



BIDHAN CHANDRA COLLEGE

SESSION- 2022-2023

TOPIC:- TRIBAL LIFE IN THE WORLD (ESKIMOS)

COURSE NAME:- GEOGRAPHY OF HUMAN & CULTURAL LANDSCAPE

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Teacher's Signature

✓
23/05/23

Student's Signature

Poulami Mitra

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ESKIMO

INTRIBUTION : There are many groups of indigenous people who are not so developed and civilized as the vast majority of people are known as tribal or indigenous people. Tribal people are strikingly different and diverse in their culture, social, and economic life. They cherish their own distinct culture and have maintained a close relationship to the land and natural environment.

Most of them live according to their traditions and engaged in food gathering, hunting, fishing, agriculture etc. There are many tribal or indigenous people in the world, but today we will discuss about a specific tribal group named ESKIMO, also known as INUIT

INUIT : INUIT are a group of culturally similar indigenous peoples inhabiting the Arctic and Subarctic regions of Greenland, Labrador, Quebec, Nunavut, the Northwest Territories, and Alaska. Inuit languages are part of the Eskimo-Aleut languages.

Linguists believe that "Eskimo" is derived from a Montagnais (Innu) word 'ayaškimew' meaning "maker of snowshoes"

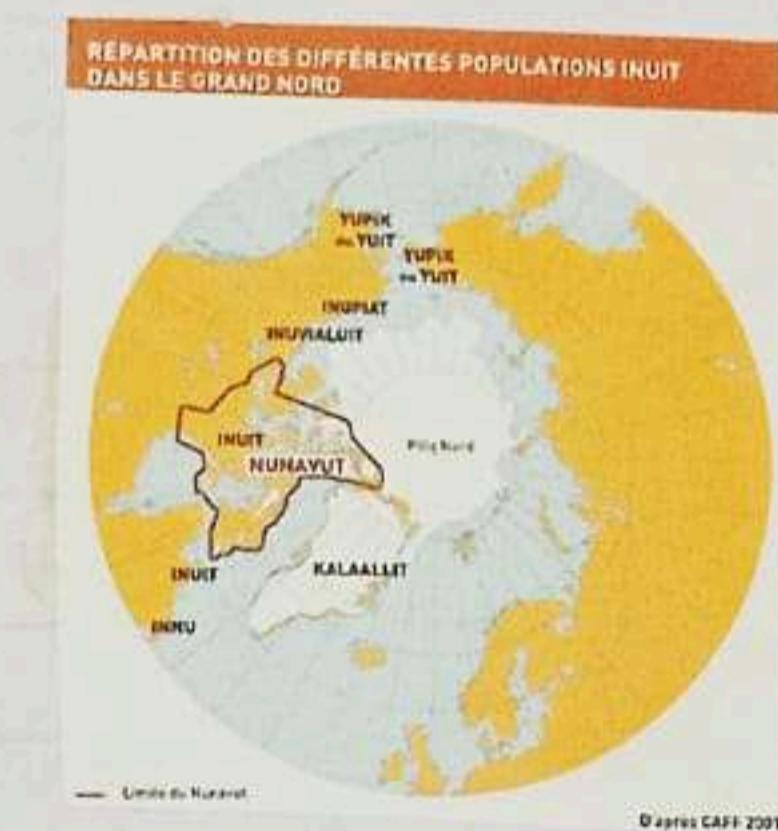
ESKIMO : Eskimos or Esquimaux is a term referring to aboriginal people who, together with the related Aleuts, the Inuit (including the Alaska Native Inupiat, the Canadian Inuit and the Greenlandic Inuit) and the Yupik (or Yuit) of eastern Siberia and Alaska. They are traditionally living by hunting seals and other Arctic animals and

birds and by fishing. They are in the first stage of development; lifestyle, primary demands, culture and economic demands are mainly controlled by Nature.



LOCATION

These circumpolar peoples have traditionally inhabited the Arctic and Subarctic regions from eastern Siberia (Russia) to Alaska (United States), Northern Canada, Nunavik, Nunatsiavut and Greenland.



