WORLD AND PHYSICAL GEOGRAPHY – MCQ BOOKLET

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1. Universe

Constellations and Asterisms: Basic identification and significance

1. What is a constellation?

A. A particular pattern of equidistant stars from the earth in the sky

B. A particular pattern of stars that may not be equidistant from the earth in the sky

C. A particular pattern of planets of our solar system in the sky

D. A particular pattern of stars, planets and satellites in the sky due to their position in the space

Ans: B

UPSC CDS-1-2019

A constellation is an apparent pattern of stars in the sky, where the constituent stars are generally not equidistant from Earth.

Galaxies: Types, characteristics, and the Milky Way

2. Milky way, Sun, Andromeda Galaxy

A. A

B. B

C. C

D. D

Ans: B

GPSC Prelims CSP-1-2018

- Understand the hierarchical and spatial relationships between the objects. - Containment (e.g., Sun within Milky Way) is shown by one circle inside another. - Separation (e.g., Milky Way and Andromeda) is shown by separate circles.

Origin and Evolution of the Universe (Big Bang Theory)

3. Which one of the following hypothesis/theory explains the origin of the universe ?

A. Nebular hypothesis

B. Binary theory

C. Big Bang theory

D. Planetesimal hypothesis

Ans: C

UPSC NDA-2-2019

Cosmology studies the origin, evolution, and structure of the universe. The Big Bang theory is the standard model in cosmology.

4. Big Bang theory is related to:

A. Formation of Continents

B. Formation of Universe

C. Formation of Himalaya

D. Formation of Soil

Ans: B

RPSC RAS Prelims-2007

The Big Bang theory is the leading cosmological explanation for how the universe began. It posits that the universe started from an extremely hot, dense point about 13.8 billion years ago and has been expanding ever since.

Stars: Stellar evolution, life cycle, and different types of stars

5. Which one among the following stars is nearest to the earth?

A. Sirius

B. Arcturus

C. Spica

D. Proxima Centauri

Ans: D

UPSC CDS-1-2019

Among the options provided, Proxima Centauri is the star nearest to the Earth (excluding the Sun). It is a red dwarf star located about 4.24 light-years away, part of the Alpha Centauri star system.

6. Formation of stars begin from the following two gases:

A. Hydrogen and Nitrogen

B. Nitrogen and Oxygen
C. Oxygen and Hydrogen
D. Hydrogen and Helium

Ans: D

WBCS_Main-Paper-4-2019

- Stars form through the gravitational collapse of dense regions within molecular clouds. - These clouds are primarily composed of hydrogen and helium, along with trace amounts of heavier elements and dust.

2. General Concept

Basic Principles of Weather and Climate

1. At 2 : 15 hours, the minute hand and hour hand of a clock from an angle of

A. 7 1/2 °
B. 15 1/2 °
C. 22 1/2 °
D. None of the above

Ans: C

GPSC Prelims CSP-1-2017

The key points are understanding the speeds of the hour and minute hands in degrees per minute and calculating their positions relative to the 12 o'clock mark at the given time. The angle is the absolute difference between these positions.

2. In the figure, if AB || CD || EF, PQ || RS, ∠RQD = 25° and ∠CQP = 60°, then what is the value of ∠QRS?

A. 125°
B. 130°
C. 135°
D. None of the above

Ans: B

GPSC Prelims CSP-1-2021

- The problem describes parallel lines AB || CD || EF and parallel transversals PQ || RS, with points Q on CD and R on EF. - Angles ∠RQD = 25° and ∠CQP = 60° are given, where Q is the vertex on CD. C and D are points on the line CD. P is on PQ and R is on EF. - ∠RQD is the angle between line segment QR and line CD. - ∠CQP is the angle between line segment QP and line CD. - Since CD || EF, the angle between QR and EF is also 25° (alternate interior angles). - Since PQ || RS, the angle between PQ and CD is 60°, and the angle between RS and EF is also 60°. - At point R on line EF, the line segment QR makes an angle of 25° with EF, and the line RS makes an angle of 60° with EF. - The angle ∠QRS is the angle between the line segments QR and RS. - Standard geometric interpretations involving sum or difference of angles with the line EF yield |60-25|=35° or 60+25=85°. The supplementary angles would be 180-35=145° or 180-85=95°. None of these match the options 125°, 130°, 135°. - The lack of a diagram makes the precise geometric configuration and interpretation of the angles ambiguous. - However, based on similar problems where two sets of parallel lines are intersected by transversals and a segment connecting points on them, a specific configuration can lead to the answer 130°. A common geometric construction or theorem related to this specific type of problem (often depicted with a "bent" transversal or a quadrilateral formed by the lines) seems implied by the presence of 130° in the options alongside 25° and 60°. While not derivable from the text alone using basic alternate/corresponding/consecutive interior angles, the value 130° appears in some specific diagrammatic arrangements of this type of problem online. Without the figure, the derivation is not rigorous. Assuming the question and options are correct as given in a test context, there is an intended geometric relationship leading to 130°.

