

Important Instructions :

1. The test is of **1 hour 40 minutes** duration and the Test Booklet contains **100** multiple-choice questions (four options with a single correct answer) from **Mathematics, Science and General Knowledge**.
2. Each Question carries **4** marks. For each correct response, the candidate will get **4** marks. For each incorrect response, **one** mark will be deducted from the total scores. **The maximum marks are 400**.
3. Use **Blue/Black Ball Point Pen only** for marking responses on Answer Sheet.
4. Rough work is to be done in the space provided for this purpose in the Test Booklet only.
5. On completion of the test, the candidate **must hand over the Answer Sheet to the Invigilator** before leaving the Room/Hall. The candidates are allowed to take away this Test Booklet with them.
6. The candidates should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your Roll No. anywhere else except in the specified space in the Answer Sheet.
7. Use of white fluid for correction is **NOT** permissible on the Answer Sheet.
8. The candidates should not leave the Examination Hall without handing over their Answer Sheet to the Invigilator on duty.
9. Use of Electronic/Manual calculator is prohibited.
10. Use of any unfair means shall amount to disqualification.

Note:-

For Official Answer Keys & Result , do visit our website : wearehere.org.in

Name of the Candidate : _____

Roll Number : _____ Candidate's Signature : _____

SECTION A (G.K)**1. The tropic of cancer does not pass through**

- | | |
|-------------------|------------|
| a) Madhya Pradesh | b) Mizoram |
| c) Bihar | d) Gujrat |

2. Who is the 14th Prime Minister of India

- a) Dr. Manmohan Singh
- b) Atal Bihari Vajpayee
- c) Narendra Modi
- d) Jawahar Lal Nehru

3. Which of the following is the “State Butterfly” of Jammu & Kashmir?

- | | |
|----------------------|--------------------|
| a) Monarch Butterfly | b) Blue pansy |
| c) Green hair streak | d) Julia Butterfly |

4. Which of the following is largest tributary of River Indus?

- | | |
|-----------|-----------|
| a) Chenab | b) Sutlej |
| c) Jhelum | d) Ravi |

5. Which of the following Batsman has completed 100 centuries across all formats in the history of cricket ?

- | | |
|---------------------|------------------|
| a) Viv Richards | b) Brian Lara |
| c) Sachin Tendulkar | d) Ricky Ponting |

6. WHO stands for

- a) World Hierarchy Organization
- b) World Health Organization
- c) World Heritage Organization
- d) NOT

7. How many Megabytes(MB) are there in 1 Gigabyte(GB)?

- | | | | |
|---------|---------|---------|---------|
| a) 1000 | b) 1200 | c) 1050 | d) 1024 |
|---------|---------|---------|---------|

8. Who was the last Governor of state J&K ?

- | | |
|----------------|-------------------|
| a) Manoj Sinha | b) Satyapal Malik |
| c) G.C Murmu | d) N.N Vohra |

9. Tropic of Cancer is the imaginary line at

- | | | | |
|------------|------------|------------|-----------|
| a) 23.5 °N | b) 23.5 °S | c) 23.5 °E | d) 23.5°W |
|------------|------------|------------|-----------|