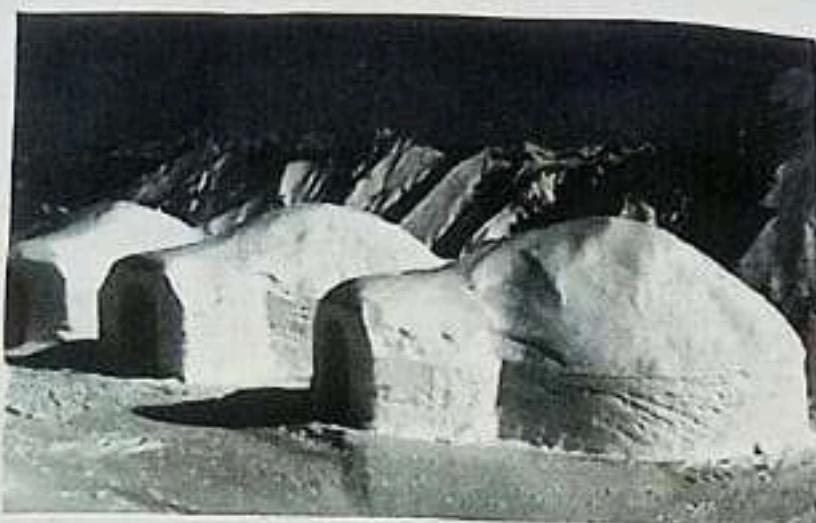
HOUSES

In winter Eskimos made their houses using snow and some blocks of ice, which is dome shaped and which helps to heat retention, called Igloo.

Inuit and Iupiat peoples traditional summer dwellings were located near animal herds.

They were called their tents 'Tupiq', lined with animal skin and made of driftwood or bone, made by whale's bone which helps to

Stitch the Tukiq.



LANGUAGE

ESKIMO-ALEUT languages, also called Eskaleut languages and INUIT-YUPIK-UNANGIAN LANGUAGE Family, family of languages spoken in Greenland (Kalaallit Nunaat) Canada, United States (in Alaska), and Russia (in eastern Siberia) by the INUIT and Aleut.

Most linguists, however, continue to identify this language group as the ESKIMO-ALEUT LANGUAGES though use of the term ESKALAUT LANGUAGE is growing, and some linguists prefer the term INUIT-YUPIK-UNANGIAN LANGUAGE Family.

ALEUT is a single language with two surviving dialects. Eskimo consists of two divisions: Yupik, spoken in Siberia and Southwestern Alaska, and Inuit, spoken in northern Alaska, Canada, and Greenland.

Each division includes several dialects. The proposed relation of ESKIMO-ALEUT with other language families, such as Chukotko-Kamchatkan, Uralic, and/or Indo-European remains conjectural.

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□ RELIGION

Eskimo religion is the shared spiritual beliefs and practices of the Eskimo, an indigenous people from Alaska, northern Canada, parts of Siberia, and Greenland. Their religion shares many similarities with some Alaska Native religions. Traditional Eskimo religious practices include animism and shamanism, in which spiritual healers mediate with spirits.

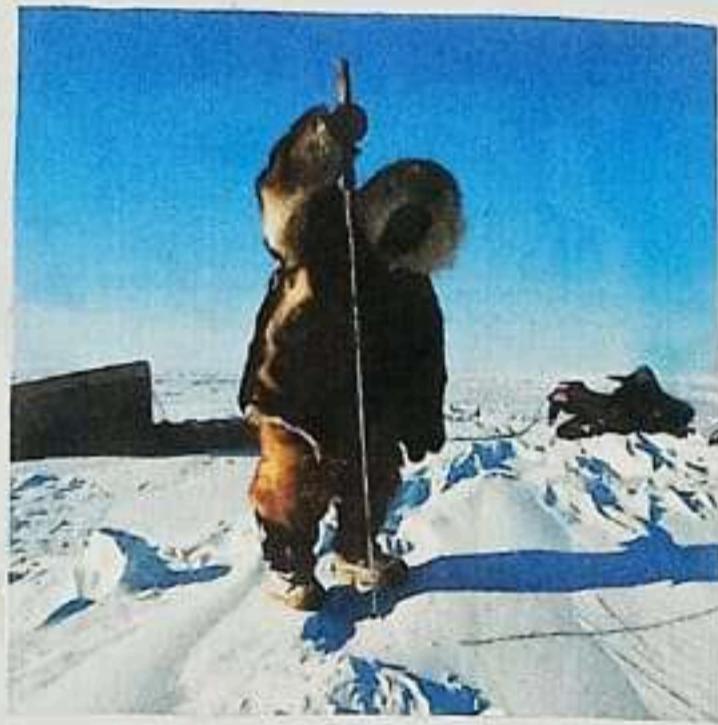
Today many Eskimo follow Christianity, but traditional Inuit spirituality continues as a part of a living, oral traditional and part of contemporary Inuit society. Inuit who balance indigenous and Christian theology practice religious syncretism.





