Instructions to Candidates

Read the following instructions carefully before you answer the questions. Answers are to be SHADED on a SEPARATE OMR Answer sheet given, with a HB pencil. Read the Instructions printed on the OMR sheet carefully before answering the questions.

1. Please write your Roll No. very clearly (only one digit in one block) on the OMR Answer sheet as given in your admission card. Please see that no block is left unfilled and even Zeros are correctly transferred to the appropriate blocks on the OMR Answer sheet. For all the subsequent purposes, your Centre Code No. and other details shall remain the same as given on the Admission Card.

2. Paper-II (Scholastic Aptitude Test) consists of 100 questions (Q. Nos. 1 to 100).

3. All questions carry one mark each.

4. Since all questions are compulsory, do not try to read through the whole question paper before beginning to answer it.

5. Begin with the first question and keep trying one question after another till you finish all the questions.

6. If you do not know the answer to any question, do not spend much time on it and pass on to the next one. If time permits, you can come back to the questions which you have left in the first instance and try them again.

7. Since the time allotted to the question paper is very limited, you should make the best use of it by not spending too much time on any question.

8. A blank page is provided for rough work at the end of question paper.

9. REMEMBER YOU HAVE TO SHADE ANSWERS ON A SEPARATE OMR ANSWER SHEET PROVIDED.

10. Answer to each question is to be indicated by SHADING the circle having the number of the correct alternative in the OMR Answer sheet from among the ones given for the corresponding question in the booklet.

11. Now turn to the next page and start answering the questions.

12. The OMR Answer sheet consists of two copies, the ORIGINAL COPY and the CANDIDATE'S COPY. Do not separate or displace them. Do not darken the bubbles in two copies of OMR Answer sheets separately. After the examination, you should hand over the original copy of OMR Answer sheet to the invigilator of the room and can take away the Candidate's copy of OMR Answer Sheet with them.

13. The candidate need not return this Question Paper booklet and can take it after completion of the examination. No candidate should leave the examination hall before the end of the examination.
Note:

(i) Subjects, Total Questions of each subject and Marks allotted:

1. Physics  | 13 Questions | 13 Marks
2. Chemistry | 13 Questions | 13 Marks
3. Biology  | 14 Questions | 14 Marks
4. Mathematics | 20 Questions | 20 Marks
5. History  | 12 Questions | 12 Marks
6. Geography | 12 Questions | 12 Marks
7. Political Science | 08 Questions | 08 Marks
8. Economics | 08 Questions | 08 Marks

(ii) **SHADE** the correct alternatives in the OMR Answer Sheet provided, from amongst the ones given against the corresponding questions in the Question Booklet. For shading the circles, use a **HB pencil**.
1. Match the following:

<table>
<thead>
<tr>
<th>List – P</th>
<th>List – Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 1 joule</td>
<td>1. 4.186 J</td>
</tr>
<tr>
<td>B. 1 WH</td>
<td>2. $3.6 \times 10^6$ J</td>
</tr>
<tr>
<td>C. 1 kWh</td>
<td>3. $10^7$ ergs</td>
</tr>
<tr>
<td>D. 1 calorie</td>
<td>4. 3.6 kJ</td>
</tr>
</tbody>
</table>

The correct match is (2) A-3, B-4, C-2, D-1

2. **Assertion (A)**: The velocity of a particle may vary even when its speed is constant.

**Reason (R)**: The particle is moving in a circular path.

(1) Both (A) and (R) are true and (R) is correct explanation to (A).

(2) Both (A) and (R) are true, but (R) is not correct explanation to (A).

(3) (A) is true, but (R) is false.

(4) (A) is false, but (R) is true.

3. A convex lens of focal length 20 cm is cut into two halves. Each of which is placed 0.5 mm and a point object placed at a distance of 30 cm from the lens as shown.

Then the image is at (4) 70 cm

4. Which of the following graph represents non-uniform acceleration?

(1) ![Graph](image1)

(2) ![Graph](image2)

(3) ![Graph](image3)

(4) ![Graph](image4)

5. **Assertion (A)**: Work done by gravitational force in a moving body path is independent.

**Reason (R)**: Gravitational force is non-conservative force.

(1) Both (A) and (R) are true and (R) is correct explanation to (A).

(2) Both (A) and (R) are true, but (R) is not correct explanation to (A).

(3) (A) is true, but (R) is false.

(4) (A) is false, but (R) is true.

