 1922

86. The dates of Independence day and Republic day of INDIA

- A. 26-01-1947 and 15-08-1950
- B. 15-08-1950 and 26-01-1947
- C. 26-01-1950 and 15-08-1947
- D. 15-08-1947 and 26-01-1950

87. Identify the outline shape of Jammu and Kashmir state



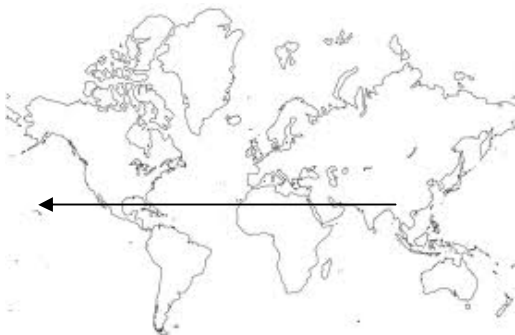
88. World human rights day

- A. 10th December
- B. 2nd October
- C. 14th November
- D. 8th March

89. The minimum age of marriage for Girls in India

- A. 14 Years
- B. 12 Years
- C. 18 Years
- D. 16 Years

90. The continent shown in the given world map is



- A. Europe
- B. Africa
- C. Asia
- D. Australia

ENGLISH GRAMMAR

91. Correct sentence

- A. Sun rise in the east
- B. The sun is rising in the east
- C. The Sun rises in the East
- D. The sun rises in east

92. Ram said, " Delhi is the capital of India".

The reported speech for the above sentence is

- A. Ram said Delhi is the capital of India.
- B. Ram said that Delhi was the capital of India.
- C. Ram said Delhi was the capital of India.
- D. Ram said that Delhi is the capital of India.

93. Sri latha is very fond toys.

- A. for
- B. to
- C. of
- D. towards

94. There are three fans in Library.

- A. Ceiling
- B. Sealing
- C. Selling
- D. Seeling

95. Let the book be kept.

The above sentence is in

- A. Active voice
- B. Passive voice
- C. either Active voice or Passive voice
- D. None of the above

96. A person who brings out new books is called

- A. Preacher
- B. Author
- C. Book seller
- D. Publisher

97. Which is correct?

- A. Sravani is going to school every day with her friend Rajani.
- B. Vikram going to school every day with his friend Yaswanth.
- C. Vamsi Madhav goes to school every day with his friend Abdul Kalam.
- D. Sheela go to school every day with her friend Keerthana.

98. Tamanna is a beautiful lady. Ram Charan stared at her

- A. Beautiness
- B. Beauty
- C. Beautify
- D. Beautiful

(99-100) Read the following passage.

Chandra sekhar Venkata Raman was born on 7th November 1888. He was died on 21st November 1970. He was the first Indian scientist and also Asian scientist who awarded with Nobel prize. He got Nobel prize in physics in **1930** for the discovery of Raman effect. He was honoured with Bharatha Ratna in 1954.

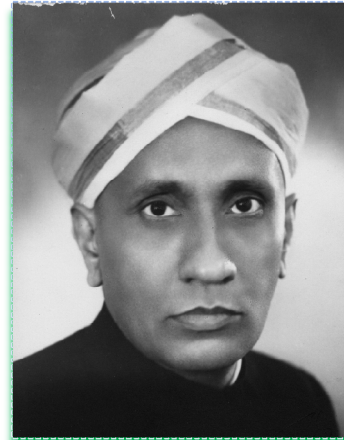
Now answer the following.

99. C.V.Raman discovered

- A. Bharatha Ratna
- B. Raman effect
- C. Nobel prize
- D. Physics

100. C.V.Raman was born on

- A. 28th February
- B. 7th November
- C. 21st November
- D. 21st February



nagamurthy.weebly.com