- 10. Which of the following countries, India shares its longest land border with**
- a) Pakistan b) China c) Nepal d) Bangladesh
- 11. The eastern most longitude of India is**
- a) $68.7^{\circ}E$ b) $82.32^{\circ}E$
c) $97.25^{\circ}E$ d) $77.6^{\circ}E$
- 12. "World Day against Child Labour" is celebrated on**
- a) 05 July b) 10 May
c) 12 September d) 12 June
- 13. Who is the current president of India?**
- a) Droupadi Murmu
b) Pranam Mukherjee
c) Ram Nath Kovind
d) Pratibha Devisingh Patil
- 14. 1 U.S Dollar is equal to _____ Rupees**
- a) 80 b) 85 c) 83 d) 90
- 15. Full Form of WWW is**
- a) World Weird Web b) World Wide Web
c) Working Word Web d) NOT
- 16. Who was the last "Sadhri Riyasat" & first Governor of J&K ?**
- a) Sheikh Mohammad Abdullah
b) Mehr Chand Mahajan
c) Dr. Karan Singh
d) Bakshi Ghulam Mohammad
- 17. How many districts are there in UT of J&K**
- a) 22 b) 24 c) 21 d) 20
- 18. What is the full form of LED ?**
- a) Light Emitting Diode
b) Light Emitting Device
c) Light Emerging Diode
d) Light Emerging Device
- 19. Which of the following is not among the Folk Dances of jammu & Kashmir ?**
- a) Rouf Dance b) Dumhal Dance
c) Kud Dance d) Kuchipadi Dance
- 20. Which Lens is used in Torch ?**
- a) Convex b) Concave
c) Both a & b d) NOT
- 21. Gulmarg is also known as**
- a) Meadow of Flowers b) Meadow of mountains
c) meadow of Snow d) Death Meadow
- 22. "Betaab valley" is situated in which district**
- a) Srinagar b) Kulgam
c) Shopian d) Anantnag
- 23. Hari Parbat is also known as**
- a) Kooh-e-Maran b) Siraj bagh
c) Shankaracharya Hills d) NOT
- 24. Who is the father of Medicine**
- a) Aristotle b) Hippocrates
c) Charles Darwin d) Einstein
- 25. Earth is present in which of the following Galaxy?**
- a) Milky Way Galaxy b) Andromeda Galaxy
c) Sombrero Galaxy d) Tadpole Galaxy
- 26. Which of the following Scientist was also the president of India ?**
- a) Srinivasa Ramanujan b) Aryabhata
c) APJ Abdul Kalam d) C.V Raman
- 27. Who is the father of Indian constitution?**
- a) Dr. Rajendra Prasad b) Jawahar Lal Nehru
c) Lal bahadur Shastri d) Dr. B.R Ambedkar
- 28. Who is the writer of Book "Raj Tarangini" ?**
- a) Rabindranath Tagore b) Kalhana
c) Narayan R.K d) Amir Khusrow
- 29. Dandi March is also known as**
- a) Satyagraha b) Non-Cooperation Movement
c) Chipko Andolan d) Quit india Movemont
- 30. Gandhi jayanti is celebrated on**
- a) 03 October b) 04 October
c) 02 October d) 05 October
- SECTION B (SCIENCE)**
- 31. When an object is moving along a straight line at a variable speed, the magnitude of its rate of motion is expected in terms of:**
- a) Displacement b) Acceleration
c) Instantaneous Velocity d) Average velocity

