# NTSE 

NTSE Stage - II
Sample Paper - SAT
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1. A body of mass $m$ is moving in a circle of radius $r$ with a constant speed $v$. The force on the body is $\frac{m v^{2}}{r}$ and is directed towards the centre what the work is done by this force in moving the body over half the circumference of the circle.
(a) $\frac{m v^{2}}{r} \times \pi r$
(b) zero
(c) $\frac{m v^{2}}{\mathrm{r}^{2}}$
(d) $\frac{\pi r^{2}}{m v^{2}}$
2. In 1.0 second a particle goes from point $A$ to point $B$ moving in a semicircle of radius 1.0 m . The magnitude of the average velocity is

(c) $1.0 \mathrm{~m} / \mathrm{s}$
(d) zero

3. A train accelerates from rest at a constant rate $\alpha$ for distance $X_{1}$ and time $t_{1}$. After that it retards at constant rate $\beta$ for distance $x_{2}$ and time $t_{2}$ and comes to rest, which of the following relations is correct.
(a) $\frac{x_{1}}{x_{2}}=\frac{\alpha}{\beta}=\frac{t_{1}}{t_{2}}$
(b) $\frac{x_{1}}{x_{2}}=\frac{\beta}{\alpha}=\frac{t_{1}}{t_{2}}$
(c) $\frac{x_{1}}{x_{2}}=\frac{\alpha}{\beta}=\frac{t_{2}}{t_{1}}$
(d) $\frac{x_{1}}{x_{2}}=\frac{\beta}{\alpha}=\frac{t_{2}}{t_{1}}$
4. A light spring balance hangs from a hook of the other light spring balance and a block of man M kg hangs from the former ones. Then the true statement about the scale reading is
(a) Both the scales read $\mathrm{M} / 2 \mathrm{~kg}$ each.
(b) Both the scales read M kg each.
(c) The scale of the lower one reads M kg and the upper one zero.
(d) The reading of the two scales can be anything but the sum of the reading will be M kg .
5. A cubical block is floating in a liquid with half of its volume immersed in the liquid. When the whole system accelerates upwards with acceleration of $g / 3$, the fraction of volume immersed in the liquid will be

(a) $1 / 2$
(b) $3 / 8$
(c) $2 / 3$
(d) $3 / 4$
6. A body floats in water with one third of its volume above the surface of water. If it is placed in oil, it floats with half of its volume above the surface of the oil. The specific gravity of the oil is
(a) $5 / 3$
(b) $4 / 3$
(c) $3 / 2$
(d) 1
7. A concave lens and a convex lens each having same focal lengths of 25 cm are put in contact to from a combination of lenses. The power of the combination.
(a) zero
(b) 25
(c) 50
(d) Infinite
8. A transparent cube of 0.21 m edge contains a small air bubble. Its apparent distance, when viewed through the one face of the cube is 0.10 m and when viewed through the opposite face is 0.04 m . The actual distance of the bubble from the second face of the cube is
(a) 0.04 m
(b) 0.05 m
(c) 0.06 m
(d) 0.21 m
9. A light pointer fixed to one prong of turning fork touches a vertical plate. The fork is set vibrating and the plate is allowed to fall freely. It eight oscillations are counted when the plate falls through 10 cm . The frequency of the dunning fork is
(a) 360 Hz
(b) 280 Hz
(c) 560 Hz
(d) 56 Hz
10. A particle is dropped from a height $h$. A constant horizontal velocity is given to the particle taking $g$ to be constant everywhere, kinetic energy E of the particle with respect to time is correctly shown in
(a)

(b)

(c)

(d)

11. An engine pumps water through a house pipe. Water passes through pipe and leaves it with a velocity of $2 \mathrm{~m} / \mathrm{s}$. The man per unit length of water in the pipe is $100 \mathrm{~kg} / \mathrm{m}$. What is the power of the engine?
(a) 800 W
(b) 400 W
(c) 200 W
(d) 100 W
12. It ${ }^{i} r_{\mathrm{j}}$ represents refractive index, when a light rays goes from medium i to medium j then the product ${ }^{2} \mu_{1} \times{ }^{3} \mu_{2} \times{ }^{4} \mu_{3}$ is equal to
(a) ${ }^{3} \mu_{1}$
(b) ${ }^{3} \mu_{2}$
(c) ${ }^{4} \mu_{1}$
(d) ${ }^{4} \mu_{2}$
13. (A) The force work done in bringing a body down from the top of the base along a frictionless incline plane is the same as the work done in bringing it down in the vertical side.
(B) The gravitational force on a body along the inclined plane is the same as that along the vertical side.
(a) Both (A) and (B) are true
(b) Both (A) and (B) are false
(c) (A) is true and (B) is false
(d) (B) is true and (A) is false
14. Match (list I) SCIENTIST with List (II) their DISCOVERY

