

ALTERNATIVE ENERGY SOLAR ENERGY - FULL MIND MAP

Topic-wise | Hinglish | SSC / BPSC / BSSC / Railway

Topics in this chapter:

1. Solar Energy - Basics, Eco-friendliness & Potential
2. International Solar Alliance (ISA) - Formation, DCR & Partnerships
3. Solar Applications & India Solar Milestones
4. Solar Targets, Tariffs / Manufacturing & State Capacity

1. Solar Energy - Basics, Eco-friendliness & Potential

- solar energy ka organic form mein sabse zyada use kiya jata hai. suraj ki roshni aur heat Earth par life ke liye zaroori hain. [Q1]
- solar energy ka organic form mein sabse zyada use kiya jata hai. suraj ki roshni aur heat Earth par life ke liye zaroori hain. [Q2]
- Sun - solar energy ka organic form mein sabse zyada use kiya jata hai. suraj ki roshni aur heat Earth par life ke liye zaroori hain. [Q3]
- options mein diye gaye energy sources mein solar cell sabse zyada environment-friendly hai, kyunki yeh photovoltaic effect se light energy ko seedhe electricity mein convert karta hai. dusre option kisi na kisi ke roop mein environment ko prabhavit karte hain. [Q4]
- non-renewable resources us natural substance ko kahate hain jo Earth ke neeche paya jata hai aur jiska consumption kiye jane par woh usi speed se dobara nahi bharata jis speed se uska use hota hai. non-renewable resources ke main udaharan fossil fuels, coal, natural gas aadi hain. [Q5]
- Solar cells - solar cell ya photovoltaic sel ek electricity upakaran hai jo light (Sun) ki energy ko photovoltaic effect se seedhe electricity mein convert karta hai. [Q6]

EXAM TRAP kisi bhi energy-technology ka pura life-cycle purnatah environmental effect se free nahi hota. solar energy ke sanchalan-charan mein direct emissions bahut kam hota hai, lekin construction, kharan, land-use, electricity-preshan aur life-ant waste se environmental effect ho sakte hain. coal aur petrol se air pollution aur greenhouse gases ka bada effect hota hai, jabki atoms energy mein waste, protection aur resources-management ki chunautiyan hain. [Q7]

- Solar energy - solar photovoltaic system bina burning ke bijali banati hai; isliye bijali production-site par common sanchalan mein traditional air-pollutants ka direct emissions nahi hota. coal aur petroliyam ke burning se air-pollutant aur greenhouse gases seedhe nikalati hain. [Q8]
- Solar power - MNRE India mein bahut badi solar energy sanbhavyata batata hai aur apne standard banjar-land anuman ke basis par lagbhag 748 GW land-based (Ground-Mounted) solar capacity ka akalan karta hai. MNRE ke solar RPO/REC dhanche mein bhi India ke renewable energy-sources mein solar energy ki sanbhavyata ko sabse zyada bataya gaya hai. [Q9]

2. International Solar Alliance (ISA) - Formation, DCR & Partnerships

- ISA India mein mukhyalay wala pehla sandhi-based (Treaty-Based) international antar-sarakari (Intergovernmental) organization hai. statement 1 mein diya stable ankada “38 sadasy country” galat hai; ISA ki sadasyata isse bahut age badh chuki hai aur 2026 ki sarakari/ISA material 120 se zyada sadasy (Member) aur hastaksharakarta (Signatory) countries batati hai. 'ek Sun ek world ek grid' (One Sun One World One Grid) initiative ISA ke cooperation se applied ki ja rahi hai aur world solar bank ka prastav ISA sabha process ke medium se age badhaya gaya. [Q10]
- India aur phrans ne 30 navanbar 2015 ko Paris mein COP21 ke dauran international solar gathabandhan ki sanyukt shuruat ki. baad mein ISA framework agreement mein sanshodhan karke United Nations ke sabhi sadasy countries ko ismein shamil hone ke liye patr banaya gaya. patrata ka meaning yeh nahi hai ki United Nations ka har ek sadasy country svatah ISA ka sadasy hai. [Q11]
- Developing solar power production in our country - gharelu material zarurat (DCR) ka meaning MNRE dwara specified vinirdeshon aur parikshan avashyakataon ke ke mutabik country mein nirmit solar photovoltaic (SPV) koshikaen aur modyul (Modules) dono ka use hai. is prastav-amantran (Request for Selection - RfS) ke tahat applied ki jane wali pariyojanaon ke liye solar electricity pariyojanaon mein used solar koshikaen aur modyul dono India mein bane hone chahie. [Q12]
- New Delhi - international solar gathabandhan ka sansthapak (Founding) conference India aur phrans ne 11 March 2018 ko nayi Delhi mein sanyukt roop se organized kiya. ISA ki pehli sabha baad mein aktubar 2018 mein national rajadhani Pradesh mein organized hui. [Q13]
- Asian Development Bank - 10 March 2018 ko Asian development bank (ADB) aur international solar gathabandhan ne nayi Delhi mein cooperation-vyavastha par hastakshar kie. iska purpose Asia-prashant area mein solar energy ke expansion, laghu-grid (Mini-Grids) aur grid ekikaran (Integration) sahit solar pariyojanaon ko badhava dena tha. [Q14]

