

2023

GEOGRAPHY

Paper : GEOHC3056

(Climatology)

Full Marks : 60

Pass Marks : 24

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Choose the correct answer from the following (any five) : 1×5=5

(a) Which is the coldest layer of the earth's atmosphere?

(i) Mesosphere

(ii) Stratosphere

(iii) Thermosphere

(iv) Troposphere

(2)

(b) Which of the following belts is called 'Doldrum'?

- (i) Equatorial low-pressure belt
- (ii) Sub-tropical high-pressure belt
- (iii) Sub-polar low-pressure belt
- (iv) Polar high-pressure belt

(c) Winds are

- (i) vertical air movement
- (ii) horizontal air movement
- (iii) sluggish air movement
- (iv) movements of velocity

(d) In which layer, the formation of clouds is mostly found?

- (i) Stratosphere
- (ii) Mesosphere
- (iii) Ionosphere
- (iv) Troposphere

(Continued)

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(3)

(e) Which one of the following is not a permanent wind system?

- (i) Trade wind
- (ii) Westerlies
- (iii) Easterlies
- (iv) Jet stream

(f) What is the approximate weight of atmospheric pressure on our body?

- (i) About one tonne
- (ii) About two tonnes
- (iii) About three tonnes
- (iv) About four tonnes

(g) Name the force generated by the rotation of the earth.

- (i) Endogenetic force
- (ii) Coriolis force
- (iii) Exogenetic force
- (iv) Centripetal force

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(Turn Over)

(h) What term is used for westerlies in 40°-50° south latitudes?

- (i) Horse latitudes
- (ii) Doldrums
- (iii) Roaring Forties
- (iv) Chinook winds

(i) Name the natural region which gets rainfall in winter due to westerlies.

- (i) Equatorial region
- (ii) Mediterranean region
- (iii) Temperate region
- (iv) Tundra region

(j) The area on the globe that lies between the Tropic of Cancer and the Tropic of Capricorn is called

- (i) frigid zone
- (ii) north temperate zone
- (iii) south temperate zone
- (iv) torrid zone

2. Answer the following questions (any five) :

2×5=10

- (a) What do you mean by normal lapse rate?
- (b) What is jet stream?
- (c) Mention two controlling factors of horizontal distribution of temperature.
- (d) What is pressure belt?
- (e) Mention two important characteristics of ozonosphere.
- (f) What do you mean by westerlies?
- (g) What is anticyclone?

3. Answer any five of the following questions :

5×5=25

- (a) Write briefly about the inversion of temperature.
- (b) Write a short note on fronts with its source region, types and associated weather.
- (c) Explain the processes and forms of condensation.
- (d) Write a brief note on tropical cyclone.

- (e) Discuss about the salient features of the troposphere.
- (f) Classify climate as forwarded by Köppen.
- (g) What is La Niña? What are its effects?
- (h) Write briefly about the distribution processes and heating and cooling of the atmosphere.
- (i) Write briefly about the mechanism of monsoon.

4. Answer any *two* of the following questions :
10×2=20

- (a) Discuss, in detail, about the composition of the atmosphere.
- (b) What do you mean by air masses? Explain its origin, classification and characteristics.
- (c) Discuss, in detail, about the planetary wind system.
- (d) Discuss, with a neat diagram, about the heat budget of the earth.

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