|  | Column - I |  | Column - II |
| :---: | :---: | :---: | :---: |
| $(1)$ | Bohr (1912) | (K) | Proton |
| $(2)$ | Rutherford (1911) | (L) | neutron |
| $(3)$ | Goldstein (1886) | (M) | energy shells |
| $(4)$ | Chadwick (1932) | (N) | nucleus |

(a)1-M,2-K,3-L,4-N
(b) 1-N,2-L,3-M,4-K
(c) 1-L,2-M,3-K,4-N
(d)1-M,2-N,3-K,4-L
15. The $\mathrm{e} / \mathrm{m}$ value for cathode rays -
(a) Varies with the nature
(b) Does not vary with the nature of the gas
(c) Could not be determined by J.J. Thomson.
(d) Both (b) and (c) are correct.
16. Molarity of $4 \% \mathrm{NaOH}$ solution is -
(a) 0.1 M
(b) 0.5 M
(c) 0.01 M
(d) 1.0 M
17. What is the number of molecules contained in a drop of water weighing 0.06 g ?
(a) $1.6023 \times 10^{21}$
(b) $6.022 \times 10^{23}$
(c) $2.0073 \times 10^{21}$
(d) $1.2046 \times 10^{21}$
18. For each of the following pair, which is the correct option of one in larger size.
$\mathrm{Na}-\mathrm{Na}^{+}, \mathrm{Br}-\mathrm{I}, \mathrm{Cl}-\mathrm{Cl}^{-}, \mathrm{Be}-\mathrm{Mg}$
(a) $\mathrm{Br}, \mathrm{Cl}^{-}, \mathrm{Na}, \mathrm{Be}$
(b) $\mathrm{Na}, \mathrm{I}, \mathrm{Cl}, \mathrm{Mg}$
(c) $\mathrm{I}, \mathrm{Na}, \mathrm{Cl}^{-}, \mathrm{Be}$
(d) $\mathrm{Na}, \mathrm{I}, \mathrm{Cl}^{-}, \mathrm{Mg}$

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19. Isoelectronic species are -
(a) $\mathrm{F}^{-}, \mathrm{O}^{2+}$
(b) $\mathrm{F}^{-}, \mathrm{O}$
(c) $\mathrm{F}^{-}, \mathrm{O}^{+}$
(d) $\mathrm{F}^{-}, \mathrm{O}^{2-}$
20. The action of dry litmus on dry ammonia gas is $\qquad$
(a) Turns red
(b) Turns blue
(c) No change
(d) Burns
21. A blue salt becomes white on heating
(1) Salt is anhydrous copper sulphate
(2) Salt is blue vitriol
(3) The process show water of crystallization
(4) The process is to show transpiration
(a) (1) and (2) are correct
(b) (1) and (3) are correct
(c) (3) and (2) are correct
(d) (1) and (4) are correct
22. An example of Lewis acid is -
(a) NaCl
(b) $\mathrm{MgCl}_{2}$
(c) $\mathrm{AlCl}_{3}$
(d) $\mathrm{SnCl}_{4}$
23. Micelles are formed by
(i) Sodiumlauryl sulphate
(ii) Sodiumstearate
(a) Both of these
(c) Only sodium lauryl sulphate
(b) None of these
(d) Only sodium stearate
24. Study the table properly.

| S.N. | Element | M.P. <br> (in ${ }^{\circ} \mathrm{C}$ ) | B.P. <br> (in $\left.{ }^{\circ} \mathrm{C}\right)$ |
| :---: | :---: | :---: | :---: |
| 1. | X | -8 | 64 |
| 2. | Y | 64 | 760 |
| 3. | Z | 186 | 986 |