6. Find the current flowing through the above circuit.

(1) 0.374 A

(2) ![Answer](image5)

(3) 3.74 A

(4) 3.75 A
Match the following:

Name of the Planet | Gravitation m/s²
---|---
A. Earth | 1. 25.95
B. Jupiter | 2. 3.7
C. Saturn | 3. 9.8
D. Mars | 4. 11.8

(1) A-4, B-2, C-3, D-1  
(2) A-3, B-2, C-1, D-4  
(3) A-2, B-1, C-3, D-4  
(4) A-3, B-1, C-4, D-2

8. Bulb 'P' marked as 100 W, 220 V and bulb Q marked as 60 W, 110 V. The resistance ratio of P and Q is

(1) 12:5  
(2) 5:12  
(3) 12:7  
(4) 5:7

9. X X X

X

X

X

As per the above figure

(1) Electric current flows along the rod from A to B.

(2) The rod AB is uniformly charged.

(3) The end "A" of the rod becomes positively charged.

(4) The end "B" of the rod becomes charged.

10. A person fired a gun standing at a distance of 55 m from a wall. If the speed of sound is 330 m/s, the time for an echo heard is

(1) 0.3s  
(2) 0.4s  
(3) 0.5s  
(4) 0.6s

11. The radius of curvature of a plano-convex lens which has 2 refractive index is 20 cm. By applying Silver Bromide on its surface to change it as a concave mirror, what is the focal length of the formed mirror?

(1) 5 cm  
(2) 20 cm  
(3) 10 cm  
(4) 40 cm

12. Identify the following colours in the ascending orders of their frequencies.

(1) Red, blue, yellow, green

(2) Blue, green, yellow, red

(3) Red, green, yellow, blue

(4) Red, yellow, green, blue

13. A point object is placed at a distance of 10 cm and its real image is formed at a distance of 20 cm from a concave mirror. When the object is moved by 0.1 cm towards the mirror, then the image will be moved by about

(1) 0.4 cm away from the mirror

(2) 0.4 cm towards the mirror

(3) 0.8 cm away from the mirror

(4) 0.8 cm towards the mirror
14. The allowable combinations of quantum numbers for each of the electron in 4s, 3p, 5d orbitals respectively
   (1) \( n = 4, l = 0, m_l = +1; n = 3, l = 2, m_l = 1; n = 5, l = 3, m_l = 0 \)
   (2) \( n = 4, l = 0, m_l = 0; n = 3, l = 2, m_l = -1 \)
   (3) \( n = 4, l = 0, m_l = 0; n = 3, l = 1, m_l = 0; n = 5, l = 2, m_l = -1 \)
   (4) \( n = 4, l = 0, m_l = 0; n = 3, l = 0, m_l = 0; n = 5, l = 1, m_l = 0 \)

15. Find the correct increasing order of Ionic radius among
   \( \text{Al}^{3+}, \text{Mg}^{2+}, \text{O}^{2-}, \text{F}^{-} \)
   (1) \( \text{F}^{-} < \text{Mg}^{2+} < \text{Al}^{3+} < \text{O}^{2-} \)
   (2) \( \text{Mg}^{2+} < \text{F}^{-} < \text{O}^{2-} < \text{Al}^{3+} \)
   (3) \( \text{Al}^{3+} < \text{Mg}^{2+} < \text{F}^{-} < \text{O}^{2-} \)
   (4) \( \text{Al}^{3+} < \text{Mg}^{2+} < \text{O}^{2-} < \text{F}^{-} \)

16. Set of elements with the following atomic numbers belongs to the same group:
   (1) 9, 16, 35, 3  (2) 12, 20, 4, 38
   (3) 11, 19, 27, 5  (4) 24, 47, 42, 55

17. The elements A, B, C and D have atomic numbers 9, 10, 11 and 12 respectively. The correct order of ionization energy is
   (1) \( A > B > C > D \)
   (2) \( B > A > D > C \)
   (3) \( B > A > C > D \)
   (4) \( D > C > B > A \)

18. An atom ‘A’ belongs to III A group and another atom “B” belongs to VI A group. The formula of the compound formed is
   (1) \( \text{A}_3\text{B}_6 \)
   (2) \( \text{A}_2\text{B} \)
   (3) \( \text{A}_2\text{B}_3 \)
   (4) \( \text{A}_3\text{B}_2 \)