Food

They hunted animals, including birds, caribou, Seals, walruses, Polar bears, whales and fish which provided them all the nutrition for Eskimos for at least 10 months for the year and in the Summer Season people gathered a few plant foods such as berries, grasses, tubers, roots, stems, and seaweeds.



CLOTHING

For extreme winter both men and women wore clothes made of deer and polar bear skins made of whale bones. They have different types of caps and hats on their heads and shoes are up to the knees.

The most basic version of the traditional Inuit clothing consisted of a hooded parka, pants and mittens made of caribou or

Dealskin (Worn in one or two layers according to the season), and up to four layers of footwears. Each garment was tailored to fit the individual.



HOUSEHOLD APPLIANCES

Eskimos use clay lamps with Seal fish fat to light their homes, meat as food and they use leather bags to store milk. They currently use guns and harpoons and Spear.

SOCIAL LIFE

Eskimos live in extreme struggle with nature. They are divided into small groups for hunting however, the leaders order is their last word. The elder person in the family takes most of the decisions. The listing place, hunting directions for team members is provided by

their team leaders. They use sleds to carry things from one place to another. 10 to 12 domestic pole dogs are used to pull the sled and these pole dogs are specially trained to pull the sled.

When Summer comes from July to September the Eskimos meet in festive gathering and compete in various games and magic competitions continues among magicians.

Quviasukvik is the Inuit winter feast that celebrates the coming year and placates the roaming spirits for good luck in the year come. As Christmas became more of a commonly celebrated event in the Central Arctic communities there are remarkable ways that the Inuit retained many of their traditions and aspects of the Christian holiday was adopted.



HUNTING METHODS

They hunt with bow and arrow and also use gun and spear. Some Wager Inlet Eskimos use an ingenious method for hunting through the ice: an old rifle is mounted on a tripod and set over the seal hole in such a way that when the rises to breath it pushes up a thin rod

which releases the trigger and fires a small harpoon, a hole in the ice.



Economic Society

The traditional economy of many Inuit / Eskimo groups of Arctic was based on the hunting Sea animals, including whales, seals, and Walruses. They also fish and hunt other types of animals, and gather food from their environment. The cold environment of Tundra is not congenial for cultivation mainly because of extremely cold climate and short growing seasons.



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IMPRINT OF MODERNITY

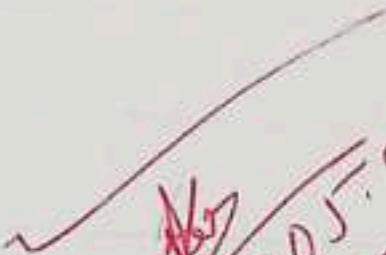
The lifestyle of the Eskimos changed considerably due to contact with civilized country's people in the Southern tundra region. Nowdays their food habits and clothing have changed.



NATURAL INACCESSIBILITY

The Eskimos living in the tundra region are among the world's inhabitants who struggle to survive with extreme hardship. Because they live in extremely cold regions, the biggest problem with gathering food is that they caught fish from very cold water and eat but as the population grows, food becomes a problem now.