Now answer the question
Which element is liquid at Room temperature?
(a) Y
(b) Z
(c) X
(d) YZ
25. If 20 g of solute can dissolve in 1000 g of water at $25^{\circ} \mathrm{C}$ then what is the solubility of solute
(a) 20 g
(b) 2 g
(c) 0.2 g
(d) 200 g
26. Extraction of highly electropositive metal is done by
(a) Electrolysis of aqueous solution of metal chloride
(b) Electrolysis of molten metal chloride.
(c) Carbon reduction of oxide of the metal
(d) Strongly heating the oxide of the metal.
27. Genes are made of
(a) Histones
(b) Polynucleotides
(c) Phosphate
(d) Lipoproteins
28. The process of transcription is involved in the
(a) Conversion of DNA into RNA
(b) Movement of RNA from nucleus
(c)Formation of DNA from RNA
(d) None of these
29. Which vitamin deficiency causes the loosening and falling of teeth?
(a) Vitamin A
(b) Vitamin C
(c) Vitamin B1
(d) None of these
30. Enzyme Rennin is secreted in :-
(a) Stomach of human adults
(b) Stomach of calf
(c) Stomach of apes
(d) None of these
31. The fungus Saccharomyces is also known as
(a) Black mould
(b) Blue mould
(c) Mushroom
(d) Budding yeast
32. Which of the following are biomagnified at different levels of a food chain
(i) Heavy metals
(ii) D.D.T
(iii) Green house gases $\qquad$
(iv) Aerosols
(a) I \& ii are correct
(b) i \& iii are correct
(c) ii \& iii are correct
(d) iii \& iv are correct
33. The maximum reabsorption of substances occurs in the
(a) DCT
(b) Collecting duct
(c) Glomerulus
(d) PCT
34. Plant cell differ from animal cell in having.
(a) Large central vacuole
(b) Big size of nucleus
(c) Cell wall around the cell membrane
(d) All of them.

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35. A human RBC is placed in a solution for few hours, but no change is observed in the size of the RBC afterwards. What is the nature of the solution
(a) Hypertonic
(b) Hypotonic
(c) Isotonic
(d) None of the above
36. Match the columns

I
A. Labeo rohita
B. Gallus gallus
C. Bos indicus
D. Antheraea mylitta
(a) $\mathrm{A}-2, \mathrm{~B}-1, \mathrm{C}-4, \mathrm{D}-3$
(b) $\mathrm{A}-4, \mathrm{~B}-1, \mathrm{C}-2, \mathrm{D}-3$
(c) $\mathrm{A}-1, \mathrm{~B}-4, \mathrm{C}-2, \mathrm{D}-3$
(d) $\mathrm{A}-2, \mathrm{~B}-4, \mathrm{C}-1, \mathrm{D}-3$

## II

1. Fowl
2. Carp
3. Tusar silkmoth
4.Cow
4. Rate of photosynthesis
(1) Greater in intense light than in diffused light
(2) Minimum in red light
(3) Greater in intermittent light than in continuous light
(4) Decrease in presence of some plant hormones the cytokinin \& gibberellins
(a) $1,2 \& 3$ are correct
(b) 1 and 2 are correct
(c) $2 \& 4$ are correct
(d) 1 and 3 are correct
5. Match the columns

I
A. Zymogen cells
B. Produce in Liver for Fat digestion
C. Gaseous diffusion
D. Gaseous exchange
E. Pulmonary vein
F. Pulmonary artery
G. Renal artery

## II

1. Bile
2. External respiration
3. Internal respiration between alveoli and blood in Lungs
4. Oxygenated blood between heart and lungs
5. Pepsin
6.Deoxygenated blood
6. Filtration of blood
(a) $\mathrm{A}-5, \mathrm{~B}-1, \mathrm{C}-2, \mathrm{D}-3, \mathrm{E}-4, \mathrm{~F}-6, \mathrm{G}-7$
(b) $\mathrm{A}-5, \mathrm{~B}-2, \mathrm{C}-1, \mathrm{D}-3, \mathrm{E}-6, \mathrm{~F}-4, \mathrm{G}-7$
(c) $\mathrm{A}-5, \mathrm{~B}-3, \mathrm{C}-2, \mathrm{D}-1, \mathrm{E}-6, \mathrm{~F}-4, \mathrm{G}-7$
(d) $\mathrm{A}-5, \mathrm{~B}-6, \mathrm{C}-2, \mathrm{D}-3, \mathrm{E}-1, \mathrm{~F}-4, \mathrm{G}-7$