19. Find the correct matching
   
<table>
<thead>
<tr>
<th>Bond</th>
<th>Band Energy kJ/mol</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-H-H</td>
<td>1. 193</td>
</tr>
<tr>
<td>B-Br-Br</td>
<td>2. 366</td>
</tr>
<tr>
<td>C-H-C/</td>
<td>3. 432</td>
</tr>
<tr>
<td>D-H-Br</td>
<td>4. 436</td>
</tr>
<tr>
<td>A-4, B-1, C-3, D-2</td>
<td>(1)</td>
</tr>
<tr>
<td>A-4, B-3, C-1, D-2</td>
<td>(2)</td>
</tr>
<tr>
<td>A-3, B-4, C-2, D-1</td>
<td>(3)</td>
</tr>
</tbody>
</table>

20. IUPAC Name of
   CH₃ - C - C - COOH
   OH
   (1) 3-3 diethyl Butane
   (2) 2-Hydroxy - 2 Methyl - Butane
   (3) 3-Hydroxy - 3 Methyl - Butanoic acid
   (4) 3-Ethyl - 2 Methyl - Propane

21. If we added \( \text{FeSO}_4 \) to above four test tubes, in which test tube we observe black residue?
   (1) “A” and “B”  (2) “A” and “C”
   (3) “B” and “C”  (4) “B” and “D”
From the above experimental set-up, what precipitate we obtain and what is the colour of obtained precipitate?

1. Lead Iodide - Yellow
2. Potassium Nitrate - Yellow
3. Lead Iodide - Red
4. Potassium Nitrate - Red

23. Find the composition of Stainless Steel.
   1. Fe, Cr, Ni
   2. Fe, Ni, Cu
   3. Fe, Cr, Cu
   4. Fe, C, Ni

24. Electro-negativity of the following elements increase in the order:
   1. C, N, Si, P
   2. N, Si, C, P
   3. Si, P, C, N
   4. P, Si, N, C

25. Match the following:

<table>
<thead>
<tr>
<th>List - P</th>
<th>List - Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Ethane</td>
<td>1. 2 sp carbons</td>
</tr>
<tr>
<td>B. Ethylene</td>
<td>2. 6 sp² carbons</td>
</tr>
<tr>
<td>C. Acetylene</td>
<td>3. 2 sp³ carbons</td>
</tr>
<tr>
<td>D. Benzene</td>
<td>4. 2 sp² carbons</td>
</tr>
</tbody>
</table>

The correct answer is

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

26. **Assertion (A):** Isotopes are electrically neutral.
   **Reason (R):** Isotopes are species with same mass number but different atomic number.
   1. Both (A) and (R) are true and (R) is the correct explanation to (A).
   2. Both (A) and (R) are true, but (R) is not the correct explanation to (A).
   3. (A) is true, but (R) is false.
   4. (A) is false but (R) is true.

Question Id: 26
27. In a living cell the fluid present inside the Nucleus called as
   (1) Cytoplasm    (2) Protoplasm    (3) Endoplasm    (4) Nucleoplasm

28. The scientific name of Human is "Homo sapiens". In this the word "Sapiens" represents
   (1) Species        (2) Genera        (3) Class        (4) Family

29. In animal kingdom, the first organism possessing back bones :
   (1) Amphibians       (2) Fishes        (3) Aves         (4) Reptiles

30. In human eye, the cornea formed from
   (1) Sclera           (2) Choroid       (3) Retina       (4) Iris

31. One of the following digestive juices which contains no enzyme :
   (1) Amylase         (2) Lipase        (3) Bile         (4) Trypsin

32. If you think chest cavity is a room, in this the diaphragm may be
   (1) Roof            (2) Floor         (3) Walls        (4) Windows

33. The enzyme thrombokinase released by
   (1) Red blood cells (2) White blood cells (3) Plasma    (4) Platelets

34. Match the item in Column - I with Column - II

<table>
<thead>
<tr>
<th>Column - I</th>
<th>Column - II</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Plants Excrete Material</td>
<td>1. Tears</td>
</tr>
<tr>
<td>B. Animals Excrete Material</td>
<td>2. Saliva</td>
</tr>
<tr>
<td>C. Plants Secretion</td>
<td>3. Falling of leaves</td>
</tr>
<tr>
<td>D. Animals Secretion</td>
<td>4. Gums</td>
</tr>
<tr>
<td>(1) A-3, B-1, C-4, D-2</td>
<td>(2) A-1, B-3, C-2, D-4</td>
</tr>
<tr>
<td>(3) A-2, B-1, C-3, D-4</td>
<td>(4) A-4, B-2, C-1, D-3</td>
</tr>
</tbody>
</table>

