國立成功大學 108 學年度碩士班招生考試試題

所:電腦與通信工程研究所

考試科目:通訊工程英文

考試日期:0224,節次:1

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※ 考	生請注意:本試題不可使用計算機。 請於答案卷(卡)作答,於本試題紙上作答者,不予計分
I.	Write one word in each gap to complete the sentences $(2\% \times 5 = 10\%)$.
1.	
2.	I like watching scary films.
	What you do last night?
	When my alarm went off I dreaming about work!
5.	He hasn't all of his lunch.
II.	Choose the best way to complete the sentences $(2\% \times 5 = 10\%)$.
6.	Look at birds in the tree over there.
	(A) these (B) those
7.	Are these tickets?
	(A) yours (B) your
8.	There isn't milk in the fridge!
	(A) some (B) any
9.	A people were feeding the ducks.
	(A little (B) few
10	O. I didn't like of the books you lent me.
	(A) either (B) neither
III.	In the following sentences, correct the errors if any. Mark "Correct" if the sentence is already correct ($3\% \times 10 = 30\%$).
1]	1. The damage was worse than they had anticipated: the rugs were stained, flood damage, and some wiring had to be replaced.
12	2. Her skills for the new job included researching, organization, and writing of long reports.
13	3. After spilling the soup at today's luncheon, the new Zappo contract was lost by John.
14	4. The personnel department couldn't decide between rental and buying a third copy machine for the upcoming rush.
15	5. Packed in Styrofoam, you can ship the Fogg smoke detector anywhere.
16	5. The new employee's Spanish was better than many native speakers.
17	7. He was better prepared for his speech than any other speech I've heard in a long time.
18	3. The consultant's time-management study proved that our strategy is more efficient than ITT.
10	This is among the easiest, if not the easiest, quiz I've ever taken.

20. If a person makes a mistake, they should admit it and not hide the truth.

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IV. Reading $(3\% \times 10 = 30\%)$.

Article 1: The spread of true and false news online (Source: S. Vosoughi and et al., Science, 09 Mar 2018)

Foundational theories of decision-making, cooperation, communication, and markets all view some conceptualization of truth or accuracy as central to the functioning of nearly every human endeavor. Yet, both true and false information spreads rapidly through online media. Defining what is true and false has become a common political strategy, replacing debates based on a mutually agreed on set of facts. Our economies are not immune to the spread of falsity either. False rumors have affected stock prices and the motivation for large-scale investments, for example, wiping out \$130 billion in stock value after a false tweet claimed that Barack Obama was injured in an explosion. Indeed, our responses to everything from natural disasters to terrorist attacks have been disrupted by the spread of false news online.

New social technologies, which facilitate rapid information sharing and large-scale information cascades, can enable the spread of misinformation (i.e., information that is inaccurate or misleading). But although more and more of our access to information and news is guided by these new technologies, we know little about their contribution to the spread of falsity online. Though considerable attention has been paid to anecdotal analyses of the spread of false news by the media, there are few large-scale empirical investigations of the diffusion of misinformation or its social origins. Studies of the spread of misinformation are currently limited to analyses of small, ad hoc samples that ignore two of the most important scientific questions: How do truth and falsity diffuse differently, and what factors of human judgment explain these differences?

- 21. Choose a proper answer to filling the blank: _____ information spreads rapidly through online media.
 - (A) True
 - (B) False
 - (C) Both true and false
- (D) Neither true nor false
- 22. The meaning of "disrupted" is close to
 - (A) affected
 - (B) immune
 - (C) interrupted
- (D) Misleading
- 23. Which of the following word pairs are antonyms?
- (A) diffusion, spread
- (B) anecdotal, true
- (C) accurate, rigorous
- (D) motivation, enthusiasm

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- 24. From the article, why we know little about the spread of false news through online media?
- (A) Our economics are not immune to the spread of false news online.
- (B) Little attention has been paid.
- (C) Social networks accelerate information spread.
- (D) Existing research is narrow in scope.
- 25. Which of the following statement is supported by the article?
- (A) False rumors will destroy human endeavor to cooperation.
- (B) Barack Obama has a tweet account.
- (C) It should be important to distinguish the spread of true and false information.
- (D) The spread of misinformation can be stopped by knowing how humans judge the online news.