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39. Assertion: Diabeties insipidus is characterized by excessive urination \& too much thirst of water

Reason: ADH is secreted by posterior pituitary gland.
(a) A \& R are true and R is correct explanation of $A$
(b) $A \& R$ are true but $R$ is not correct explanation of $A$
(c) A is false but R is true
(d) A \& R both are false.
40. Prolonged exposure to the fumes released by incomplete combustion of coal may cause death of a human because of:
(a) Inhalation of unburnt carbon particles.
(b) Continuous exposure to high temperature.
(c) Increased level of carbon monoxide.
(d) Increased level of carbon dioxide.
41. The value of k for which the following system of equations has infinitely many solutions.

$$
\begin{aligned}
& 5 x+2 y=k \\
& 10 x+4 y=3
\end{aligned}
$$

(a) $\frac{1}{2}$
(b) 3
(c) $\frac{3}{2}$
(d) 1
42. If $(\sin \theta-\cos \theta)=0$, then $\left(\sin ^{4} \theta+\cos ^{4} \theta\right)=$ ?
(a) 1
(b) $\frac{1}{2}$
(c) $\frac{1}{4}$
(d) $\frac{3}{4}$
43. The value of $\frac{1}{\sqrt{3}-\sqrt{2}-1}$ a simplifying upto 3 decimal places, given that $\sqrt{2}=1.414 \& \sqrt{6}=2.4495$ is
(a) 1.465
(b) -0.1465
(c) -1.465
(d) 0.1465
44. If $x=7+4 \sqrt{3}$ then the value of $\sqrt{x}+\frac{1}{\sqrt{x}}$ is

(a) 8
(b) 6
(c) 5
(d) 4
45. The value of $x$ on simplifying $x-2|x|=-3$ is
(a) -1 or 3
(b) 1 or -3
(c) -1 or -3
(d) 1,3
46. The rational form of $2.74 \overline{35}$ is
(a) $\frac{27161}{9999}$
(b) $\frac{2708}{9990}$
(c) $\frac{27161}{9900}$
(d) $\frac{27161}{9000}$

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47. If $x+y=a \& x y=b$ then the value of $\frac{1}{x^{3}}+\frac{1}{y^{3}}$ is
(a) $\frac{a^{3}-3 a b}{b^{3}}$
(b) $\frac{a^{3}-3 a}{b^{3}}$
(c) $\frac{a^{3}-3}{-b}$
(d) $\frac{a^{3}-3}{b^{2}}$
48. If $a^{m} * a^{n}=a^{m n}$ then $m(n-2)+n(m-2)$ is
(a) 1
(b) -1
(c) 0
(d) $\frac{1}{2}$
49. If the index of any power function is zero, then the value of that function is
(a) 0
(b) 1
(c) -1
(d) None of these
50. If $f: R \rightarrow R, f(x)=x^{2}+8$ then $f(-3)$ is
(a) 1
(b) -17
(c) -1
(d) 17
51. If $2^{2 x-y}=32 \& 2^{x+y}=16$ then $x^{2}+y^{2}$ is equal to
(a) 9
(b) 10
(c) 11
(d) 13
52. The value of the expression $\sqrt{6+\sqrt{6+\sqrt{6+\sqrt{6+\ldots \ldots \ldots . . \infty}}}}$ is
(a) 2
(b) 3
(c) 30
(d) 5
53. The value of $\left(1-\frac{1}{3}\right)\left(1-\frac{1}{4}\right)\left(1-\frac{1}{5}\right) \ldots \ldots . .\left(1-\frac{1}{\mathrm{n}}\right)$ is equal to
(a) $1 / \mathrm{n}$
(b) $2 / \mathrm{n}$
(c) $3 / \mathrm{n}$
(d) n
54. What's the condition of one root of the equation $a^{2}+b x+c=0$ is double the other
(a) $\mathrm{b}^{2}=9 \mathrm{ac} / 2$
(b) $\mathrm{b}^{2}=2 \mathrm{ac}$
(c) $b^{2}=9 a c$
(d) $b^{2}=a c$
55. The Quadratic equation whose roots are a and $\frac{1}{a}$ is given by
(a) $\mathrm{x}^{2}-2 \mathrm{ax}+\left(\mathrm{a}^{2}+1\right)=0$
(b) $x^{2}-\left(a^{2}+1\right) x+1=0$
(c) $\mathrm{ax}^{2}-\left(\mathrm{a}^{2}+1\right) \mathrm{x}+\mathrm{a}=0$
(d) $x^{2}-x+2 a=0$