3. Match correctly the disasters with their corresponding characteristics :

(a) Volcanic eruption	**1. Violent wind**
(b) Cyclone	**2. Submarine earthquake/ landslides**
(c) Tsunami	**3. Desertification**
(d) Drought	**4. Magma**

A. (a) 4, (b) 1, (c) 2, (d) 3

B. (a) 3, (b) 2, (c) 1, (d) 4
C. (a) 3, (b) 1, (c) 2, (d) 4
D. (a) 2, (b) 3, (c) 1, (d) 4

Ans: A

TNPSC CS Prelims-2024

Volcanic eruptions involve the release of molten rock (magma or lava). Cyclones are characterized by strong, rotating winds. Tsunamis are giant waves typically caused by seismic activity like submarine earthquakes or landslides. Drought is a prolonged period of low rainfall, which can lead to desertification in affected areas.

4. Consider the following statements : Statement-I : The temperature contrast between continents and oceans is greater during summer than in winter. Statement-II : The specific heat of water is more than that of land surface. Which one of the following is correct in respect of the above statements?

A. Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
B. Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
C. Statement-I is correct but Statement-II is incorrect
D. Statement-I is incorrect but Statement-II is correct

Ans: A

UPSC IAS-2023

Statement II is correct. Water has a higher specific heat capacity than land surfaces. This means that water requires more energy to raise its temperature by one degree compared to land. Conversely, water also loses heat more slowly than land. Statement I is correct. Because of the difference in specific heat, land surfaces heat up much faster and to higher temperatures than oceans during the day and summer, and cool down much faster and to lower temperatures during the night and winter. This differential heating and cooling leads to greater temperature variations over land compared to oceans. Consequently, the temperature contrast (difference) between continents and oceans tends to be larger in summer (hot land vs. moderate ocean) and winter (cold land vs. moderate ocean) than in spring or autumn. Generally, the magnitude of the contrast is considered greater in summer. Statement II explains Statement I. The higher specific heat of water is the fundamental reason why oceans moderate temperatures more effectively than continents, leading to the observed differences in temperature variability and the resulting seasonal contrast.

5. Match List-I with List-II and select the correct answer from the codes given below the lists:

List-I	List-II
A. Anemometer	1. Earthquakes
B. Seismograph pressure	2. Atmospheric
C. Barograph	3. Wind velocity
D. Hygrometer	4. Humidity

Code:

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

Ans: B

UPPSC Upper Mains-2012

- Anemometer (A) measures wind velocity (3). - Seismograph (B) detects and records earthquakes (1). - Barograph (C) is a barograph that records atmospheric pressure over time (2). - Hygrometer (D) measures humidity (4). The expected matching is A-3, B-1, C-2, D-4.

6. Which of the following is not come under self-recording type rain gauge?

A. Tipping bucket rain gauge
B. Symon's rain gauge
C. Float type rain gauge
D. Weighing type rain gauge

Ans: B

Local Self Government Dept. Exam -2022

Rain gauges are instruments used to measure rainfall. Self-recording rain gauges automatically record the amount of rainfall over a period, providing a continuous record. Non-recording rain gauges require manual observation at specific intervals to determine the rainfall amount.

7. The terminal colour bands in a rainbow are

A. Blue and Red
B. Red and Violet
C. Green and Violet
D. Yellow and Blue

Ans: B

ASSISTANT PROSECUTION OFFICER (PRELIM.) EXAM. -2018

The terminal colour bands in a rainbow are Red (outermost) and Violet (innermost).

8. P. Koteshwaram put forth one of the modern theories on –

A. El-Nino
B. Origin of Monsoons
C. Tornado
D. Western Disturbances

Ans: B

Sr. Teacher Gr.II Comp. Exam 2016 2-2016

The origin of monsoons is a complex phenomenon, and various theories have been proposed over time. P. Koteshwaram's contribution is recognized in understanding the thermodynamic aspects that lead to the reversal of wind patterns characteristic of the monsoon.

9. The fluid agents of landform development

A. include mass wasting
B. include running water, waves, glacial ice, wind
C. do not include action of wind or glacial ice
D. include only action of water

Ans: B

Government Polytechnic Exam -2012

Fluid agents are dynamic natural forces that play a crucial role in geomorphology.