They are still uneducated and very undeveloped and have not improved much in contact with civilized society.


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NOTICE

Unit Test of 2nd semester B.Sc. Physics (Honours) will be held as per the following schedule:-

Date & Day	Time	Papers
07/09/2022	11 AM onwards	1. Mathematical methods in Physics 2. Electricity and magnetism

Dated: 01.09.2022

for Head of the department

Department of Physics

Bidhan Chandra College

Asansol-4

Govt. of India Dept. of Physics
Bidhansagar
(Govt. Sponsored)
Asansol-713304

Department of Physics
Bidhan Chandra College, Asansol

Second Semester Unit Test Examination

Mathematical Methods of Physics-II

BSCHPHSC201

Full Marks: 20

Time: 1Hr.

Answer Any Four Questions

5x4=20

1. Evaluate $\int_0^{\infty} x^{n-1} e^{-h^2 x^2} dx$
2. Obtain a Fourier expression for $f(x) = x^3$ for $-\pi < x < \pi$
3. Prove the recurrence formula $xJ'_n = nJ_n - xJ_{n+1}$
4. Let C be the circle $|z| = 1$ oriented counter-clockwise. Compute
$$\int_C \frac{1}{z^2 + 8z + 1} dz$$
5. Show that $\tan^{-1} z = \frac{1}{2} \log \left(\frac{1+z}{1-z} \right)$

Mathematical Methods
of Physics

BSC H PHSC 201

$$\frac{5 \times 4 = 20}{}$$

(1) Evaluate $\int_0^\alpha x^{m-1} e^{-h^2 x^2} dx$

\Rightarrow let $I = \int_0^\alpha x^{m-1} e^{-h^2 x^2} dx$ (i) $\int x^{m-1} e^{-h^2 x^2} dx$

$= \int_0^\alpha x^{m-1} e^{-h^2 x^2} dx$

Putting $t = x^2 h^2$ and $dt = 2xh dx$ $\Rightarrow x = \frac{\sqrt{t}}{h}$

$dx = \frac{dt}{2h\sqrt{t}}$

$$I = \int_0^\alpha \left(\frac{\sqrt{t}}{h}\right)^{m-1} e^{-t} \frac{dt}{2h\sqrt{t}}$$

$$= \frac{1}{2h^m} \int_0^\alpha t^{\frac{m-1}{2}} e^{-t} \frac{dt}{\sqrt{t}}$$

$$= \frac{1}{2h^m} \int_0^\alpha t^{\frac{m-2}{2}} e^{-t} dt$$

$$= \frac{1}{2h^m} \sqrt{\frac{m}{2}}$$

(2) obtain a Fourier expression for

$$f(x) = x^3 \quad [-\pi < x < \pi]$$

$\Rightarrow f(x) = x^3$ is an odd function

$$a_0 = 0 \text{ and } b_m = 0.$$

$$\begin{aligned}
 b_n &= \frac{2}{\pi} \int_0^{\pi} f(x) \sin nx dx = \\
 &= \frac{2}{\pi} \int_0^{\pi} x^3 \sin nx dx \quad [S_{uv} = uv_1 - u'v_2 + u''v_3 \\
 &\quad - u'''v_4 + \dots] \\
 &= \frac{2}{\pi} \left[x^3 \left(-\frac{\cos nx}{n} \right) - 3x^2 \left(-\frac{\sin nx}{n^2} \right) + 6x \left(\frac{\cos nx}{n^3} \right) - \right. \\
 &\quad \left. 6 \left(\frac{\sin nx}{n^4} \right) \right] \Big|_0^{\pi} \\
 &= \frac{2}{\pi} \left[-\frac{\pi^3 \cos n\pi}{n} + \frac{6\pi^2 \cos n\pi}{n^3} \right] \\
 &= 2 \cdot (-1)^n \left[-\frac{\pi^2}{n} + \frac{6}{n^3} \right]
 \end{aligned} \tag{1}$$

$$f(x) = b_1 \sin x + b_2 \sin 2x + b_3 \sin 3x + \dots$$

$$\begin{aligned}
 x^3 &= 2 \left[-\left(-\frac{\pi}{1} + \frac{6}{1^3} \right) \sin x + \left(-\frac{\pi^2}{2} + \frac{6}{2^3} \right) \sin 2x \right. \\
 &\quad \left. - \left(-\frac{\pi^2}{3} + \frac{6}{3^3} \right) \sin 3x + \dots \right]
 \end{aligned}$$