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56. If $y=x-x^{2}+x^{3}-x^{4}+$ ....... upto infinity, the value of $x$ is
(a) $\frac{y}{x+y}$
(b) $\frac{y}{1-y}$
(c) $y-\frac{1}{y}$
(d) $\mathrm{y}+\frac{1}{\mathrm{y}}$
57. The value of $(625)^{0.16} \times(625)^{0.09}$ is
(a) 4
(b) 5
(c) 25
(d) 625
58. If $2 x+y=3 \& x y=1$, the value of $(x+y)^{x-y}$ is
(a) 100
(b) 10
(c) 0
(d) 1
59. 125 identical cubes are cut from a big cube and all the smaller cubes are arranged in a row to form a long cuboid. What is the percentage increase in the total surface area of the cuboid over the total surface area of the cube?
(a) $234 \frac{2}{3} \%$
(b) $235 \frac{1}{3} \%$
(c) $134 \frac{2}{3} \%$
(d) $195 \frac{2}{3} \%$
60. If three positive real numbers $a, b, c$ are in A.P. such that a.b.c. $=4$, then the minimum value of $b$ is:
(a) $2^{1 / 2}$
(b) $2^{1 / 3}$
(c) $2^{2 / 3}$
(d) $2^{3 / 2}$
61. The swaraj flag designed by Mahatma Gandhi had the spinning wheel in it. What did it symbolize?
(a) Ideal of self - help
(b) Symbol of defiance to the British rule.
(c) Greatness of India in pre - colonial time.
(d) Ahinsa (non - violence) in contemporary world.
62. Which of the following statements regarding the Silk Routes are correct?
I. They also meant cultural links.
II. They spread over land and by sea.
III. They connected Asia with Europe and Africa.
IV. Besides textiles, gold and silver got exported from Asia to Europe through these routes.
(a) I, II and III
(b) I, II and IV
(c) II, III and IV
(d) I, II, III and IV
63. Which of the following statements regarding the impact of Depression of 1929 are correct?
I. India's exports increased but imports decreased.
II. Prices of farm produce fell.
III. Urban India suffered more than the rural India.
IV. It led to unrest in rural areas.
(a) I, II and III
(b) I, II and IV
(c) II, III and IV
(d) II and IV

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64. Which of the following statements about the French in Vietnam are correct?
I. The Vietnamese teachers generally twisted the school curriculum given by the French
II. The students protested the undue dominance by the colons.
III. The Annanese Student was a French journal for enlisting the students support.
IV. The French had to counter the Chinese influence.
(a) I, II and III
(b) I, II and IV
(c) I, III and IV
(d) II, III and IV
65. Read the statements about the impact of forest rules on tribal communities in the $19^{\text {th }}$ century.

Which of the following statements are incorrect?
I. Jhum cultivators could carry out their activities in village forests.
II. Jhum cultivators took to plough cultivation with ease.
III. Tribal people could graze cattle in the protected forests.
IV. Tribal people did not have access to reserved forests for collecting wood for fuel and house building.
(a) I and II
(b) I and III
(c) II and III
(d) III and IV
66. Which of the following statements about the Non-cooperation Movement are incorrect?
I. The Justice Party participated in the elections in Madras.
II. It was launched in 1929.
III. People had to boycott foreign goods.
IV. Gandhiji broke the Salt Law which led to the beginning of the Non-cooperation Movement.
(a) I and III
(b) I and IV
(c) I, II and III
(d) II and IV
67. Which of the following regarding the Constitution of 1791 and the status of women in France are correct?
I. It made them active citizens.
II. Provisions were made for schools for both boys and girls.
III. Divorce rules were made stringent.
IV. Provisions were made for training women for jobs.
(a) I, II and III
(b) II and IV
(c) III and IV
(d) II, III and IV
68. Arrange the following historical developments in a chronological sequence
I. Rowlatt Act
II. Kheda Satyagraha
III. Champaran Movement
IV. Formation of Swaraj Party
(a) I, II, III, IV
(b) II, I, III, IV
(c) III, I, IV, II
(d) III, II, I, IV
69. Read the statements and select the correct answer from the options given below.

