

# Climatology

1. Because of which one of the following factors, clouds do **not** precipitate in descents?
- A. Low pressure      B. Low humidity  
C. High wind velocity      D. High temperature

2. Which of the following statements characterize convectional rainfall?
- A. It occurs daily in the equatorial regions  
B. It is of very short duration  
C. It occurs through cumulo-nimbus clouds

Select the correct answer using the code given below:

- A. 1, 2 and 3      B. 1 and 3 only  
C. 2 and 3 only      D. 1 only

3. The Tornadoes are very strong tropical cyclones originating in:
- A. Carribean sea      B. China sea  
C. Arbian sea      D. Black sea

4. Match List-I with List-II and select the correct answer using the code given below the lists:

| <b>List-I</b><br>(Country) | <b>List-II</b><br>(Local wind) |
|----------------------------|--------------------------------|
| (a) Australia              | 1. Hurricane                   |
| (b) China                  | 2. Willy-Willy                 |
| (c) France                 | 3. Typhoon                     |
| (d) West Indies            | 4. Mistral                     |

**Codes:**

|    | (a) | (b) | (c) | (d) |
|----|-----|-----|-----|-----|
| A. | 2   | 3   | 4   | 1   |
| B. | 1   | 2   | 3   | 4   |
| C. | 1   | 3   | 2   | 4   |
| D. | 4   | 1   | 2   | 3   |

5. Which of the following statements is not true about doldrum?
- A. It is found across all longitudes.  
B. It is located astride the equator.  
C. It is a zone of feeble westerly winds.  
D. It is a high pressure belt.
6. Which of the following does not contribute to the origin of ocean currents?
- A. Rotation of the earth  
B. Differences in density of ocean water  
C. Wind direction  
D. Difference in temperature

7. Consider the following statements:

**Assertion (A) :** The thickness of the troposphere is the greatest at the equator.

**Reason (R) :** Near the equator insolation is high and convection currents are strong.

- A. Both A and R are true and R is the correct explanation of A  
B. Both A and R are true but R is not the correct explanation of A  
C. A is true but R is false  
D. A is false but R is true

8. Study the following statements regarding summer solstice and select the correct answer from the code given below:

1. The sun is on the cancer  
2. The sun is on the capricorn  
3. The day is longest and night is shortest in the Nothern Hemisphere.  
4. The day is longest and night is shortest in the Southern Hemisphere.

**Codes:**

- A. 1 and 2 are correct  
B. 2 and 4 are correct  
C. 1 and 3 are correct  
D. 2 and 3 are correct

9. Consider the following statements:

**Assertion (A) :** Isotherms do not run parallel to each other.

**Reason (R) :** The variation of temperature in any area is not orderly.

Select the correct answer from the code below.

**Codes:**

- A. A is true R is false  
B. Both A and R are false  
C. R is true A is false  
D. Both A and R are true

10. Dry warm summers are found in:

- A. China Sea      B. Mediterranean Sea  
C. Red Sea      D. Arabain Sea

11. Hot dry winds blowing in Sahara are known as:

- A. Fohn      B. Chinook  
C. Mistral      D. Sirocco

12. In which part of India is found a Amw type climate as per Koeppen's classification?  
 A. S.W. Coast B. N.W. Coast  
 C. N.E. Coast D. S.E. Coast
13. Chinook winds descend on the eastern slopes of rocky mountains their temperature is raised according to:  
 A. Normal lapse rate  
 B. Dry adiabatic rate  
 C. Wet adiabatic rate  
 D. Both the normal lapse rate and dry adiabatic rate
14. The ratio between actual humidity of air and its maximum moisture holding capacity at a given temperature is termed as:  
 A. Absolute humidity B. Relative humidity  
 C. Specific humidity D. Dew Point
15. A planet's farthest points in its orbit from the sun is known as:  
 A. Apogee B. Perigee  
 C. Aphelion D. Perihelion
16. Which of the following order of the structure of the atmosphere is correct?  
 A. Stratosphere, Troposphere, Thermosphere, Mesosphere  
 B. Troposphere, Stratosphere, Mesosphere, Thermosphere  
 C. Troposphere, Mesosphere, Ozonosphere, Ionosphere  
 D. Troposphere, Thermosphere, Mesosphere, Exosphere
17. In Koppen's climatic classification 'AS' stands for which region of India?  
 A. Western desert B. Tamil Nadu coast  
 C. Kerala coast D. Eastern Himalayas
18. The movement of I.C.C. largely governs the rainfall pattern in:  
 A. Equatorial climate.  
 B. Mediterranean climate.  
 C. Monsoon climate.  
 D. Western maritime climate.
19. A majority of arboreal fauna, few grazing lands, carnivorous animals and abundant aquatic life are characteristic of:  
 A. Wet-dry tropics B. Rainy tropics.  
 C. Monsoon lands D. Tropical desert
20. Match List-I with List-II and select the correct answer using the code given below the lists:

