

Scheme of Evaluation

1(a)	Definition and plank's equation	— 2M
	Einstein's equation	— 1M
	DeBroglie wavelength Derivation	— 4M

1(b)	Wave function expression	— 2M
	Differentiation	— 2M
	Total energy equation	— 2M
	Final equation	— 1M

2(a)	Diagram and discussion	— 2M
	Derivation	— 3M
	Conclusions	— 2M

2(b)	Discussion and diagram	— 5M
	Energy level diagram	— 2M

3(a)	PN diode construction	— 2M
	Diagram	— 2M
	I-V characteristics curve explanation	— 3M

History of Evolution

- 1859 - Charles Darwin: On the Origin of Species
- 1871 - Darwin: The Descent of Man and Selection in Relation to Sex
- 1881 - Alfred Russel Wallace: Contributions to the Theory of Natural Selection
- 1882 - Darwin: The Expression of Emotions in Man and Animals
- 1889 - Ernst Haeckel: The History of the Development of Man
- 1902 - R. S. Macdonald: The Evolution of Man
- 1904 - Darwin: The Power of Moral Education
- 1908 - Ronald Fisher: The Genetical Theory of Natural Selection
- 1918 - Mayr: Systematics and the Origin of Species
- 1930 - Sewall Wright: Evolution and the Genetics of Populations
- 1932 - Fisher: The Genetical Theory of Natural Selection
- 1936 - Mayr: Systematics and the Origin of Species
- 1942 - Huxley: The Evolutionary Synthesis
- 1951 - Mayr: Systematics and the Origin of Species
- 1959 - Mayr: Systematics and the Origin of Species
- 1961 - Mayr: Systematics and the Origin of Species
- 1966 - Mayr: Systematics and the Origin of Species
- 1972 - Mayr: Systematics and the Origin of Species
- 1978 - Mayr: Systematics and the Origin of Species
- 1981 - Mayr: Systematics and the Origin of Species
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- 2019 - Mayr: Systematics and the Origin of Species
- 2020 - Mayr: Systematics and the Origin of Species
- 2021 - Mayr: Systematics and the Origin of Species
- 2022 - Mayr: Systematics and the Origin of Species
- 2023 - Mayr: Systematics and the Origin of Species
- 2024 - Mayr: Systematics and the Origin of Species

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3(b)

Definition and diagram — 2M
 Force expressions — 2M
 Hall coefficient expression — 1M
 Importance — 2M

4(a)

Definition and diagram — 2M
 Field expressions — 3M
 Internal field equation — 2M

4(b)

For each point — 2M

5(a)

Discussion part — 4M
 Application part — 3M

5(b)

Hysteresis curve with domains — 3M
 curve explanation — 4M

6(a)

Rate expression (probability) — 3M

Boltzmann and Planck's expressions — 2M

Ratio expression — 2M.

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6(b)

construction & diagram — 3M
Energy level diagram
and transitions explanation — 4M

7(a)

Definition & diagram — 3M
Snell's equation — 2M
N.A expression — 2M

7(b)

classification — 1M
Step index fiber R-I profile
and light ray diagram — 2M
Graded index fiber R-I profile
and light ray diagram — 2M
Applications — 2M

8(a)

Discussion about scale
and properties — 3M
Explanation about SAV
and Quantum confinement — 4M

8(b)

construction and diagram — 4M
working — 3M

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