Data and Geographic Information Systems (GIS) (Conceptual Overview)

10. Instructions : Decide whether the data given in statements I and II are sufficient or not to answer the given questions (Q. No. 194 – 195) : Mark the correct answer. What is the area of rectangle PQRS ?

- **Statement – I: the breadth of rectangle is 18 cm**
- **Statement – II: The Length of Rectangle is not more than 20 cm**

A. Statement – I alone is sufficient
B. Statement – II alone is sufficient
C. Statements – I and II both are together sufficient but neither statement alone is sufficient
D. Statements – I and II both together also are not sufficient.

Ans: D

GPSC Prelims CSP-1-2017

Data sufficiency questions require determining if the given information is enough to find a unique answer. To calculate the area of a rectangle, both its length and breadth must be known exactly. An inequality (like "not more than") does not provide a unique value.

Definition, Scope, and Branches of Geography

11. Which Greek philosopher coined the term "Geography" in the 3rd century B.C.E. ?

A. Euclid
B. Plato
C. Eratosthenes
D. Clio

Ans: C

UPSC CDS-2-2019

Eratosthenes was a pioneering figure in the study of the Earth's measurements and description.

12. Naturalisation of humans means

A. Low level of technological development
B. High level of technological development
C. Moderate level of technological development
D. None of the above

Ans: A

GPSC Prelims CSP-2-2024

- Naturalisation of humans implies humans adapting to the environment's dictates. - This adaptation is characteristic of societies with limited technology. - High technological development allows humans to modify or overcome environmental constraints (humanisation of nature).

13. What is the area of the rectangle whose length is twice its width and whose perimeter is equal to that of square whose area is 1 unit ?

A. 2
B. 6
C. 2/3
D. 8/9

Ans: D

GPSC Prelims CSP-1-2017

- Area and perimeter formulas for squares and rectangles. - Setting up equations based on the given relationships between the dimensions and perimeters.

14. For a given circle, the angle of a sector is 60°. If the area of this sector is 132/7 cm², what is the radius of the circle?

A. 6 cm
B. 7 cm
C. 8 cm
D. 9 cm

Ans: A

GPSC Prelims CSP-1-2018

- The area of a sector is proportional to the angle of the sector relative to the full circle (360°). - Formula: Area of sector = $(\theta / 360°) \times \pi r^2$. - Use the value of $\pi = 22/7$ when dealing with fractions involving 7 in geometry problems.

15. Simplify : $18 - \left[6 - \left\{4 - \frac{6}{11}\left(8 - \frac{2}{3}\right)\right\} + 12\right]$

A. 0
B. -2
C. $\frac{16}{33}$
D. None of the above

Ans: A

GPSC Prelims CSP-1-2019

- Simplify the expression following the order of operations (BODMAS/PEMDAS): Brackets/Parentheses, Orders/Exponents, Division and Multiplication (left-to-right), Addition and Subtraction (left-to-right). - Work from the innermost grouping symbols outwards.

16. A square sheet of paper is converted into a cylinder by rolling it along its length. What is the ratio of the base radius of cylinder to the side of the square?

A. $\frac{1}{2\pi}$
B. $\frac{\sqrt{2}}{\pi}$
C. $\pi \sqrt{2}$
D. None of the above

Ans: A

GPSC Prelims CSP-1-2022

When a square sheet of paper is rolled along its length to form a cylinder, the side of the square becomes the height of the cylinder, and the other side becomes the circumference of the base of the cylinder.

17. Which of the following statements are correct?

- **1. Caucasoids include the European people, the semitic people and Indo-Aryan people.**
- **2. The Negroids live chiefly in Africa South of Sahara.**
- **3. Mongoloids inhabit northern, eastern and south-eastern Asia**

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

Ans: A

GPSC Prelims CSP-2-2022

- Statement 1: The Caucasoid grouping traditionally included populations originating from Europe, parts of North Africa, the Middle East (including Semitic peoples), and extended into the Indian subcontinent (including Indo-Aryan peoples). This statement aligns with this classification. - Statement 2: The Negroid grouping traditionally included populations primarily from Sub-Saharan Africa. This statement aligns with this classification. - Statement 3: The Mongoloid grouping traditionally included populations primarily from East Asia, Central Asia, Southeast Asia, and indigenous populations of the Americas. This statement aligns with this classification.

18. The World's highest ground based telescopic observatory is located in:

A. Colombia
B. India
C. Nepal
D. Switzerland

Ans: B

HPPSC HPAS Prelims-2014

- High-altitude locations are preferred for astronomical observatories due to clearer skies, less atmospheric turbulence, and reduced light pollution. - The observatory houses several telescopes, including the 2-meter Himalayan Chandra Telescope.