35. Nodes of Ranvier absent in
   (1) Mylenated Neurons         (2) Sensory Neurons
   (3) Motor Neurons             (4) Non-Mylenated Neurons

36. Parthenogenesis is
   (1) Asexual Reproduction      (2) Sexual Reproduction
   (3) Artificial Propagation    (4) Natural Propagation

37. The hormone "Ghrelin" is secreted by
   (1) Wall of the Stomach       (2) Wall of the Intestine
   (3) Wall of the Esophagus     (4) Salivary Glands

38. One of the following is not related to "Pea" plant :
   (1) Presence of bisexual flowers (2) It is a biennial plant.
   (3) It prefers self fertilization,   (4) It has well defined characters.

39. Ecological pyramid was first introduced by
   (1) Darwin         (2) William Elton
   (3) Charles Elton  (4) Mendel
40. Find out the Renewable Resource.
   (1) Coal         (2) Petrol
   (3) Water       (4) Natural Gas

Question Id: 40
41. The 10th term from the end of the A.P. 5, 12, 19, ....... 173 is
   (1) 96  (2) 103  (3) 110  (4) 117

42. If \( \triangle ABC \) is an equilateral triangle such that \( AD \perp BC \), then \( AD^2 = \)
   \[ A. \frac{3a^2}{4} \quad B. \frac{3a^2}{2} \quad C. \frac{3}{4} BC^2 \quad D. \frac{\sqrt{3}}{2} a \]
   (1) A  (2) B and C  (3) D  (4) A and C

43. If \(-2\) is a root of the quadratic equation 
   \[ x^2 - px + 6 = 0 \] and \[ x^2 + px - k = 0 \] 
   has equal roots, then the value of \( k \) is 
   (1) 6  (2) 10  (3) 14  (4) 18

44. Metallic spheres of radii 15 cm, 20 cm, and 25 cm respectively are melted to form a single solid sphere. Then the radius of the resulting sphere is 
   (1) 20 cm  (2) 25 cm  (3) 30 cm  (4) 35 cm

45. If \( \alpha \) and \( \beta \) are the zeroes of the quadratic polynomial \( P(x) = x^2 + qx - p \), then the value of \( \frac{1}{\alpha} + \frac{1}{\beta} \) is 
   (1) \( \frac{p}{q} \)  (2) \( \frac{q}{p} \)  (3) \( -\frac{p}{q} \)  (4) \( -\frac{q}{p} \)

46. If \( \cos \theta = \frac{a}{b} \) then \( \cosec \theta + \cot \theta \) in terms of \( a \) and \( b \) is 
   (1) \[ \sqrt{\frac{b+a}{b-a}} \]  (2) \[ \sqrt{\frac{a+b}{a-b}} \]  (3) \[ \sqrt{\frac{b-a}{b+a}} \]  (4) \[ \sqrt{\frac{a-b}{a+b}} \]

47. In the adjacent figure if \( AB = 10 \text{ cm}, \ BC = 12 \text{ cm} \) and \( AC = 14 \text{ cm} \), then \( AD = \)
   (1) 5 cm  (2) 6 cm  (3) 7 cm  (4) 8 cm

48. If \( \alpha \) and \( \beta \) are the zeroes of the polynomial 
   \[ P(x) = x^2 + 3x + k \] such that \( \alpha - \beta = 5 \), then the value of \( k \) is 
   (1) 2  (2) -3  (3) -4  (4) 5

49. The sum of a number and its reciprocal is \( 2 \frac{1}{6} \) then the number is 
   (1) \( \frac{5}{6} \) or \( \frac{6}{5} \)  (2) \( \frac{4}{5} \) or \( \frac{5}{4} \)  (3) \( \frac{3}{4} \) or \( \frac{4}{3} \)  (4) \( \frac{2}{3} \) or \( \frac{3}{2} \)
50. Match the item in Column – I with Column – II.

