



## Nepal Student Union Hetauda Campus, Hetauda



### FORESTRY CAPSULE FOR IOF(TU),Hetauda Campus ENTRANCE EXAMINATION

Altitudes range-67 m (220 ft) in the south-eastern Terai to 8,848 m (29,029 ft) at Sagarmatha.Ecosystem in Nepal(118 types-80 types in PAs).35 forest types,75 vegetation types. PAs(20)Out of 20-12 NP, 6 CA, 1 WR, 1 HR. Buffer zones(13 – 12 in NP and 1 in WR). PAs area(23.39 % i.e 34,419.75 sq.km). Biggest CA(PAs)- Annapurna CAs(7629 sq.km). Smallest CAs-Krishnasar CAs. No of Ramsar-10, Largest and youngest-Lake cluster(10 lakes) of pokhara(178.5 km<sup>2</sup>) and smallest-Gosaikunda 13.8 ha (34 acres). Province having largest forest area- Province 4. Hunting license=4 types. Total forest cover=44.74% .

NP=rara(smallest), shey-phoksundo(largest), parsa(youngest), only electric wire fenced NP(Chitwan NP) .Tiger population=235(Recent census update=23 sep 2018). TCN(The Timber Co-operation of Nepal)=Estd in 1961. Located in 34 Districts. Forest Products Development Board (FPDB)-Estd in 1975. Both are Semi-autonomous body. Altogether 84 Division Forest Office (DFO) located in 77 districts (7 districts have 2 Division Offices-Udayapur, Sindhuli,Makwanpur, Kapilbastu, Dang, Kailali, Surkhet)

### FOREST MENSURATION,AGROFORESTRY,ECO-TOURISM,FOREST MANAGEMENT

**DBH (Diameter at Breast height)-1.3m (4'3")** above ground level in Nepal and **1.37m (4'6")** in India, Burma, and other countries. FAO also recommend 1.3m. Instruments used for measuring tree height=Hypsometer(**Christen's hypsometer** based on Geometric principle and **Abney's level** based on trigonometry principle). **Form** is the rate of taper of a log or stem. **Taper** is decrease in diameter of stem of a tree or of a log from base upward.Basal portion of tree corresponds to the frustum of **Neiloid**, the middle portion to the frustum of **Paraboloid** and the top portion to a **Cone**. **Smilians formula**= $s_1 \cdot s_2 / 2 \cdot l$ , overestimates the volume . **Hubers formula**= $S_m \times l$ , underestimates the volume .**Newtons formula**= $(s_1 + 4s_m + s_2) / 6 \cdot l$ , is the most accurate formula. **Quarter girth formula**  $(g/4)^2 \times l$  (g= girth) It gives only 78.5% of tree volume. In Nepal **Quarter girth formula(also called Hoppus formula)**is used.

**Billet**= Individual piece of fuel wood

**Stack**= collection of fuel wood

**Bark gauge**=Measure Bark thickness

In Nepal, stack firewood is called **Chatta**. Having dimensions of **20× 5× 5 cubic ft**. And volume of 500 cubic ft or 14.16 cubic meter

**CAI (current annual increment)** is the increment that a tree puts in a year. **MAI (mean annual increment)** is the mean increment that a tree puts from origin to death i.e it is total increment upto the age divided by the age. MAI value is **never 0 and non-negative** unlike CAI. The time at which CAI and MAI meet is called **year of culmination** and the **most efficient or maximum volume producing period**. **CAI and MAI meets 2 times in whole year**. Cheapest means of Transportation=water.

In Nepal; Modern tourism=since 1950, Nepal tourism board=estd 1957, visit nepal year=1998, destination nepal=2002, visit pokhara year=2007, nepal tourism year=2011, visit lumbini year=2012

Visit nepal 2020 special events 1. NEPAL INDIA CHINA EXPO(NICE) 2. HIMALAYAN TRAVEL MART(HTM) 3. KATHMANDU BY NIGHT

Special uses; salix spp=cricket bat, walnut=rifle, teak=harmonium, white dhup=guitar, simal=match stick, mulberry=hockey stick and cricket stick, balsa(lightest wood), lokta used in paper making, Rotation age; sal=80 yr, sisoo=35, teak=60, iron wood/cassia siamea=4 yr

tree + crops (**agrosilviculture**), tree + pasture (**silvopastoral**), tree + crops + pasture (**agrosilvpastoral**), tree + fruits tree/vegetable/ornamental (**hortosilviculture**), tree + fish (**silvofishery**), tree + bee (**apiculture**), tree + silkworms (**sericulture**) **Taungya** was started in 1972 in Tamagadi and practiced only in terai. It is the modified form of the shifting cultivation. In Taungya, species are planted at **2m\*4m**. **Shifting cultivation** is practiced in middle and high mountains. **Alley cropping** is synonymous of **Hedge row intercropping**.

Normal forest=forest under ideal condition. **Intermediate yield**= All materials preceding main fellings in a regular forest. **Final Yield**=All materials derived from main felling. **Total yield** = final yield + intermediate yield. **Normal yield** = the yield from normal forest. **Sustained yield** = the material that a forest can yield annually or periodically in perpetuity. **To be a normal forest, an irregular forest must have the volume proportion of young, middle and old age class trees as 1:3:5.**

**No. of CF is 22,266. Area covered by CF is 2,237,670.524 ha. No. of house hold benefited by CF is 2,907,871.** Land ownership of community forest belongs to GoN(Government of Nepal). Operational plan is of 5 yrs prepared by DFO(Division Forest Officer).

Survey is the art of determining relative position of points above or beneath the surface of earth. Two types of survey • Plane survey spheroidal surface of the earth is neglected • Geodetic survey: spheroidal surface is taken into account. Principle behind diagonal scale is similar triangle. Survey in which only linear measurement is taken is chain survey. Obstacle in chaining but not ranging(pond, hedge, river etc). Obstacle to ranging but not chaining(hill). Obstacle to both chaining and ranging(building).

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