2022年度
大学院理工学研究科【情報システム工学専攻】博士前期課程
一般選抜試験（第Ⅰ期）問題

英　　語

開始時刻　午前9時30分
終了時刻　午前10時15分

【注意事項】

1．　答案用紙には受験番号，氏名を必ず記入してください。
2．　配布された答案用紙は試験が終了したら，必ず提出してください。
　　（問題用紙は提出しなくてよい）。
3．　答案用紙は問1、問2、問3ごとに一枚ずつ使用してください。

創価大学大学院 理工学研究科 情報システム工学専攻
2022年度 一般入学試験第Ⅰ期　英語筆記試験問題

以下の3問すべての問いについて、解答用紙に答えを記入してください。

［問 1］以下は中村修二教授のノーベル物理学賞バンケットでのスピーチである。下線部(1)～(4)を日本語に訳しなさい。

On behalf of my co-recipients, Professor Isamu Akasaki and Professor Hiroshi Amano, I would like to thank the Members of the Nobel Prize selection committee, and members of the Swedish Royal Academy of Science for honouring our invention of the efficient blue-light emitting diodes (LED) which has enabled bright and energy-savings white light sources.

Alfred Nobel wanted his prize to be awarded based on an invention or discovery in physics that "during the preceding year, shall have conferred the greatest benefit on mankind." Therefore we are deeply honoured that the dream of LED Lighting has now become a reality, and is greatly benefiting mankind.

(1) Nowadays we can buy energy efficient LED Light bulbs at the supermarket and help reduce energy use. LED lighting IS 10 TIMES MORE efficient than conventional incandescent lamp so we can drastically reduce energy consumption. I believe that LED Lighting can also reduce Global Warming too.

(2) In Addition, by combining LED with Solar Cell we can give sustainable lighting to the 1.5 Billion people without electricity that's cost effective, clean, and safe - truly lighting the world.

My colleague at UCSB, and Physics Nobel Laureate in 2000, Professor Herbert Kromer said about LED lighting: "*We are not just talking about doing things better, but about doing things we never could before. You have forever changed the world, now every person can experience LED Lighting.*"

(3) If I can tell you a little story of encouragement … when we began work on the blue LED in the 1980s, we were told again and again that what we were trying to do was impossible.

Still, we persevered, working hard for many hours and years to develop this new technology.

(4) After the breakthroughs in making the bright blue LED by Professors Akasaki, Amano and myself, an explosion of research activity occurred. Thousands of researchers joined the field and applied the LED to many fields such as mobile phone screens, LED Television, and LED Lighting.

Along with Professor Isamu Akasaki and Professor Hiroshi Amano, I would like to thank the Swedish Royal Academy again for awarded this prize to our invention of blue LED and energy efficient LED Lights. I would also like to thank all my colleagues at Nichia and UCSB and my Family for letting me work so hard.

Today, I hope that everyone can now use efficient and LED Lighting to save energy!

出典："Shuji Nakamura - Banquet Speech." Nobelprize.org. Nobel Media AB 2014.

［問 2］ 下記の文章の空白（1～10）に入る最も適切な単語を同じ番号の(a)～(d)のなかから選びなさい。

In studying (1) and (2), one soon becomes aware that a number of relationships are described by vector (3)-products or, if you like, (4)-hand rules. Of immediate interest is the fact that a time-(5) **E**-field generates a **B**-field, which is everywhere (6) to the direction in which **E** changes. In the same way, a time-(7) **B**-field generates an **E**-field, which is everywhere (8) to the direction in which **B** changes. Consequently, we might anticipate the general (9) nature of the **E**- and **B**-fields in an (10) disturbance.

出典：E. Hecht, Optics, Fourth Edition, p. 44, Addison Wesley, 2002.

1. (a) electric (b) electrism (c) electricity (d) electrons
2. (a) magnetism (b) magnets (c) magnetron (d) magneticity
3. (a) dot (b) cross (c) vector (d) scalar
4. (a) right (b) left (c) clockwise (d) counter-clockwise
5. (a) independent (b) independence (c) varying (d) varied
6. (a) parallel (b) similar (c) perpendicular (d) coaxial
7. (a) independent (b) independence (c) varying (d) varied
8. (a) parallel (b) similar (c) perpendicular (d) coaxial
9. (a) transverse (b) longitudinal (c) axial (d) perpendicular
10. (a) electromagnetical (b) electromagnetism (c) electromagnetic (d) electron-magnetron

［問 3］ つぎの (1)～(5) の日本語文を英語に翻訳しなさい。

(1) ウェブコンテンツを一般に公開する際には、知的所有権に配慮する必要がある。

(2) 私がもっと勉強をしていれば、この問題を解くのも簡単だったろうに。

(3) 私にはこのプログラミング言語でシステムを開発した経験がある。

(4) 彼らは統計的に有意な結果を得るに十分な回数の実験を計画した。

(5) 我々はあなたの論文が受理されたことをお知らせできて幸いです。

以上