<table>
<thead>
<tr>
<th>Column – I</th>
<th>Column – II</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Slope of x-axis</td>
<td>$\sec 0^\circ$</td>
</tr>
<tr>
<td>B. Slope of y-axis</td>
<td>$\sin 0^\circ$</td>
</tr>
<tr>
<td>C. Distance between the points $(\sin 55^\circ, 0)$ and $(0, \sin 35^\circ)$</td>
<td>$\cot 0^\circ$</td>
</tr>
</tbody>
</table>

(1) A-1, B-2, C-3  
(2) A-2, B-3, C-1  
(3) A-3, B-1, C-2  
(4) A-2, B-1, C-3

51. If $\frac{x-y}{xy} = 5$ and $\frac{x+y}{xy} = 7$, then the value of ‘$x$’ is

(1) 1  
(2) $\frac{1}{2}$  
(3) $\frac{1}{3}$  
(4) $\frac{1}{6}$

52. If the points $(a, 2a)$, $(3a, 3a)$ and $(3, 1)$ are collinear then the value of ‘$a$’ is

(1) $-\frac{1}{3}$  
(2) $-\frac{2}{3}$  
(3) $-\frac{1}{2}$  
(4) $\frac{2}{3}$

53. A copper sphere of radius 3 cm is melted and recast into a right circular cone of height 3 cm. Then the radius of the base of the cone is

(1) 3 cm  
(2) 4 cm  
(3) 5 cm  
(4) 6 cm

54. From the adjacent figure $\triangle ABC$, $DE \parallel BC$ and $AD = \frac{1}{2} \ BD$. If $BC = 6$ cm then $DE$ is

(1) 1.5 cm  
(2) 2 cm  
(3) 3 cm  
(4) 4 cm

55. Which of the following statement is not correct?

(1) If $\alpha, \beta$ are the zeroes of the quadratic polynomial $x^2 - 2x + 1$, then $\alpha^3 + \beta^3 = 2$.

(2) If the pair of linear equations $4x + 5y = 9$ and $8x + ky = 18$ has infinitely many solutions, then $k = 10$.

(3) If $\tan \theta + \cot \theta = 5$, then $\tan^2 \theta + \cot^2 \theta = 23$.

(4) The line cosec $60^\circ \ x + \cos 45^\circ \ y = 4$ passing through the point $(\tan 60^\circ, \sec 45^\circ)$.

56. The solution of the line equation $\cos 30^\circ x + \sin 30^\circ y = 3$ is

A. $(2, 3)$  
B. $(0, 6)$  
C. $(2\sqrt{3}, 0)$  
D. $(0, 2\sqrt{3})$

(1) A  
(2) B and C  
(3) C and D  
(4) A and D
57. If two positive integers ‘a’ and ‘b’ are expressible in the form of \( a = p^3 q^2 \) and \( b = p^2 q^4 \), \( p \) and \( q \) being prime numbers, then LCM (a, b) is
(1) \( p^2 q^3 \)  (2) \( p^3 q^3 \)
(3) \( p^2 q^4 \)  (4) \( p^3 q^4 \)

58. If AP is a tangent to the circle with centre ‘O’ such that \( OP = 4 \text{ cm} \) and \( \angle OPA = 60^\circ \), then the radius of the circle is
(1) 2 cm  (2) \( 2\sqrt{2} \text{ cm} \)
(3) 3 cm  (4) \( 2\sqrt{3} \text{ cm} \)

59. 20 cards numbered 1, 2, 3 ....... 20 are put in a box and mixed thoroughly. One person draws a card from the box, the probability that the number on the card is divisible by 2 and 3 both is
(1) \( \frac{1}{10} \)  (2) \( \frac{3}{20} \)
(3) \( \frac{1}{5} \)  (4) \( \frac{3}{10} \)

60. If the mean of first ‘n’ natural numbers is \( \frac{6n}{11} \) then n =
(1) 9  (2) 10
(3) 11  (4) 12
61. Eric Hobsbawm, a historian, called the 20th century “the age of extremes”. This is not the reason for that statement.
   (1) Great Depression
   (2) Occurred two world wars
   (3) Women got their right to vote
   (4) Established colonies

62. Match Column – I with Column – II and select the correct answer using the codes given below the columns.

   Column – I       Column – II
   A. Bolsheviks    1. Mussolini
   B. Mensheviks    2. Hitler
   C. Nazism        3. Lenin
   D. Fascism       4. Kerensky

   (1) A-1, B-2, C-3, D-4    (2) A-4, B-3, C-2, D-1
   (3) A-3, B-4, C-2, D-1    (4) A-2, B-4, C-3, D-1

63. Arrange the following events in chronological order regard to Germany:
   i. Proclamation of the Weimar Republic.
   ii. Hitler becomes Chancellor of Germany.
   iii. Germany invades Poland.
   iv. Germany invades the USSR.