Statement I: In the 19th century, London was a colossal city.
Statement II: London had grown as an industrial city.
(a) Statement I is true, Statement II is false.
(b) Statement I is false, Statement II is true.
(c) Both Statements are true; and Statement II provides explanation to Statement I.
(d) Both Statements are true; but Statement II does not provide explanation to Statement I.
70. Read the statements and select the correct answer from the options given below.

Statement I: Indians not taking off their turban before colonial officials was considered offending.
Statement II: Turban was a sign of respectability in India.
(a) Statement I is true, Statement II is false.
(b) Statement I is false, Statement II is true.
(c) Both Statements are true; and Statement II provides explanation to Statement I.
(d) Both Statements are true; but Statement II does not provide explanation to Statement I.
71. Read the statements and select the correct answer from the options given below.

Statement I: Louis Blanc build a cooperative community.
Statement II: He believed the community could produce goods together and divide the profits among the members.
(a) Statement I is true, Statement II is false.
(b) Statement I is false, Statement II is true.
(c) Both Statements are true; and Statement II provides explanation to Statement I.
(d) Both Statements are true; but Statement II does not provide explanation to Statement I.
72. Read the statements and select the correct answer from the options given below.

Statement I: Hand printing developed in China.
Statement II: The Chinese started printed textbooks in vast numbers.
(a) Statement I is true, Statement II is false.
(b) Statement I is false, Statement II is true.
(c) Both Statements are true; and Statement II provides explanation to Statement I.
(d) Both Statements are true; but Statement II does not provide explanation to Statement I.
73. Read the statements and select the correct answer from the options given below.

Statement I: Rainfall is low in the western parts of Deccan Plateau and East of Sahyadris.
Statement II: Western Ghats causes convectional rainfall.
(a) Statement I is true, Statement II is false.
(b) Statement I is false, Statement II is true.
(c) Both Statements are true; and Statement II provides explanation to Statement I.
(d) Both Statements are true; but Statement II does not provide explanation to Statement I.
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74. Read the statements and select the correct answer from the options given below.

Statement I: A large part of the Deccan plateau is occupied by black soil.
Statement II: Black soil in this part was formed by denudation of basaltic rocks overtime.
(a) Statement I is true, Statement II is false.
(b) Statement I is false, Statement II is true.
(c) Both Statements are true; and Statement II provides explanation to Statement I.
(d) Both Statements are true; but Statement II does not provide explanation to Statement I.
75. If the local time at Varanasi, located at $83^{\circ} \mathrm{E}$ longitude is $23: 00$ hour then what will be the local time at Kibithu located at $97^{\circ}$ E longitude (Arunachal Pradesh) and Jodhpur, located at $73^{\circ}$ E longitude?
(a) 00:00 hour, 22:00 hour
(b) 22:20 hour, 23:56 hour
(c) 23:56 hour, 22:20 hour
(d) 22:56 hour, 23:20 hour
76. Which one of the following statements are true about latitudes and longitudes.
I. All latitudes are angular distances measured towards the Pole from the Equator.
II. All longitudes do not join at poles
III. All Parallels and Meridians are imaginary lines
IV. Latitudes are used to determine the time of a place
(a) I and II
(b) I and III
(c) I, II and III
(d) II, III and IV
77. If the current climatic condition of Srinagar (J\&K) with average annual temperature of $13.5^{\circ} \mathrm{C}$ and annual average precipitation 710 mm get modified and become similar to that of Ranchi (Jharkhand) with annual average temperature $23.7^{\circ} \mathrm{C}$ and precipitation 1430 mm ., which one of the following types of vegetation will become predominant in Srinagar?
(a) Tropical Semi Evergreen
(b) Tropical Moist Deciduous
(c) Tropical Dry Deciduous
(d) Tropical Dry Evergreen
78. On a school field trip, a student spotted tigers, turtles, gharials and snakes in their natural habitats. Name the ecological region (delta) where that student had gone.
(a) Cauvery
(b) Mahanadi
(c) Godavari
(d) Ganga - Brahmaputra