**List-I**

- (a) Chinook  
 (b) Sirocco  
 (c) Brickfielder  
 (d) Mistral

**List-II**

1. U.S.A.  
 2. Australia  
 3. Europe  
 4. Africa

**Codes:**

|    | (a) | (b) | (c) | (d) |
|----|-----|-----|-----|-----|
| A. | 1   | 4   | 2   | 3   |
| B. | 2   | 3   | 4   | 1   |
| C. | 3   | 2   | 1   | 4   |
| D. | 4   | 1   | 3   | 2   |

21. Consider the following statements:

**Assertion (A) :** The mediterranean region receives rainfall during winter.

**Reason (R) :** It lies between the westerlies and the trade winds.

Select the correct answer from the code given below.

**Codes:**

- A. Both A and R are true and R is the correct explanation of A  
 B. Both A and R are true but R is not the correct explanation of A  
 C. A is true but R is false  
 D. A is false but R is true

22. Study the following statements:

**Assertion (A) :** The coastal North America receives rainfall through out the year.

**Reason (R) :** It is influenced by onshore winds for most of the year

Select the correct answer from the code given below.

**Codes:**

- A. Both A and R are true and R is the correct explanation of A  
 B. Both A and R are true but R is not the correct explanation of A  
 C. A is true but R is false  
 D. A is false but R is true

23. Which one of the following winds flows across the Alps mountain?

- A. Dust Devils B. Zonda  
 C. Fohn D. Santa Ana

24. Which climate is represented by the following data?

|                   | Jan. | April | July | Oct. |
|-------------------|------|-------|------|------|
| AV. Max. Temp. °C | 8.0  | 13.5  | 24.4 | 17.2 |
| AV. Rainfall mm   | 8.6  | 5.0   | 1.0  | 11.0 |

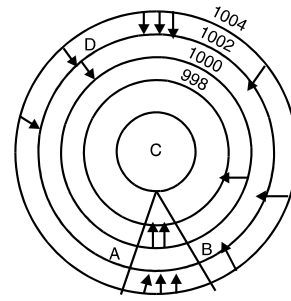
- A. China type B. Mediterranean type  
 C. Monsoon type D. Sudan type

25. Central chile of south America is an example of:

- A. Equatorial Region  
 B. Mediterranean Region  
 C. Savanna Region  
 D. Taiga Region

26. Koppens 'CS' dry summer subtropical climate is found in:
- Mediterranean deserts
  - Mid Latitude deserts
  - Mid Latitude coniferous forest
  - Sub tropical deserts
27. In which of the following climate regions rainfall is affected due to southern oscillations:
- Sudan type
  - Monsoon type
  - N. W. European type
  - Equatorial type
28. Westerlies blow all the year round..... rainfall maximum in winters.....sometimes snowfall as well as ports are never frozen, frosts may occur on cold nights, distinct seasons, comfortable climate. Which of the following regions do these characteristics apply to:
- Western Europe
  - South-East Asia
  - North Latin America
  - South-East Australia
29. The category of sources which meets the largest requirement of commercial energy in the world at present is:
- Solar energy, geothermal and wind power
  - Dung and vegetation waste
  - Fossil fuel
  - Hydro power
30. Which of the following winds blows down the leeward slope of the northern Alps in Switzerland?
- Fohn
  - Sirocco
  - Mistral
  - Chinook
31. In which of the following natural regions dairy industry is best developed?
- Monsoon Region
  - N.E. Prairie Region
  - Mediterranean Region
  - Savanna Region
32. Which one of the following is not a factor in occasioning summer monsoon precipitation in India?
- North Atlantic oscillation
  - Southern oscillation
  - I.T.C.
  - Jet stream
33. Who of the following have divided India into climatic regions based on range of temperature and amount of rainfall?
- Koppen
  - Stamp and Kendrew
  - Trewartha
  - Thornthwaite