32. Which equation best satisfies the expression of average velocity in mathematical terms:
- a) $V_{av} = 1/2 (V^2 + U^2)$ b) $V_{av} = 2 (U+V)$ as
 c) $V_{av} = \frac{U+V}{2}$ d) $V_{av} = U^2 + 2as$
33. Calculate the average speed of the car in Kmh^{-1} if the odometer of the car reads 2000 Km at the start of the trip if the trip took 8h :-
- a) 13.9 Kmh^{-1} b) 25.9 Kmh^{-1}
 c) 50 Kmh^{-1} d) 30 Kmh^{-1}
34. The distance-time graph of a body moving along a straight path in a single direction with uniform speed will be:
- a) Along X-axis b) a line with positive slope
 c) parallel to X-axis d) None of these
35. A freely falling body is said to be coming with:
- a) Constant non zero acceleration
 b) Non uniform motion
 c) Zero velocity
 d) Non uniform acceleration
36. _____ can be added algebraically:
- a) Acceleration b) Velocities
 c) Distances d) Any physical quantities
37. A racing car has a uniform acceleration of 4m/s^2 what distance will it cover in 10 seconds after start:
- a) 300 m b) 130 m c) 250 m d) 200 m
38. The inertia of of an object causes the object to:
- a) Decrease its speed b) Increase its speed
 c) Resist any change in the state of its motion
 d) Decelerate due to friction
39. Which of the following is the S.I unit of Force:
- a) Kgm/s^2 b) Kgm/s c) Newton-meter d) Newton
40. A bus moves from town A to town B with a constant speed of 40Kmh^{-1} and town B to town A with a constant speed of 60Kmh^{-1} , what is the average speed ?
- a) 48 Kmh^{-1} b) 50 Kmh^{-1} c) 55 Kmh^{-1} d) 49 Kmh^{-1}
41. The masses of the bodies are in ratio 5:6 and their velocities are in ratio 1:2 then their linear momentum will be in the ratio:
- a) 5:6 b) 1:2 c) 12:5 d) 5:12
42. If $(m_A U_A + m_B U_B)$ is the total momentum of the two balls A and B before the collision and $(m_A V_A + m_B V_B)$ is the total momentum after the collision, then which is correct among the following:
- (a) $m_A U_B = m_A V_A \times m_B V_B$
 (b) $m_A U_B = m_B U_B = m_A V_A - m_B V_B$
 (c) $(m_A U_A) (m_A V_A)$
 (d) $m_A U_A + m_B U_B = m_A V_A + m_B V_B$
43. In the S.I system, the gravitational unit of force is:
- a) Kg m/s^2 b) Kgf c) m/s d) meter
44. According to third law of motion action and reactions are happened at:
- a) Same time b) At different time
 c) Action happens first and then reaction
 d) Reaction happens first and then action
45. The kinetic energy of the particles _____ with temperature:
- a) Remains same b) Decreases
 c) Increases d) Has no effect
46. The polymers of rubber bounce back to their original length when pulling force is released, the property is called:
- a) Conductivity b) Rigidity
 c) Ductility d) Elasticity
47. A form of matter that has no fixed volume, an example of this form of matter is:
- a) CO_2 b) Ice
 c) Water vapour d) Kerosene
48. Which of the following phenomenon would increase with raising temperature:
- a) Evaporation, diffusion, expansion of gasses
 b) Diffusion, evaporation, compression of gasses

- c) Statement (ii) & (iv) are incorrect
 d) All the statements are incorrect

63. Where are the essential proteins and liquids required for cell membranes, manufactured:

- a) Lysosome b) Chromosome
 c) Endoplasmic reticulum d) Mitochondria

64. Who is the father of biology:

- a) Theophrastus b) Aristotle
 c) William Roxburgh d) Robert hooke

65. The study of tissues is called as:

- a) Microbiology b) Anatomy
 c) Histology d) Tissueology

66. Which cell does not have perforated cell walls:

- a) Tracheids b) Companion cells
 c) Sieve tubes d) Vessels

67. Intestines absorb the digested food material, what type of epithelial cells are responsible for that:

- a) Stratified squamous epithelium
 b) Columnar epithelium
 c) Spindle fibres d) Cuboidal epithelium

68. Rapid elongation of a bamboo stem is due to:

- a) Lateral meristem b) Intercalary meristem
 c) Apical meristem d) None of the above

69. The nodes of ranvier are found in:

- a) Nerve cells b) Heart cells
 c) Liver cells d) All of the above

70. The origin of epithelial tissue is:

- a) Ectodermal & endodermal
 b) Ectodermal
 c) Mesodermal
 d) Ectodermal, mesodermal, endodermal

SECTION C (MATHEMATICS)

71. Every rational number is

- a) whole number b) real number
 c) natural number d) integer

72. How many rational numbers are between 1 & 2 ?

- a) zero b) 10 c) infinity d) NOT

73. The three rational numbers between 3 & 4 are

- a) $5/2$, $6/2$, $7/2$ b) $12/7$, $13/7$, $14/7$
 c) $11/4$, $12/4$, $13/4$ d) $13/4$, $14/4$, $15/4$

74. $\sqrt{6} \times \sqrt{27} =$

- a) $9\sqrt{2}$ b) $3\sqrt{3}$ c) $9\sqrt{3}$ d) $2\sqrt{2}$

75. The decimal representation of the rational number is

- a) always terminating
 b) either terminating or non-repeating
 c) neither terminating non-repeating
 d) either terminating or repeating