(3) Prove that $\therefore n \mathbb{J}'m = m \mathbb{J}m + n \mathbb{J}m + 1$

\Rightarrow we know,

$$\mathbb{J}m = \sum_{r=0}^{\infty} \frac{(-1)^r}{r! \sqrt{(m+r+1)}} \left(\frac{n}{2}\right)^{m+2r}$$

D. w. t. x

$$\mathbb{J}'m = \sum_{r=0}^{\infty} \frac{(-1)^r (m+2r)}{r! \sqrt{(m+r+1)}} \left(\frac{n}{2}\right)^{m+2r-1} \frac{1}{2} \tag{1}$$

$$\begin{aligned}
 n \mathbb{J}'m &= m \sum_{r=0}^{\infty} \left[\frac{(-1)^r}{r! \sqrt{(m+r+1)}} \right] \left(\frac{n}{2}\right)^{m+2r} \\
 &\quad + n \sum_{r=0}^{\infty} \frac{(-1)^r r}{(2r)! \sqrt{m+r+1}} \left(\frac{n}{2}\right)^{m+2r-1}
 \end{aligned}$$

$$n J_m = n \Im m + n \sum_{r=0}^{\infty} \frac{(-1)^r}{(r+1)! \sqrt{(m+r+1)}} \left(\frac{x}{z}\right)^{m+2r-1}$$

$$= n \Im m + n \sum_{s=0}^{\infty} \frac{\frac{(-1)^{s+1}}{s! \sqrt{m+s+2}}}{\left(\frac{x}{z}\right)^{m+2s-1}} \quad [r-1=s]$$

$$= n \Im m + n \sum_{s=0}^{\infty} \frac{(-1)^s}{s! \sqrt{(m+1)+2s}} \left(\frac{x}{z}\right)^{(m+1)+2s}$$

$$n J'_m := n \Im m - n \Im m_1$$

$$(4) \int_C \frac{1}{z^2 + 8z + 1} dz$$

$$(5) \tan^{-1} z = \frac{1}{z} \log \left(\frac{1+z}{1-z} \right)$$

$$\Rightarrow \text{let, } \omega = \tan^{-1} z$$

$$z = \tan \omega = \frac{\sin \omega}{\cos \omega} = \frac{e^{\omega} - e^{-\omega}}{e^{\omega} + e^{-\omega}} = \frac{e^{2\omega} - 1}{e^{2\omega} + 1}$$

Thus,

$$z(e^{2\omega} + 1) = e^{2\omega} - 1$$

$$e^{2\omega} = \frac{z+1}{1-z}$$

$$2\omega \log e = \log \left(\frac{z+1}{1-z} \right)$$

$$\omega = \frac{1}{2} \log \left(\frac{z+1}{1-z} \right)$$

$$\text{So, } \tan^{-1} z = \frac{1}{2} \log \left(\frac{z+1}{1-z} \right)$$

$$(4) \int_C \frac{1}{z^2 - 8z + 1} dz \text{ where } |z| = 1$$

$$= \frac{1}{(z-4-\sqrt{15})(z-4+\sqrt{15})}$$

Singularity in $|z| < 1$ at,

$$z = 4 - \sqrt{15}$$

$$\int_C \frac{1}{z^2 - 8z + 1} dz \quad 2\pi i$$

$$= 2\pi i \lim_{z \rightarrow 4-\sqrt{15}} \frac{1}{(z-4-\sqrt{15})(z-4+\sqrt{15})}$$

$$= 2\pi i \left(\frac{1}{z-4-\sqrt{15}} \right) \Big|_{z=4-\sqrt{15}}$$

$$= -\frac{\pi i}{\sqrt{15}}$$