34. In the diagram the warm front lies at:



35. Consider the following statements:

**Assertion (A) :** There is no atmosphere on moon.

**Reason (R) :** Only one part of moon can be seen from the earth

Select the correct answer from the code given below.

**Codes:**

- Both A and R are true and R is the correct explanation of A
  - Both A and R are true but R is not correct explanation of A
  - A is true but R is false
  - A is false but R is true
36. 'Halo' around the sun or moon are produced due to:
- refraction of light by ice crystals.
  - refraction of light by water droplets.
  - diffraction of light by ice crystals.
  - diffraction of light by water crystals.
37. Which of the following pairs is correctly matched?
- Monsoon Region — Heavy rainfall throughout the year
  - Mediterranean Region — Summer rain
  - Desert Region — Winter rain
  - Equatorial Region — Afternoon thunder showers
38. Which one of the following notations has been used by G.T. Trewartha for the climate of Ganga plain?
- CA'w
  - Caw
  - CB'w
  - Cwg
39. Relative humidity of the atmosphere is measured by:
- Hydrometer
  - Hygrometer
  - Lactometer
  - Clinometer
40. The ozone layer lies in:
- Ionosphere
  - Photosphere
  - Stratosphere
  - Troposphere
41. **Assertion (A) :** The Atmosphere receives most of the heat from the earth's surface.
- Reason (R) :** The conversion from short wave solar energy to long wave terrestrial energy takes place at the earth's surface.

- A. Both A and R are true and R is the correct explanation of A  
 B. Both A and R are true but R is not the correct explanation of A  
 C. A is true but R is false  
 D. A is false but R is true
42. In which atmospheric layer are observed, two contrasting trends of temperature. (increase followed by decrease with height).  
 A. Troposphere                      B. Mesosphere  
 C. Ionosphere                      D. Stratosphere
43. Which one of the following persons has used evapotranspiration for the classification of the world climate?  
 A. Koppen                      B. Trewartha  
 C. Thorn waite                      D. Kendrew
44. The weather map of India does not show.  
 A. cloudiness                      B. wind direction  
 C. Isobars                      D. Isotherms
45. Study the following statements:  
**Assertion (A) :** There is a close correlation between moisture supply and forests.  
**Reason (R) :** Most of the wet regions of the world are tree covered.  
 A. Both A and R are true and R is the correct explanation of A  
 B. Both A and R are true but R is not the correct explanation of A  
 C. A is true but R is false  
 D. A is false but R is true
46. Winter rains in Uttar Pradesh are associated with:  
 A. Retreating monsoons  
 B. Thunder storms  
 C. Temperate cyclones  
 D. Local convection
47. The most colourful evening clouds are:  
 A. cumulus                      B. stratus  
 C. cirrus                      D. nimbus
48. For the year as a whole the anomalies: are negative over the continents from  
 A. about 30° latitude towards the pole  
 B. about 40° latitude towards the pole  
 C. about 50° latitude towards the pole  
 D. about 60° latitude towards the pole
49. Which one of the following climatic symbols has been used by C.W. Thornthwaite to denote the climate of the Southern Ganga Plain.  
 A. AA'r                      B. BA'w  
 C. CA'w                      D. CB'w
50. Which one of the following is a correct sequence of electromagnetic radiation from the sun from the shortest wave length to the longest wavelength?  
 A. Visible light rays, ultraviolet rays, radiowaves, infrared rays.  
 B. Ultraviolet rays, visible light-rays, infrared rays, radiowaves.  
 C. Ultraviolet rays, infrared rays, radio waves, visible light.  
 D. Infrared rays, visible light rays, radio waves, ultraviolet rays.
51. Who of the following introduced the idea of precipitation evaporation ratio in climatic classification?  
 A. Koppen                      B. Thornwaite  
 C. Critchfield                      D. Strahler
52. The layer of the atmosphere which contains water vapour and dust particles is called?  
 A. Stratosphere                      B. Troposphere  
 C. Ionosphere                      D. Mesosphere
53. The relatively moderate climate of the British isles is explained by:  
 A. Labrador current                      B. Kuro-siwo  
 C. Gulf stream                      D. North Atlantic drift
54. EL-Nino flows along the coast of:  
 A. Brazil                      B. Peru  
 C. Alaska                      D. Western Australia
55. The hot and dry local winds which blow in the Saharan region are known as:  
 A. Fohn                      B. Chinook  
 C. Mistral                      D. Sirocco
56. Which type of rainfall does take place in the coastal areas of West Bengal and Odisha in April-May?  
 A. Orographic                      B. Cyclone  
 C. Convectional                      D. Frontal
57. Mistral is:  
 A. Benign wind.  
 B. Beneficial to the orchard keepers.  
 C. A very cold and dry wind with high velocity.  
 D. Channeled through the Rhine valley
58. Chinook blows:  
 A. down the east slopes of the Rockies  
 B. down the west slope of the Andese  
 C. down the east slope of the Andese  
 D. down the west slope of Rockies
59. Chinook is a:  
 A. devastating wind  
 B. hot and dry wind  
 C. cold and dry wind  
 D. all of the above

