MANONMANIAM SUNDARANAR UNIVERSITY

DIRECTORATE OF DISTANCE AND CONTINUING EDUCATION

INTERNAL ASSIGNMENT FOR MAY 2025 EXAMINAITONS

B.Sc. Physics – Second Semester

மொழித் தாள் – I

தமிழ் இலக்கிய வரலாறு

Subject Code: J1TL21

1.) (அ) சிற்றிலக்கியம் தோற்றம் வளரச்சி குறித்து விளக்குக.

(அல்லது)

(ஆ) புதுக்கவிதை தோற்றம் வளரச்சி குறித்து விளக்குக.

2.) (அ) கடிதம் அந்நியரகள் சிறுகதைகளை ஆராய்க.

(அல்லது)

(ஆ) வேலைக்காரி நாடகம் குறித்து கட்டுரை வரைக.

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B.Sc. Physics – Second Semester

General English - II (Part - II English)

Subject Code: J2EN21

1.) **(A)** Examine the use of imagery and metaphor in the poem **"**Still Here".

(OR)

(B) Reflect on the enigmatic personality of princess in "The lady, Or the Tiger".

2.) **(A)** Elucidate the theme of choice and decision-making in "The Road Not Taken".

(OR)

(B) Write about the narrator's grandmother's experiences of Illiteracy and her journey towards self-empowerment in "How I Taught My Grandmother to Read?"

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B.Sc. Physics – Second Semester

Heat, Thermodynamics and Statistical Physics

Subject Code: JMPH21

1.) **(A)** What is Carnot's engine? Construction and working of Carnot's engine.

(OR)

(B) What is Thermal Conductivity? How do you determine Thermal conductivity by Forbes and less disc method?

2.) **(A)** Derive Maxwell – Boltzmann statistics with distribution function?

(OR)

(B) Derive Fermi-Dirac statistics with distribution function?

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B.Sc. Physics – Second Semester

Vector Calculus and Fourier Series

Subject Code: JEMA21

1.) **(A)** Evaluate $\iint X^2 Y^2 \, dxdy$ where D is the circular disc $X^2 + Y^2 \leq 1$.

(OR)

(B) Evaluate $\int_0^{\propto} \int_0^{\wedge} e^{-r2} \, rdrdo$.

2.) **(A)** Evaluate $\iint (\nabla \times \vec{f}) . n \, ds$ where $f = y^2 \rightarrow + yj \rightarrow - xzk \rightarrow$ and S is the upper half of the sphere $\times^2+y^2+z^2=a^2$ and $z \geq 0$.

(OR)

(B) Verify Gauss divergence theorem for the function f = a $(\times + y) 2^{5)}$ + a $(y - \times) \vec{} \; j + z2 \; k \; \rightarrow$ over the hemisphere bounded by the $\times oy$ phane and the upper half of the sphere $\times^2+y^2+z^2=a^2$

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B.Sc. Physics – Second Semester

Home Electrical Installation

Subject Code: JSPH21

1.) **(A)** Difference between DC and AC. Explain the Advantage of AC over DC.

(OR)

(B) What is Transmission losses? Role of step-up and step-down transformer's in transmission of electricity?

2.) **(A)** Difference between single and three phase connection. How will you calculate EB bill?

(OR)

(B) What is the use of electrical fuse and circuit breakers what are the types of Fuses?

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INTERNAL ASSIGNMENT FOR MAY 2025 EXAMINAITONS

B.Sc. Physics – Second Semester

Physics of Music

Subject Code: JSPH22

1.) **(A)** How vibrations of atoms of matter occurs. Explain the propagation of sound waves in air, other media, fluids and solids.

(OR)

(B) Simple vibrating systems of a tuning fork. Explain the following parameters amplitude, phase, energy, energy loss, energy damping, energy dissipations.

2.) **(A)** How sine and cosine waves influence in musical tone?

(OR)

(B) How music sound recorded in a digital recording. List out the equipments used for the recording.