



GEOGRAPHY

BOOKS - FULL MARKS GEOGRAPHY (HINGLISH)

SOLAR RADIATION, HEAT BALANCE AND TEMPERATURE

Ncert Textbook Questions With Answers

1. The sun is directly overhead at noon on 21st June at :

A. The equator

B. $23.5^{\circ} S$

C. $23.5^{\circ} N$

D. $66.5^{\circ} N$

Answer: A



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2. In which one of the following cities, are the days the longest?

A. Thiruvananthapuram

B. Chandigarh

C. Hyderabad

D. Nagpur

Answer: A



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3. The atmosphere is mainly heated by the :

A. Short wave solar radiation

B. Reflected solar radiation

C. Long wave terrestrial radiation

D. Scattered solar radiation

Answer: C



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4. Make correct pairs from the following the columns.

(a) Insolation	(i) The difference between the mean temperature of the warmest and the coldest months
(b) Albedo	(ii) The lines joining the places of equal temperature
(c) Isotherm	(iii) The incoming solar radiation
(d) Annual range	(iv) The percentage of visible light reflected by an object.



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5. The main reason that the earth experiences highest temperature in the subtropics in the northern hemisphere rather than at the equator is :

A. Subtropical areas tend to have less cloud cover than equatorial areas.

B. Subtropical areas have longer day hours in the summer than the equatorial.

C. Subtropical areas have an enhanced "green house effect" compared to equatorial areas.

D. Subtropical areas are nearer to the oceanic areas than the equatorial locations.

Answer: B



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6. How does the unequal distribution of heat over the planet earth in space and time cause variations in weather and climate?



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7. What are the factors that control temperature distribution on the surface of the

earth?



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8. In India, why is the day temperature maximum in May and why not after the summer solstice?



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9. Why is the annual range of temperature high in the Siberian plains?



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10. How do the latitude and the tilt in the axis of rotation of the earth affect the amount of radiation received at the earth's surface?



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11. Discuss the processes through which the earth-atmosphere system maintains heat balance.



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12. Compare the global distribution of temperature in January over the northern and the southern hemisphere of the earth.



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Additional Questions With Answers Mcq

1. What percent of sunrays that is received by the upper layer of the atmosphere reach the

earth surface?

A. 43 %

B. 51 %

C. 53 %

D. 40 %

Answer: B



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2. The process of heating up of land through horizontal movement of heat is called :

A. Conduction

B. Convection

C. Advection

D. Air drainage

Answer: A



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3. With increase in height the temperature decreases at a normal rate. It is called :

- A. Air drainage
- B. Earth radiation
- C. Normal lapse rate
- D. Inversion of temperature

Answer: C



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4. Being heavy and dense, the cold air acts almost like water and moves down the slope to pile up deeply in pockets and valley bottoms with warm air above. This is called what?

- A. Air drainage
- B. Earth radiation
- C. Normal lapse rate
- D. Inversion of temperature

Answer: A



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5. The air in contact with the earth rises vertically on heating in the form of currents and further transmits the heat of the atmosphere. This process of vertical heating of the atmosphere is called what?

A. Conduction

B. Convection

C. Advection

D. Air drainage

Answer: B



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6. What is normal lapse rate at 1000 metre?

A. 4 degree celsius

B. 2 degree celsius

C. 1 degree celsius

D. 6.5 degree celsius

Answer: D



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7. On 4th July, the earth is farthest from sun.

What is its distance?

A. 152 million km

B. 147 million km

C. 148 million km

D. 198 million km

Answer: A



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8. On 3rd January, the earth is nearest from sun. What is its distance?

A. 152 million km

B. 147 million km

C. 148 million km

D. 198 million km

Answer: B



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9. Which continent has highest temperature range?

A. Asia

B. Australia

C. Africa

D. Eurasia

Answer: D



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10. Which of the following has longest day and nights?

A. Poles

B. Equator

C. Tropic of Cancer

D. Tropic of Capricorn

Answer: A



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11. Which of the following causes inversion of temperature in mountainous regions?