60. Fohn is located in:  
 A. The Alps                      B. The Atlas  
 C. The Andes                    D. The Rockies
61. The areas affected by loo comprise of:  
 A. Pakistan  
 B. Afghanistan  
 C. Plains of Northern India  
 D. All of the above
62. Local winds develop:  
 A. as a result of local differences in pressure  
 B. in the lowest levels of the troposphere  
 C. all of the above  
 D. None of these
63. The valley breeze blows:  
 A. along the slope              B. at night  
 C. during day time              D. Both (A) and (C)
64. The land breeze blows:  
 A. at night  
 B. during day  
 C. during both day and night  
 D. None of the above
65. Which of the South Asian countries does not get rains from monsoon?  
 A. Bhutan                      B. Pakistan  
 C. Bangladesh                D. Burma
66. Among the current theories of origin of the monsoon, the widely accepted theory is given by:  
 A. Fohn                      B. Coriolis  
 C. Haggard                    D. None of these
67. Monsoons are the:  
 A. periodic winds.  
 B. best examples of large scale modification of the planetary wind systems  
 C. Both (A) and (B)  
 D. None of these
68. Land and sea breeze are example of:  
 A. parochial winds              B. local winds  
 C. periodic winds                D. None of these
69. The westerlies are the best developed between:  
 A. 20° and 45° North      B. 45° and 70° South  
 C. 40° and 65° South      D. 30° and 45° South
70. The trade winds in the northern and southern hemisphere are known as:  
 A. North eastern and South eastern trades respectively  
 B. North western and south western trades respectively  
 C. North Western and south western trades respectively  
 D. North Eastern trades and south western trade respectively
71. The trade winds due to coriolis force are deflected:  
 A. to the right in the Northern Hemisphere  
 B. to the right in the Southern Hemisphere and to the left in the Northern Hemisphere  
 C. to the right in the Southern Hemisphere  
 D. none of the above
72. The trade winds are:  
 A. prevailing winds              B. planetary winds  
 C. periodic winds                D. Both (A) and (B)
73. The westerly winds are the:  
 A. planetary winds              B. trade winds  
 C. prevailing winds              D. Both (A) and (B)
74. The direction and speed of wind are controlled by:  
 A. the pressure gradient force  
 B. gravity  
 C. the coriolis effect  
 D. all of the above
75. The vertical or nearly vertical movement of air referred to as:  
 A. wind                      B. air current  
 C. planetary winds              D. global winds
76. The horizontal movement of the air is called:  
 A. wind  
 B. air current  
 C. Both (A) and (B)  
 D. None of the above
77. Formation of sub-tropical high pressure belts are caused by:  
 A. Thermal mechanism  
 B. Dynamic control  
 C. Subsidence of cooled air  
 D. Both B and C
78. Horse Latitudes are:  
 A. belt of calm conditions  
 B. characterised by variable and feeble wind  
 C. high pressure belt  
 D. all of the above
79. Lowest temperatures are found:  
 A. over the tropics  
 B. over the poles  
 C. over the equator  
 D. None of the above
80. On the earth's surface. There are in all—pressure belts.  
 A. 5                              B. 6  
 C. 7                              D. 8
81. The density of air depends upon:  
 A. temperature                      B. amount of water  
 C. gravity                              D. All of the above