   (1) i, ii, iii, iv  (2) iv, iii, ii, i
   (3) i, iii, ii, iv  (4) ii, i, iii, iv

64. Which is **not** the main principle of United Nations Organization?
   (1) Preserve peace
   (2) Uphold human rights
   (3) Promote social progress
   (4) Achieve equality among different countries

65. The French were keen to develop Vietnam as an exporter of Rice. For this purpose they did not adopt this strategy.
   (1) Improving irrigation network
   (2) Encouraging landlords.
   (3) **Taken up of land reforms**
   (4) Facilitating marketing of agricultural produce like rice & rubber

66. Consider the following statements:
   A. In 1937 the Muslim League got only 4.4 percent of the total Muslim votes.
   B. In 1946 when elections were held again for the provincial and central assemblies, the Muslim League succeeded in winning the Muslim seats decisively.
   C. It was occurred by sensitive response of Congress Party with Muslims.

Which of the statements given above are correct?
   (1) A, B & C  (2) A & B only
   (3) B & C only  (4) A & C only

67. Match Column – I with Column – II and select the correct answer using the codes given below the columns.

   Column – I       Column – II
   A. Spain         1. Mexico
   B. Belgium       2. Congo
   C. Portugal      3. Brazil
   D. Britain       4. Nigeria

   (1) A-1, B-2, C-3, D-4    (2) A-4, B-3, C-2, D-1
   (3) A-2, B-3, C-1, D-4    (4) A-3, B-1, C-2, D-4
68. Arrange the following events in correct chronological order with regard to Indian National Movement:
A. Quit India Movement
B. Three member Cabinet Mission came to India
C. Direct Action Day
D. Cripps Mission came to India
(1) A, B, C, D (2) D, C, B, A
(3) D, A, B, C (4) A, D, B, C

69. Which statement is incorrect with regard to “Tebhaga” Movement?
(1) This agitation was started in Bengal.
(2) This movement was led by Provincial Kissan Sabha.
(3) Bigger Landlords participated in this movement.
(4) This movement about to tenancy reforms.

70. In March 1945, the US President, Harry Truman, said ‘we have emerged from this war as the most powerful nation in the world—the most powerful nation, perhaps, in all history’. This is not reason for this statement.
(1) Infact the Second World War helped USA grow out of its economic misery caused by the Great Depression.
(2) Far from the theatres of war, the industries and agriculture of USA prospered.
(3) This ensured full employment and high productivity in US during the Second World War.
(4) Only villages of USA had been completely destroyed.

71. The “Zollverein” is known as
(1) Tax  (2) Customs Union
(3) Administrative Union  (4) Religious Union

72. The following regional military and strategic alliances given below, is not related to U.S.A.
(1) NATO (2) SEATO
(3) CENTO  (4) WARSAW
73. Kudremukh is an important Iron ore mine of
   (1) Kerala  (2) Madhya Pradesh
   (3) Karnataka  (4) Andhra Pradesh

74. The ocean beds are rich in
   (1) Iron  (2) Gold
   (3) Copper  (4) Manganese

75. Which of the following is not true with reference to the climatic condition required for the cultivation of rice?
   (1) It requires high temperature i.e. above 25 °C.
   (2) It requires high humidity.
   (3) It requires annual rainfall above 100 cm.
   (4) It requires 210 frost free days.

76. Which of the following is the correct statement?
   I. The peninsular plateau is one of the most ancient land blocks on the earth's surface.
   II. One of the remarkable features of the peninsular plateau is black soils formed due to volcanic activity.
   (1) Only I is true.  (2) Only II is correct.
   (3) I and II are correct.
   (4) I and II are incorrect.

77. Which of the following is not correct regarding 'Jet Streams'?
   (1) Jet streams develop at about 35 °N.
   (2) These are fast flowing air currents in a narrow belt in the upper atmosphere.
   (3) These causes the neighbouring atmosphere cool.
   (4) These causes rain from clouds.

78. Which of the following statements is not true regarding India's climate?
   (1) The climate of India is described as the monsoon type.
   (2) India's climate has characteristics of tropical as well as subtropical climate.
   (3) The climate of India is strongly influenced by trade winds.
   (4) The North-East monsoons are responsible for most of the rainfall in India.