Article 2: What to Do When Algorithms Rule (Source: J. Collins, Behavioral Scientist, 06 Feb 2018)

The first American astronauts were recruited from the ranks of test pilots, largely due to convenience. As Tom Wolfe describes in his incredible book The Right Stuff, radar operators might have been better suited to the passive observation required in the largely automated Mercury space capsules. But the test pilots were readily available, had the required security clearances, and could be ordered to report to duty.

Test pilot Al Shepherd, the first American in space, did little during his first, 15-minute flight beyond being observed by cameras and a rectal thermometer (more on the "little" he did do later). Pilots rejected by Project Mercury dubbed Shepherd "spam in a can."

Other pilots were quick to note that "a monkey's gonna make the first flight." Well, not quite a monkey. Before Shepherd, the first to fly in the Mercury space capsule was a chimpanzee named Ham, only 18 months removed from his West African home. Ham performed with aplomb.

But test pilots are not the type to like relinquishing control. The seven Mercury astronauts felt uncomfortable filling a role that could be performed by a chimp (or spam). Thus started the astronauts' quest to gain more control over the flight and to make their function more akin to that of a pilot. A battle for decision-making authority—man versus automated decision aid—had begun.

Human resistance to relinquishing decision-making to automated decision aids has been the subject of detailed research. Despite the evidence of the superiority of (often simple) algorithms to human decision makers in many contexts, from psychiatric and medical diagnoses to university admissions offices, we humans tend not to listen to the answers. When humans are given a choice between their own judgment and that of a demonstrably superior algorithm, they will generally choose the former, even when it comes at the expense of themselves or their performance.

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- 26. From the article, test pilot Al Shepherd is criticized for .
- (A) not knowing passive observation
- (B) simply relying on automatic flying control
- (C) resisting to relinquishing decision making during his first flight
- (D) Trusting his own choice rather than algorithms
- 27. Which of the following word has the meaning closest to "relinquishing"?
- (A) insisting
- (B) waiving
- (C) confronting
- (D) Adopting
- 28. The work "algorithms" mentioned in the last paragraph might refer to
- (A) automated decision aids
- (B) choosing the test pilots
- (C) research on decision making
- (D) Evaluating the superiority between human judgement and automated decision aids
- 29. According to the article, how did the first money pilot perform in his flight mission?
- (A) like to spam in a can
- (B) better than humans
- (C) remains clam
- (D) not described in the article
- 30. From the article, which of the following statement is true?
- (A) Human judgements often perform better than algorithms.
- (B) Best pilots think that a chimp may replace them.
- (C) Some space pilots asked for more control during the flight because they do not want to be replaced by decision-making authority.
- (D) The first generation of American astronauts were not selected carefully.

Translation into Chinese (20%) V.

請閱讀以下與物聯網 (IoT, Internet of Things)有關的段落後翻譯為暢通的中文,評分重點為語意精確 度,除了標示有底線的字彙為技術專有名詞不需翻譯之外,中文段落中每出現一個英文字彙扣2分。

Should the IoT keep people in the loop, it has the potential to evolve into an integrated multitenant system-of-systems that may form novel, unprecedented services. For instance, the underlying people-centric sensor and actuator network may act as a new utility, similar to electricity and water, creating important usable knowledge from vast amounts of data. Facilitated by this global utility, different IoT devices and networks that previously had nothing to do with each other may discover and start talking to one another.

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thereby augmenting the current talk-by-design approaches. While the existing studies primarily focus on how the IoT can serve humans in various scenarios, in this work we maintain that people can also assist the IoT in its daily tasks, thus closing the loop. This proposed vision renders the next-generation IoT as a genuinely multi-user, <u>multi-tenant</u>, and multi-application platform that can be materialized in the near future by relying on the emerging IoT radio technologies.

以下為文章出處,不須翻譯。

Source: "When IoT Keeps People in the Loop: A Path Towards a New Global Utility", V. Petrov and et al., IEEE Communications Magazine, 2018.