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79. A person traveling by road (shortest distance) from Mangaluru to Machilipatnam will be able to observe natural vegetation types in which of the following sequences?
(a) Montane Forest - Tropical Deciduous Forests - Tropical Evergreen Forests
(b) Tropical Evergreen Forests - Tropical Thorn Forests - Tropical Deciduous Forests
(c) Tropical Deciduous Forests - Tropical Evergreen Forests - Montane Forest
(d) Tropical Evergreen Forests - Tropical Deciduous Forests - Mangrove Forests
80. Which of the following statement (s) is/are true with respect to monsoons in India?
A. The Southwestern Monsoon takes longer duration as compared to retreating Monsoon in covering India.
B. The Southwestern Monsoon has a shorter duration as compared to retreating Monsoon in covering India.
C. Both the Monsoons take almost the same duration in covering India.
D. The Southwestern Monsoon is propelled by the depressions while retreating Monsoon results from the movement of Air Masses.
(a) A and D
(b) B only
(c) C only
(d) B and D
81. Choose the incorrect statement
I. Due to the apparent movement of the sun, the low pressure trough becomes strong in northern plains in October-November.
II. Trade winds converge at ITCZ.
III. Relatively low pressure develops over north western parts of the country in October-November.
IV. The windward side of the Western Ghats receives 100 cm rainfall annually.
(a) I and III
(b) I and IV
(c) II and IV
(d) I and IV
82. With increasing urbanization, the main activity which leads to loss of biodiversity is:
I. rural-urban migration.
II. rapid increase in built-up area.
III. increased vehicular pollution.
IV. development of big industrial complexes.
(a) I and III
(b) I and IV
(c) II and IV
(d) III and IV
83. Which one of the following statements is NOT correct about the shaded part on the given outline of India?

(a) It has high potential for hydel-power generation
(b) It has the lowest degree of urbanization.
(c) Ragi is an important millet growth here.
(d) It is famous for religious tourism.
84. Chandimal, Jaysurya and Umesh left their respective villages in Sri Lanka for Chennai in India. Who among the following could be a refugee?
I. Chandimal, who is an IT professional, could not find a job in Sri Lanka.
II. Jaysurya, who left his village due to ethnic conflicts.
III. Umesh, whose land and house were destroyed due to Tsunami.
(a) Only Jaysurya
(b) Only Chandimal
(c) Jaysurya and Umesh
(d) Chandimal and Jaysurya
85. Consider the following statements about the United Nations Security Council (UNSC):
I. UNSC consists of 15 members.
II. US, Russia and Germany are among the permanent members.
III. China is the only Asian nation among the permanent members.
IV. All members of the UNSC have veto power.

Which of the above statements are correct?
(a) I and II
(b) I and III
(c) I and IV
(d) III and IV
86. Which of these statements about the Election Commission of India are true?
I. It conducts and controls the election process in the country.
II. It gets the voters list updated before the elections.
III. It also conducts the Panchayat elections in the country.
IV. The Chief Election Commissioner is appointed by the Prime Minister.
(a) I and II
(b) II and III
(c) II and IV
(d) III and IV

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87. Consider the following statements about the Indian Parliament:
I. It is the ultimate authority to make laws in India
II. It consists of the President, the Lok Sabha and the Rajya Sabha
III. It consists of only the Lok Sabha and the Rajya Sabha
IV. Lok Sabha members are chosen by the people through elections.

Which of the above statements are correct?
(a) I only
(b) I and III
(c) II and III
(d) I, II and IV
88. Which of the following is the inspiring philosophy of the Constitution of India?
I. Secularism, Equality, Communism, Democratic Republic
II. Democratic Republic, Sovereignty, Fraternity
III. Secularity, Equality, Justice
IV. Equality, Fraternity, Communalism, Secularism
(a) I and II
(b) I and III
(c) II and III
(d) II and IV
89. Which of the following features of the Indian Judiciary are true?
I. Integrated judicial system
II. The Supreme Court is the highest court of appeal
III. Only the Supreme Court can interpret the constitution
IV. Public Interest Litigation (PIL) can be filed only in the Supreme Court and the High courts
(a) I, II and III
(b) I, III and IV
(c) I, II and IV
(d) II, III and IV
90. Which of the following statements is NOT true about Indian Federalism?
(a) The Union government is vested with more financial powers than the State government.
(b) Power to legislate on residuary subjects is vested in the Union government.
(c) The Union Government cannot change the basic structure of the Constitution.
(d) The Union legislature can amend any provision of the constitution without the consent of the state governments.
91. Democracy promotes equality through the following:
I. Universal adult franchise
II. Equality before law and equal protection of law
III. Reservation for scheduled castes, scheduled tribes and women

IV Independent and impartial media
(a) I and II
(b) I, II and III
(c) I, III and IV
(d) II and IV
92. Read the following statements and select one of the four options given below.