76. Among π and $22/7$, which is a rational number?

- a) π b) $22/7$ c) both a & b d) NOT

77. By simplifying $(\sqrt{7} + \sqrt{5}) \times (\sqrt{7} - \sqrt{5})$, we get

- a) 24 b) 12 c) 2 d) 74

78. The degree of $(x^2 + x)(x^3 - 1)(x + 1)$ is

- a) 6 b) 3 c) 5 d) 4

79. The value of $P(x) = (5x + 2)(3x^2 - 1)$ when $x = -1$

- a) 6 b) 9 c) -6 d) NOT

80. Find the degree of polynomial $\sqrt{2} + \sqrt{3}$

- a) 1 b) $1/2$ c) 2 d) 0

81. A polynomial with two degree is called

- a) binomial b) linear
 c) monomial d) quadratic

82. If a line passes through coordinates (3,0) then the line is parallel to

- a) X-axis b) Y-axis
 c) both a & b d) NOT

83. Ordinate of all points on the X-axis is

- a) 0 b) 1 c) -1 d) any number

84. If the coordinates of a point are (3,-4) then it lies in which quadrant

- a) 1st b) 2nd c) 3rd d) 4th

85. A quadrant in which both x and y values are negative is

- a) 1st b) 2nd c) 3rd d) 4th

86. The solution of equation $x - 2y = 4$ is

- a) 0, 2 b) 4, 0 c) 3, 0 d) 4, 2

87. The linear equation $2x - 5y = 7$ has

- a) infinitely many solutions
b) unique solution
c) two solutions
d) no solution

88. The point of the form (a,a) always lies on the line

- a) passing through origin and makes an angle 45° with X-axis
b) for which $y = x$
c) $y = mx + c$
d) both a & b

89. Two angles whose sum is equal to 180° are called

- a) complementary angles b) adjacent angles
c) supplementary angles
d) vertically opposite angles

90. Two straight line $AB = CD$ cut each other at O, if $\angle BOD = 63^\circ$ then $\angle BOC = ?$

- a) 63° b) 117° c) 297° d) 37°

91. What are the other two angles in a right angled isosceles triangle?

- a) 30° & 60° b) 40° & 50°
c) 90° & 180° d) 45° and 45°

92. In an equilateral triangle ABC, two medians are drawn which intersect each other at O. Find the $\angle AOC$?

- a) 120° b) 90° c) 60° d) 30°

93. Which of the following is not a criterion for congruence of triangles ?

- a) SAS b) ASA c) SSA d) SSS

94. If $\triangle ABC \sim \triangle PQR$, then which of the following is true ?

- a) $AB = PQ$ b) $AB/PQ = AC/PR$
c) $AB/BC = PQ/QR$ d) NOT

95. All Isosceles triangles are

- a) similar b) congruent
c) both a & b d) NOT

96. The distance between coordinates (-3,4) and (6,-8) is

- a) 7 b) 14 c) 15 d) 10

97. If a circle is drawn with origin as center, the circle passes through point (3,3). Find the area of the circle?

- a) 9π b) 18π c) 15π d) 25π

98. What is the area of an equilateral triangle whose one side is on the X-axis, two corners have coordinates $(0, 2\sqrt{3})$ & $(-2, 0)$?

- a) $4\sqrt{3}$ b) $2\sqrt{3}$ c) $3\sqrt{3}$ d) $8\sqrt{3}$

99. In a right angled triangle, if the length of hypotenuse is 13 units. What will be the length of other two sides?

- a) 8 & 5 b) 10 & 3 c) 6 & 8 d) 12 & 5

100. A right angled triangle whose base & hypotenuse are 6 and 10 respectively is replaced by an equilateral triangle of side 4, find the change in area?

- a) 14 b) $6(4\sqrt{3})$ c) $4(6 - \sqrt{3})$ d) NOT