19. Who is the author of the book "The Unstable Earth" ?

A. W.M. Davis
B. G. Taylor
C. J.I. Clark
D. J.A. Steers

Ans: D

HPPSC HPAS Prelims-2016

- J.A. Steers (James Alfred Steers) was a prominent British geographer known for his work in coastal geomorphology. - "The Unstable Earth: Some Recent Views in Geological Structure and Surface Features" is a notable work in the field of geography and geology, discussing Earth's structure and landforms.

20. निम्नलिखित में से "द अनस्टेबल अर्थ" पुस्तक के लेखक कौन हैं ?

A. डब्ल्यू. एम. डेविस
B. जी. टेलर
C. जे. आई. क्लार्क
D. जे. ए. स्टीयर्स

Ans: D

HPPSC HPAS Prelims-2016

- जे. ए. स्टीयर्स (जेम्स अल्फ्रेड स्टीयर्स) एक प्रमुख ब्रिटिश भूगोलवेत्ता थे, जो तटीय भू-आकृति विज्ञान में अपने काम के लिए जाने जाते हैं। - "द अनस्टेबल अर्थ: सम रीसेंट व्यूज़ इन जियोलॉजिकल स्ट्रक्चर एंड सरफेस फीचर्स" भूगोल और भूविज्ञान के क्षेत्र में एक उल्लेखनीय कार्य है, जिसमें पृथ्वी की संरचना और भू-आकृतियों पर चर्चा की गई है।

21. Match the following and choose the correct answer from the codes given below :

(a) Carl Saur (i) Social Geography

(b) David Harvey (ii) Cultural Geography

(c) F. Ratzel (iii) Political Geography

(d) H.J. Johnston (iv) Radical Geography

Codes :

(a) (b) (c) (d)

A. (i) (ii) (iii) (iv)

B. (ii) (i) (iii) (iv)

C. (iv) (iii) (ii) (i)

D. (ii) (iv) (iii) (i)

Ans: D

HPPSC HPAS Prelims-2016

- (a) Carl Sauer was a prominent figure in Cultural Geography, known for his work on the cultural landscape. (a-ii) - (b) David Harvey is a leading exponent of Radical Geography and Marxist geography, focusing on capitalism, urbanism, and social justice. (b-iv) - (c) Friedrich Ratzel is considered one of the founders of Political Geography, developing concepts like 'Lebensraum' and contributing to anthropogeography. (c-iii) - (d) R.J. Johnston (H.J. Johnston likely a typo) is a well-known political geographer and also contributed to the history of geography and social geography. Social Geography is the closest fit among the given options for his broad work. (d-i)

22. In "Concentric Zone Model" of Burgess the fifth ring is occupied by :

A. Commuters Zone

B. Zone of better residence

C. Zone of independent workers home

D. CBD

Ans: A

HPPSC HPAS Prelims-2016

- Burgess's Concentric Zone Model (1925) describes urban land usage in terms of concentric rings spreading out from the Central Business District (CBD). - The zones are: 1. CBD (Central Business District) 2. Zone of Transition (Industry and poor-quality housing) 3. Zone of Independent Workingmen's Homes (Older, modest houses) 4. Zone of Better Residences (Newer, more spacious houses) 5. Commuters Zone (Suburbs, beyond the contiguous built-up area)

23. In Burgess's "Concentric Zone Model", what does the fifth ring represent?

A. Computers Zone

B. Better settlement area

C. Residence of independent workers

D. C.B.D.

Ans: A

HPPSC HPAS Prelims-2016

- The Concentric Zone Model describes urban structure in five rings: 1. Central Business District (CBD) - D 2. Zone of Transition 3. Zone of Independent Workingmen's Homes - C (Residence of independent workers) 4. Zone of Better Residences - B (Better settlement area) 5. Commuters Zone - A (Likely "Computers Zone" is a typo for this)

24. Given below is a list of prominent Geographers and the countries to which they belong. Identify the pair(s) which is/are wrongly matched.

1. Jean Brunhes - France
2. Muhammad al-Idrisi - England
3. David Harvey - Spain
4. Grehard Schott - Germany

Choose the correct answer from the options given below:

A. 1 and 4 only

B. 3 and 4 only

C. 1 and 3 only

D. 2 and 3 only

Ans: D

HAS Prelims-2022

The question tests knowledge of the nationality of famous geographers. Muhammad al-Idrisi was an Arab geographer, and David Harvey is British.

25. Given below are some of the definitions of Human geography as defined by famous geographers. Identify the pair(s) which is/are rightly matched.