3. Solar Applications & India Solar Milestones

- 1, 2 and 3 are correct - Sun energy ka sabse bada aur asimit source hai. solar energy solar radiation ke medium se obtained natural resources hai. iska use sadak light, laghu sinchai project, avasiy bhavanon mein garam pani ki apurti, relave signal aur solar kukar aadi mein kiya ja sakta hai. phir bhi technology sanbandhi simaon ko dekhate hue chhote ganvon aur kasbon ke vidyutikaran ke liye solar energy ka use lagat-effective nahi hai. halanki government ne iske liye kuchh payalat pariyojanaen shuru ki hain. [Q15]
- Kochi - kochchi (Cochin) international havai adda year 2015 mein puri tarah solar energy se operated hone wala world ka pehla havai adda bana. iske baad CIAL ne apni solar capacity aur dusre renewable energy pariyojanaon ka expansion kiya aur svayan ko energy-adhishesh (Power-Positive) bhi banaya. [Q16]
- yeh 2018 ka samasamayik sawal hai. Gujarat ka surat district India ka pehla district bataya gaya tha, jahan sabhi 52 primary health centre solar energy se operated the. [Q17]
- 2018 mein tatkalin kendrashasit Pradesh daman aur div ka div (Diu) area din ke samay apni demand se zyada solar bijali paida karne ke liye widespread roop se charchit hua. 2020 mein div, dadara aur city haveli aur daman aur div namak sanyukt kendrashasit Pradesh ka hissa ban gaya. [Q18]
- div (Diu) smart city year 2018 mein din ke samay 100% renewable energy par chalane wala India ka pehla smart city bataya gaya tha. is upalabdhi mein land-based (Ground-Mounted) solar Park aur chhat par lage (Rooftop) solar pratishthanon dono ka contribution tha. [Q19]
- statement 1 galat hai: is sawal-kal mein “sabse bada solar Park” kahe jane wala bhadala (Bhadla) solar Park Rajasthan mein hai, Gujarat mein nahin. statement 2 sahi hai: Kerala ka kochchi (Cochin) international havai adda world ka pehla puri tarah solar energy se operated havai adda hai. statement 3 galat hai: 100 MW ramagundam tairata (Ramagundam Floating) solar project telangana mein hai, gova mein nahin. [Q20]

- international solar gathabandhan sachivalay hariyana ke gurugram mein national solar energy institute parisar located Sun bhavan (Surya Bhawan) mein hai. mejaban (Host) country agreement ke tahat ISA ka mukhyalay India mein hai. [Q21]

4. Solar Targets, Tariffs / Manufacturing & State Capacity

- 100 Giga watt - India ne national solar Mission ke tahat 2022 tak solar capacity ka target badhakar 100 GW kiya tha. yeh historic policy-target tha, 2026 ka abhi target nahin. [Q22]
- Neither 1 nor 2 - statement 1 galat hai: is sawal ke context mein India photovoltaic ikaiyon ke silikon vefar (Silicon Wafers) ka world ka tisara sabse bada nirmata nahi tha. statement 2 bhi galat hai: SECI svayan seedhe solar tairiph (Tariff) "specified" nahi karta; pratispardhi kharid mein tairiph boli (Tariff Bidding) se khoja jata hai aur electricity Act ki vyavastha ke tahat niyamakiy anumodan/monitoring hoti hai. [Q23]
- MNRE ke 31 March 2023 ke rajyavar established-capacity ankadon mein Rajasthan ki solar capacity lagbhag 17,055.7 MW thi. yeh diye gaye options mein Gujarat, Karnataka aur Tamil Nadu se zyada thi. [Q24]