79. Which of the following lakes is a fresh water lake?
   (1) Dal  (2) Pulicat
   (3) Chilka  (4) Sambhar

80. Match the following:

<table>
<thead>
<tr>
<th>Column – I</th>
<th>Column – II</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Loo</td>
<td>1. Coromandel Coast</td>
</tr>
<tr>
<td>B. Mango Showers</td>
<td>2. Andhra Pradesh</td>
</tr>
<tr>
<td>C. Winter rainfall</td>
<td>3. Dry and hot winds</td>
</tr>
<tr>
<td>D. Upper air currents</td>
<td>4. Jet Streams</td>
</tr>
</tbody>
</table>

Which is the correct set?
(1) A-3, B-2, C-1, D-4  (2) A-1, B-2, C-3, D-4
(3) A-2, B-3, C-1, D-4  (4) A-4, B-3, C-2, D-1
81. Population Change in a place is
(1) \((\text{No. of births} + \text{No. of in migrants}) - (\text{No. of deaths} + \text{No. of out migrants})\)
(2) \((\text{No. of births} - \text{No. of in migrants}) - (\text{No. of deaths} + \text{No. of out migrants})\)
(3) \((\text{No. of births} + \text{No. of in migrants}) + (\text{No. of births} - \text{No. of out migrants})\)
(4) \((\text{No. of births} - \text{No. of in migrants}) - (\text{No. of births} - \text{No. of out migrants})\)

82. Statement I: Density of population in North-East states is less due to heavy rainfall.
Statement II: Density of population in Kerala is high due to flat surface fertile soil and abundant rainfall.
(1) Both I, II are true. (2) Both I, II are false.
(3) I is true, but II is false.
(4) I is false, but II is true.

83. Which is correct regarding Rural – Urban migration?
a. Migration mainly due to insufficient employment opportunities in rural areas.
b. Migration does not necessarily involve movement of all members of the family.
c. They have greater exposure to new ideas in cities and try to challenge older notions in village.
(1) a, b, c (2) b, c
(3) a, b (4) None of these

84. Among the following statements, which is not true?
(1) The portion of range found south of the Greater Himalayas is known as ‘Lesser Himalayas’.
(2) Himachal range is mainly composed of highly compressed rocks.
(3) The average elevation of Himachal range is about 6,100 mts. above MSL.
(4) The Pirpanjal and Mahabharata ranges form the important ranges of the Himachal.
85. With reference to the Fundamental Rights, consider the following statements:
(A) Indian Constitution guarantees Fundamental Rights to its citizens.
(B) Fundamental Rights are absolute and never suspended.
Which of the statements given above is/are correct?
(1) Both (A) & (B)  
(2) (A) only  
(3) (B) only  
(4) Neither (A) nor (B)

86. Match Column – I with Column – II and select the correct answer using the codes given below the columns.

<table>
<thead>
<tr>
<th>Column – I</th>
<th>Column – II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Party</td>
<td>State</td>
</tr>
<tr>
<td>A. SAD</td>
<td>1. Uttar Pradesh</td>
</tr>
<tr>
<td>B. DMK</td>
<td>2. Assam</td>
</tr>
<tr>
<td>C. AGP</td>
<td>3. Tamil Nadu</td>
</tr>
<tr>
<td>D. BLD</td>
<td>4. Punjab</td>
</tr>
</tbody>
</table>

(1) A-1, B-2, C-3, D-4  
(2) A-4, B-3, C-2, D-1  
(3) A-4, B-2, C-3, D-1  
(4) A-1, B-3, C-2, D-4

87. Which of the following statement is incorrect regarding with first general elections of India?
(1) Symbols were introduced.  
(2) Separate ballot boxes for each candidate.  
(3) Massive campaign to encourage the voters.  
(4) Only 10% of the population could vote in those elections.

88. With reference to democracy, consider the following statements:
(A) In a democracy, only leaders elected by people should rule the country.
(B) People have the freedom to express views, freedom to organize and freedom to protest. Which of the statement(s) given above is/are correct?
(1) Both (A) & (B)  
(2) (A) only  
(3) (B) only  
(4) Neither (A) nor (B)

89. Observe the map given below:

Identify the pointed States with their corresponding Social and Environment Movements and select the correct option using the codes given below.