Statement I: Enjoyment of pollution-free water is a fulfillment of right of life.
Statement II: Release from forced labour is a fulfillment of right of life.
(a) Only I is correct
(b) Only II is correct
(c) Both I and II are correct
(d) Both I and II are incorrect
93. The daily wage of a person in urban areas is Rs 300 .The poverty line for a person is fixed at Rs 1000 per month for the urban areas. The following table shows the details of employment of four families living in Mumbai city.

| Family | Total days of employment <br> got in a month by the family | Members of the <br> family |
| :---: | :---: | :---: |
| Bari | 12 | 3 |
| Tenzin | 15 | 4 |
| Bala | 15 | 5 |
| Phulia | 20 | 5 |

Identify the family living below poverty line
(a) Mari
(b) Tenzin
(c) Bala
(d) Phulia
94. In a particular year, the prices of wheat in a market is Rs 15 per Kg and a farmer produces 100 Kg of wheat. In the next year the price of wheat has fallen to Rs 10 per kg and the farmer produces 120 kgs . If the government wishes to stabilize the income of the farmer, then what will be the minimum support price?
(a) Rs 12 Per kg
(b) Rs 12.5 per kg
(c) Rs 13 per kg
(d) Rs 13.5 per kg
95. A country has four groups of people. The table below describes some social indicators of these groups.

Identify the group that is the most vulnerable.

| Groups | Literacy rate (\%) | Life expectancy (years) | Unemployment rate (\%) |
| :---: | :---: | :---: | :---: |
| A | 74 | 82 | 5 |
| B | 93 | 80 | 10 |
| C | 63 | 78 | 15 |
| D | 65 | 78 | 10 |

(a) A
(b) B
(c) C
(d) D
96. Which of the following statement are correct?
I. Bank deposits share the essential feature of money.
II. Any depositor may demand his deposit at any point of time from a bank.
III. Bank must retain all deposits by itself.
(a) I and II are true, but III is false
(b) I is true, but II and III are false
(c) I and II are false, but III is true
(d) All statements I, II and III are true
97. Beira and his wife Sheena have two daughters aged 12 and 16 . Sheena's mother and father, aged 65 and 72, also live with them. Beira is currently looking for work, but can't find any. His elder daughter completed class 10 and prefers to look for work. Sheena prefers to stay at home to look after house works. How many unemployed members does Bia's family have?
(a) 1
(b) 2
(c) 3
(d) 4
98. Which of the following statements are correct?
I. Globalization has led to increased flow of capital across countries.
II. Increase in flows of labour across countries has been larger than the increase in flows of capital
III. MNCs spread their production and work with local producers in various countries across the globe.
(a) I and II
(b) I and III
(c) II and III
(d) I, II and III
99. In a village, Puranpur, 200 families are living. Eighty five families work on their own piece of land, 60 families work on the field of other farmers, 5 families run their own shops and 50 families work in a nearby factory to earn their livelihoods. What percentage of Puranpur village depends on the secondary sector?
(a) 20
(b) 25
(c) 35
(d) 55
100. Identify the correct pairs from List-I (Rights) and List-II (Violation of rights) and select the correct option using the codes given below.

|  | List - I <br> (Rights) |  | List (Violation of rights) |
| :--- | :--- | :--- | :--- |
| (A) | Right to choose | (I) | Raman buys a packet of milk on which the <br> company's name, manufacturing date, and expiry <br> date were missing. |
| (B) | Right to be informed | (II) | Sakina wants a particular channel from her cable <br> operator but operator offers some other channel as <br> part of a complete package. |
| (C) | Right to safety | (III) | Joseph bought a television from a shop. <br> He suffered electric shock while using it. |
| (D) | Right to seek redressal | (IV) | Murli fell ill and was admitted in the hospital <br> because of stale food served in the restaurant. |

(a) A-I and C-III
(b) B-II and C-III
(c) B-II and D-IV
(d) C-III and D-IV


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

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