82. Distribution of atmospheric pressure is not uniform over the earth's surface. It varies:  
 A. vertically  
 B. horizontally  
 C. Both (A) and (B)  
 D. None of these
83. For the year as a whole the anomalies are positive towards:  
 A. the tropic                      B. the equator  
 C. the poles                      D. None of these
84. The smallest anomalies of temperature occur in the:  
 A. Southern Hemisphere  
 B. Northern Hemisphere  
 C. Eastern Hemisphere  
 D. Both (B) and (C)
85. The atmosphere is heated:  
 A. more by terrestrial radiation  
 B. more by incoming solar radiation  
 C. less by terrestrial radiation  
 D. None of these
86. The reflected amount of radiation is called:  
 A. the heat balance of the earth  
 B. the albedo of the earth  
 C. the heat budget of the earth  
 D. Both (A) and (C)
87. Winds and ocean currents are produced:  
 A. due to radiation  
 B. due to imbalance of heat  
 C. due to temperature  
 D. due to earth's movement
88. The atmosphere is heated:  
 A. mainly from above  
 B. mainly from below  
 C. mainly from space  
 D. None of these
89. Distribution of temperature over the earth:  
 A. is uniform  
 B. is not uniform  
 C. varies horizontally as well as vertically  
 D. Both (B) and (C)
90. Conduction is important only in the:  
 A. upper layer of the atmosphere  
 B. lower layer of the atmosphere  
 C. middle layer of the atmosphere  
 D. Both (A) and (B)
91. In all latitudes below 40°:  
 A. more solar radiation is received than is lost of space by the earth  
 B. lesser solar radiation is received than is lost of space  
 C. gain and loss in equal  
 D. None of these
92. Heat budget is:  
 A. the balance of incoming and out going radiation  
 B. the account of only incoming radiation  
 C. the account of incoming and out going radiation  
 D. None of these
93. Temperature contrasts between the continents and the oceans are:  
 A. greater during winter than summer  
 B. minimum during rainy season  
 C. greater during summer than during winter  
 D. None of these
94. In many valleys, settlements and cultivation are concentrated:  
 A. on the western slopes  
 B. on the eastern slopes  
 C. on the southern slopes  
 D. on the northern slopes
95. For most places on the earth.....represent the seasonal extremes of temperature.  
 A. December and July  
 B. December and June  
 C. January and August  
 D. January and July
96. A wide-spacing of the isotherms indicates:  
 A. a slow change in temperature  
 B. a rapid change in pressure  
 C. a rapid change in temperature  
 D. a slow change in pressure
97. The largest anomalies of temperature occur in the:  
 A. Northern Hemisphere  
 B. Southern Hemisphere  
 C. Oceans  
 D. Land
98. Isotherm generally end east-west because of:  
 A. same latitude                      B. easy passage  
 C. same longitude                      D. none of these
99. Isotherm shift north and south from season to season this is due to:  
 A. position of sun with respect to earth  
 B. earth's movement  
 C. position of earth with respect to sun  
 D. None of these
100. In summers and winters isotherms swerve much north or south over:  
 A. Asian landmass  
 B. Atlantic Ocean  
 C. Australia  
 D. Indian Ocean

**ANSWERS**

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

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