(1) A - Narmada Bachao Andolan, B - Silent Valley Movement, C - Chipko Movement, D - Meira Paibi Movement  
(2) A - Silent Valley Movement, B - Chipko Movement, C - Narmada Bachao Andolan, D - Meira Paibi Movement  
(3) A - Silent Valley Movement, B - Narmada Bachao Andolan, C - Chipko Movement, D - Meira Paibi Movement  
(4) A - Chipko Movement, B - Narmada Bachao Andolan, C - Silent Valley Movement, D - Meira Paibi Movement
90. What type of information is not accessible to the citizen as per RTI?
   (1) The manner of executions of subsidy programmes, including amounts allocated.
   (2) The particulars of its organization, functions and duties.
   (3) The powers and duties of its officers and employees.
   (4) Endanger the life or physical safety of a person.

91. Observe the given ‘Logo’ and answer the question.

This ‘Logo’ represents to
   (1) United Nations Organisation
   (2) United Nations Children’s Fund
   (3) United Nation Educational, Scientific and Cultural Organisation
   (4) United Nations Human Rights Commission

92. Which of the following statement is correct regarding with “Coliation Government”?
   (1) Power shared among different organisations of Government.
   (2) Power shared among Governments at different levels.
   (3) Power shared by two or more political parties.
   (4) Power shared by different social groups.
93. For calculating Body Mass Index (BMI), weight of the person is divided by the
   (1) Square of the weight  
   (2) Square of the height  
   (3) Square root of the height  
   (4) Square of the sum of height and weight
Question Id: 93

94. In the rural areas, the unorganised sector mostly comprises of
   (i) Landless agricultural labourer.
   (ii) Garment makers.
   (iii) Street vendors.
   (iv) Sharecroppers and artisans.
   (1) (i) and (ii)  
   (2) (ii) and (iii)  
   (3) (iii) and (iv)  
   (4) (i) and (iv)
Question Id: 94

95. Terms of credit does not include
   (1) Interest rate  
   (2) Collateral  
   (3) Cheque  
   (4) Mode of repayment
Question Id: 95

96. Choose the wrong pair from given below.
   (1) Per capita income - World Bank
   (2) Human Development Index - UNDP
   (3) Per capita income US $ 12,600 and above - rich countries.
   (4) Per capita income US $ 1,035 and above - low countries
Question Id: 96

97. Which of the following are correct regarding WTO?
   (i) Its main aim is to liberalise international trade.
   (ii) It was started at the initiative of the developed countries.
   (iii) The rules of WTO are framed to favour the developing countries.
   (iv) It establishes rules regarding international trade.
   (1) Only (i), (ii) and (iv)  
   (2) Only (ii) and (iii)  
   (3) Only (iii) and (iv)  
   (4) All of these
Question Id: 97

98. Which of the following methods can be used by the government for a fair globalisation?
   (i) impose trade barriers.
   (ii) negotiate at the WTO for fairer rules.
   (iii) align with other developing countries.
   (iv) close its market for foreign trade.
   (1) Only (i) and (ii)  
   (2) Only (ii) and (iv)  
   (3) Only (i), (ii) and (iii)  
   (4) All of these
Question Id: 98

99. Which of the following is not correct relating to service sector?
   (1) All service sector activities are not growing equally well.
   (2) Service sector in India employs many different kinds of people.
   (3) 25% of people are engaged in service sector.
   (4) All the people who employed in service sector are earning high income.
Question Id: 99
Which of the following is not a feature of liberalisation?

a. Businesses are allowed to make decisions freely about what they wish to import or export.

b. Government removes restrictions from foreign trade.

c. MNCs are allowed to work in the country.

d. It establishes rules regarding international trade.

(1) Only a, b, d  
(2) Only b, c  
(3) Only c, d  
(4) All of these
Certified that we have thoroughly verified the question paper and answered the questions to upload its initial key in the website of the DGE for the convenience of the Students.

1. Mat — VV. DS. MOHANA KRISHNA
   SARKARA
   ZPHS, CHAGALLU
   5/11/19

2. Maths — N. RAMAKRISHNARAO
   SA (Maths)
   ZPHS, Jayathala
   5/11/19

3. Physics and Chemistry — I. D. SRINIVASA RAO
   SA (P.S)
   Z. P. H. School, Edava
   Aghini Palli (M.A)
   5/11/19

4. Biology — Y. Srinivasa Rao
   HM
   ZPHS, Poyyayyalam
   05/11/19

5. History, Politics — M. SRINIVAS
   ZPHS, Katrapadu
   05/11/19

6. Economics & Geography — M. Katalah
   OSR MCH School
   Muthyalampalli
   05/11/19