- A. Due to air drainage
- B. Due to dust particles
- C. Due to gravitation
- D. Due to water vapours

Answer: A



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Additional Questions With Answer Very Short Answer Type Questions

1. What factors cause variation in insolation?



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2. What is aphelion?



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3. What is perihelion?



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4. What does Plank's law state?



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5. What factors affect the temperature of a place?



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6. What is terrestrial radiation?



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7. What are the causes behind loo in tropical regions?



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8. Why does sun look red during rising and setting and why does sky look blue?



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9. How does some amount of energy is reflected to the atmosphere ? Or what is albedo?



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10. How do sunrays while passing through atmosphere gets absorbed?



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11. Atmosphere gets heated up indirectly by terrestrial radiation and not directly by sunrays. Explain.



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12. What is meant by insolation?



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13. Differentiate between Perihelion and Aphelion.



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14. Why the annual insolation received by the earth on 3rd January is more than that of 4th July?



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Additional Questions With Answer Short Answer Type Questions

1. What is inversion of temperature? When and in what regions does it take place?



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2. How does the energy received in upper layer of the atmosphere keep changing at different times of the year?



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3. How does the amount of insolation received depends on the angle of inclination of the rays?



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4. Explain about spatial distribution of insolation on the earth's surface.



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5. Explain the distribution of temperature in July.



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6. Explain the factors affecting insolation at the surface of earth.



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7. Distribution of temperature in the month of July.



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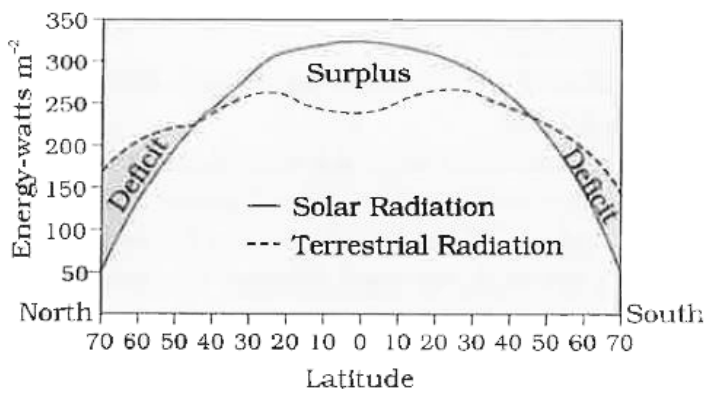
8. Explain the distribution of temperature in January.



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Additional Questions With Answer Diagram Based Question

1. Study the diagram given below and answer the questions that follow :

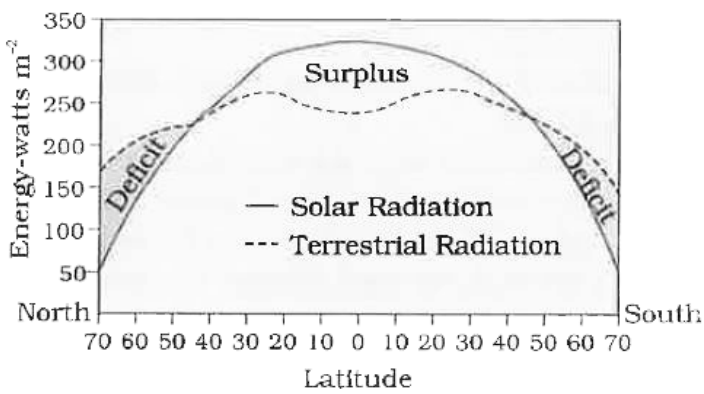


What does the diagram depict?



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2. Study the diagram given below and answer the questions that follow :



What does the diagram show?



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Additional Questions With Answer Long Answer Type Questions

1. Explain about inversion of temperature.



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2. Explain the heating and the cooling mechanism of atmosphere.

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3. Discuss the process through which earth and the atmosphere system maintain heat balance.

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Additional Questions With Answer Hots Question

1. Explain about heat budget of the earth.



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Additional Questions With Answer Map Skill

1. On an outline map of the world, locate the distribution of surface air temperature in the month of January.



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