

Learn these by heart before the exam. 考试前把这些内容背熟。

Thinking Geographically

Map types: reference shows location; thematic shows a variable (choropleth, dot, graduated symbol, isoline, cartogram).

Every projection distorts shape, area, distance or direction. Mercator keeps direction but inflates high latitudes.

Site vs situation 场所特征与相对位置: site is the physical character of a place; situation is its position relative to other places

Spatial patterns: clustered, dispersed, linear. Density is how many per unit area; concentration is how spread out.

Distance decay 距离衰减: interaction weakens as distance grows; time-space compression shrinks this effect

Scale of analysis: global, regional, national, local. The same data can show opposite patterns at different scales.

Region types: formal (a shared measurable trait), functional (a node and its hinterland), perceptual/vernacular (in people's minds).

Population and Migration

arithmetic density = $\frac{\text{total population}}{\text{total land area}}$ physiological density uses ARABLE land; agricultural density uses farmers per arable land 算术密度

$\text{NIR} = \frac{\text{CBR} - \text{CDR}}{10} \%$ 人口自然增长率

Total fertility rate 总和生育率: average births per woman; about 2.1 is replacement level

DTM: stage 1 high/high, stage 2 death rate falls (population booms), stage 3 birth rate falls, stage 4 low/low, stage 5 decline.

Population pyramid: wide base means high fertility (stage 2); narrow base and wide top means ageing (stage 4/5).

Dependency ratio 抚养比: the share aged under 15 plus over 64, compared with the working-age group

Malthus said population grows geometrically and food arithmetically. Critics point to technology and falling fertility; Boserup argued need drives innovation.

Migration: push and pull factors; Ravenstein's laws (most moves are short and step-wise). Forced vs voluntary; refugee vs internally displaced.

Cultural Patterns and Processes

Diffusion 扩散: relocation (people carry it) vs expansion: contagious, hierarchical (city to city), stimulus (the idea, not the form)

Folk culture is local, slow to change; popular culture is widespread and rapidly changing. Popular culture erodes local distinctiveness.

Cultural landscape 文化景观: the visible imprint of human activity on a place

Language families branch into languages and dialects; a lingua franca eases trade. Religions: universalising (seek converts) vs ethnic (tied to a people and place).

Acculturation adopts some traits; assimilation loses the original culture; syncretism blends two into something new.

Political Patterns and Processes

State, nation, nation-state 国家、民族、民族国家: a state is a sovereign territory; a nation is a people with shared identity; a nation-state aligns the two

Boundaries: geometric, physical, cultural. Defined, delimited (on a map), demarcated (on the ground). Antecedent, subsequent, superimposed, relic.

Shapes: compact, elongated, prorupted, fragmented, perforated. Shape affects how easily a state is governed.

Centripetal forces bind a state together (shared language, institutions); centrifugal forces pull it apart.

Devolution transfers power to regions (Scotland).

Supranationalism pools it upward (the EU, the UN).

Gerrymandering 选区划分操纵: redrawing electoral boundaries for advantage: cracking splits opponents, packing concentrates them

Agriculture and Rural Land Use

Von Thunen: intensity and perishability fall with distance from market. Dairy near, then forest, then grain, then ranching.

Agricultural revolutions: First (domestication), Second (mechanisation), Green (high-yield seeds, fertiliser, irrigation).

Green Revolution raised yields and cut famine, but needed inputs, favoured richer farmers, and cost soil and water.

Subsistence (shifting cultivation, pastoral nomadism, intensive rice) vs commercial (plantation, ranching, agribusiness).

Rural settlement patterns: clustered, dispersed, linear. Survey systems: metes and bounds, township and

range, long lot.

Cities and Urban Land Use

Central place theory 中心地理论: Christaller: larger settlements are fewer and farther apart; range is how far people travel, threshold the minimum market

rank-size: $P_n = \frac{P_1}{n}$ a primate city is disproportionately larger than rank 2 位序-规模法则

Models: Burgess concentric zones, Hoyt sectors, Harris-Ullman multiple nuclei; Latin American, African, Southeast Asian variants.

Bid-rent: land value peaks at the centre and falls outward, which sorts land use by who can pay.

Urban processes: suburbanisation, sprawl, gentrification (displaces the poor), urban renewal, smart growth, new urbanism.

Challenges: segregation, food deserts, congestion, affordability, and the cost of infrastructure.

Industrial and Economic Development

Weber's least-cost theory: locate to minimise transport plus labour, with agglomeration as a pull.

Bulk-reducing industries locate near the raw material; bulk-gaining near the market.

Sectors: primary, secondary, tertiary, quaternary, quinary. Development moves activity up the chain.

Human Development Index 人类发展指数: combines life expectancy, education, and GNI per capita; a composite, not just income

Rostow's stages assume every country follows one path. Wallerstein's world-systems divides core, semi-periphery, periphery and stresses dependency.

Gender Inequality Index measures reproductive health, empowerment, and labour participation.

Trade blocs and NGOs; microfinance targets small-scale entrepreneurs. Sustainable development balances growth, equity, and environment.

Exam technique

FRQ verbs are strict: IDENTIFY needs one word; DESCRIBE needs a characteristic; EXPLAIN needs a cause; COMPARE needs both sides in one sentence.

Always give a real, specific example. 'A country in Africa' scores less than naming one.

Name the scale you are working at, and use the model by name (Von Thunen, Weber, DTM stage 3). The vocabulary IS the mark.