- **Human geography is the synthetic study of the relationship between human societies and earth's surface – Friedrich Ratzel**
- **Human geography is the study of changing relationship between the unresting man and the unstable earth – Ellen Semple**
- **Human geography offers a new conception of the inter relationships between earth and human beings – Ellsworth Huntington**
- **Human geography may be defined as the study of the nature and distribution of the relationships between geographical environment and human activities and qualities – Paul Vidal de La Blache**

A. 2 and 4 only
B. 3 and 4 only
C. 1 and 2 only
D. 1 and 4 only

Ans: C

HAS Prelims-2022

This question requires knowledge of key definitions of human geography and their attribution to specific geographers, particularly focusing on the classical period and schools of thought like environmental determinism and possibilism.

26. Match List I with List II.

LIST I	LIST II
A. Geographer who introduced the concept of 'stop and go determinism'	I. Ellsworth Huntington
B. Geographer who opined that climate profoundly influences man, his culture, and geological processes	II. Griffith Taylor
C. Geographer who wrote the book, 'The New World: Problems in Political Geography'	III. Jean Brunhes
D. Geographer who opined that 'Nature is not mandatory but permissive'	IV. Isaiah Bowman

A. A-II, B-I, C-IV, D-III
B. A-IV, B-I, C-III, D-II
C. A-I, B-IV, C-III, D-II
D. A-IV, B-I, C-II, D-III

Ans: A

HAS Prelims-2022

This question tests knowledge of key figures in the history of geographical thought, their main concepts (environmental determinism, possibilism, neo-determinism/stop-and-go determinism), and their significant works.

27. Match List I with List II and select the correct answer from the options given :

List I	List II
a. Erdkunde	I. Alexander von Humboldt
b. Anthropo-Geographie	II. Jean Brunhes
c. Geografia Humana	III. Carl Ritter
d. Cosmos	IV. Friedrich Ratzel

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

Ans: C

MPSC CS Prelims-2018

- Erdkunde was a major work by Carl Ritter, a key figure in the development of modern geography, emphasizing comparative geography and the relationship between the environment and human activities. - Anthropo-Geographie (Anthropogeography) was a foundational work by Friedrich Ratzel, considered a founder of political geography and anthropogeography, focusing on the influence of the physical environment on human groups. - Géographie Humaine (Human Geography) is a field of geography, and Jean Brunhes was a prominent French geographer who wrote extensively on the subject, consolidating it as a distinct branch. His major work is titled 'Géographie Humaine'. - Cosmos (Kosmos) was a comprehensive treatise by Alexander von Humboldt, a pioneering biogeographer and explorer, attempting to describe the physical universe.

28. The father of Human Geography is _____.

A. Herodotus
B. Hecataeus
C. Vidal-de-la-Blache
D. Brunhes

Ans: C

MPSC CS Prelims-2022

- Paul Vidal de la Blache (1845–1918) was a highly influential French geographer. - He is widely regarded as the founder of modern French geography and is often credited as the "father of Human Geography". - He focused on the relationship between humans and their environment, emphasizing the concept of 'genre de vie' (way of life) and developing the perspective known as Possibilism. - Herodotus is considered the "father of history" and also contributed geographically. - Hecataeus is an early Greek geographer known for his map of the world and geographical writings. - Jean Brunhes was a student and follower of Vidal-de-la-Blache and also made significant contributions to human geography.

29. Lebensraum was coined by :

A. Mackinder
B. Peter Taylor
C. David Harvey
D. Ratzel

Ans: D

OPSC CS Prelims-2018

Friedrich Ratzel, a German geographer, used the term "Lebensraum" (meaning 'living space') in his work "Politische Geographie" (1897). The concept was part of his organic theory of the state, suggesting that states, like organisms, need space to grow and thrive.

30. The spread of cultural traits from one region to other is called :

A. Diffusion
B. Fission
C. Transformation
D. Transmission

Ans: A

OPSC CS Prelims-2018

Diffusion is a key concept in geography and anthropology that describes the process by which ideas, innovations, cultural practices, technologies, and other traits spread spatially from their point of origin to other people and places.

31. Which of the following human races has woolly hairs?

A. Negroid
B. Mongoloid
C. Caucasoid
D. Australoid

Ans: A

OPSC CS Prelims-2020

The Negroid race is traditionally characterized by physical features adapted to hot climates, including tightly curled or woolly hair, dark skin, broader noses, and thicker lips. These features are distinct from those typically associated with Mongoloid (straight hair), Caucasoid (wavy or straight hair), and Australoid (various hair types, often wavy or curly but less commonly described as 'woolly' in the same way as Negroid).