

2002年度 データベース検索技術者認定試験

1 級 試験問題（前半）

注意事項

- 1 . 着席したら、受験票を机の上に置いて下さい。
- 2 . 解答用紙の所定の欄に受験番号・氏名を必ずご記入下さい。
- 3 . 解答時間は、13 : 15 ~ 15 : 15の2時間です。
- 4 . 中途退席できる時間は、14 : 00 ~ 15 : 00の1時間です。
一度退席すると、15 : 35の後半の試験問題配布時まで再入場はできません。
- 5 . 問題は4問、11ページ、解答用紙は9ページです。確認の上、
落丁・乱丁・印刷不鮮明のもの等がありましたら、手をあげて
試験官にお知らせ下さい。
- 6 . 解答は、問題文の指示にしたがい、解答用紙にご記入下さい。
なお、問4の解答用紙は設問ごとに異なりますので、ご注意下さい。
(解答用紙裏面への記入は無効です。)
- 7 . 問題の内容に関する質問は一切できません。
- 8 . 試験問題は持ち帰って結構です。

問 1 以下の小問より 5 問を選択し、語句の意味を簡単に説明しなさい。
(解答用紙に選択した問題の番号を明記すること。選択した語句を解答用紙に転記する必要はない。)

- (1) ユビキタス(ubiquitous)
- (2) バイオインフォマティクス(bioinformatics)
- (3) ステミング(stemming)
- (4) ネットワークの「DMZ (DeMilitarized Zone)」
- (5) CORBA (Common Object Request Broker Architecture)
- (6) 著作権の消尽
- (7) 特許法第 36 条第 4 項第 2 号の「先行技術開示義務」

問2 以下の [A] ~ [N] に当てはまる最も適切な語句を解答群から選択し、その番号を解答欄に記入しなさい。

著作物は、国境を越えて利用されるため、世界各国は、条約を結んで、お互いに著作物や実演・レコード・放送などを保護し合っています。このような国際的な保護は、著作権は「[A]条約」と「[B]条約」、著作隣接権は「実演家等保護条約」と「レコード保護条約」によって行われています。我が国はいずれの条約にも加入しており、世界の大半の国と保護関係があります。

	[A]条約	[B]条約
正式名称	文学的及び美術的著作物の保護に関する [A]条約	[B]条約
創設年度	[C]年	1952年
加入国数	149	98
特色	内国民待遇	内国民待遇
	[D]主義	[D]主義国の著作物であっても©表示によって [E]主義国でも保護
	遡及効	不遡及
	条約上保護すべき著作物 = 同盟国の国民の著作物及び同盟国で最初に発行された著作物	条約上保護すべき著作物 = 締約国の国民の著作物及び締約国で最初に発行された著作物
	最低保護期間 = 死後 [F]年	最低保護期間 = 死後 [G]年

著作隣接権条約（2002年3月現在）

	実演家等保護条約	レコード保護条約
創設年度	1961年	1971年
加入国数	68	67
正式名称	実演家、レコード製作者及び放送機関の保護に関する国際条約	許諾を得ないレコードの複製からのレコード製作者の保護に関する条約

また、1994年には、[H]設立協定が成立し、1995年1月1日から発効していますが、この附属書として、著作権を含む「[I]」が添付されています。この[I]は、著作権、特許、商標等の知的所有権の国際的保護のための規範や確保のための手段などを規定しており、著作権と著作隣接権のいずれも対象にしています。我が国は、1994年12月に加盟していますが、2002年3月現在、加盟国は144か国になっています。

さらに、1996年（平成8年）に、[J]において、デジタル化・ネットワーク化の進展に対応した著作権保護の新たな枠組みとして「[J]著作権条約」及び「[K]実演・レコード条約」の2つの条約が策定されました。我が国は、「[J]著作権条約」に、2000年6月に加入しています。

J著作権条約（2002年3月現在）

創設年度	1996年
正式名称	著作権に関する J 条約
加入国数	34か国（我が国の加入年、2000年）
特色	K の保護
	著作物以外のもので構成される編集物・ L の保護
	譲渡権
	公衆への伝達権
	写真の著作物の保護期間の拡大（死後50年以上）
	コピープロテクション解除等の禁止
	権利管理情報の改変等の禁止

J実演・レコード条約（2002年3月現在）

創設年度	1996年
正式名称	J 実演・レコード条約
加入国数	31か国（我が国は未加入）
特色	実演家の人格権（生の音の実演・レコードに録音された実演）
	実演家の生演奏に係る M 、 N 、公衆への伝達権
	レコードに係る実演家・レコード製作者の経済的権利
	コピープロテクション解除等の禁止
	権利管理情報の改変等の禁止

解答群

1 . 5	2 . 15	3 . 25	4 . 30	5 . 50	6 . 250	7 . 1886
8 . 1890	9 . 1956	10 . 1996	11 . TRIPS協定	12 . Webページ		
13 . イメージ	14 . インターネット	15 . オンデマンド配信ビデオ				
16 . コンピュータ・プログラム	17 . コンピューター	18 . ストラスブルグ				
19 . データベース	20 . パリ	21 . ブラッセル	22 . ベルヌ			
23 . マラケシュ	24 . 委託	25 . 映像	26 . 音楽	27 . 楽曲		
28 . 関税貿易一般協定(GATT)	29 . 許諾	30 . 国際連合(UN)	31 . 差し止め			
32 . 審査	33 . 申請	34 . 人格権	35 . 世界知的所有権機関(WIPO)			
36 . 世界著作権	37 . 世界貿易機関(WTO)	38 . 知的財産保護				
39 . 知的所有権	40 . 著作権	41 . 著作権保護	42 . 転売	43 . 複製権		
44 . 米国著作権処理センター(CCC)	45 . 変形	46 . 編曲	47 . 包括			
48 . 放送権	49 . 方式	50 . 万国著作権	51 . 無審査	52 . 無方式		

問3 以下の(1)～(5)より2問選択して解答しなさい。

(1)「SDIサービス」について、システム名とそのシステムで提供されているサービスの名称(あるいはコマンド)を挙げ、その特徴を3つ述べなさい。

(2)STNには、タンパク質・核酸配列データが収録されているデータベースが搭載されていますが、そのファイル名を3つ挙げ、作成機関名、ファイルの概要、配列検索機能の特長を簡潔に述べなさい。

(3)下記の(3-1)と(3-2)の両方に解答しなさい。

(3-1)特許法における「公知技術」と「周知技術」との相違を簡単に説明しなさい。

(3-2)ある技術が「周知技術」であることの証拠資料の調査を依頼された際の留意点2点を具体的に記述しなさい。

(4)データベース作製の速報性向上のためWeb上の電子ジャーナルの書誌情報、記事情報(抄録)を利用することを検討した場合の問題点を3つ挙げなさい。

(5)データベース検索には、言葉だけでなく「分類コード」も利用できることが多い。検索に利用できる分類コードを3種類挙げ、それぞれについて、以下の例にならって
分類の名称、
その分類が利用出来る商用データベースの例(システム名とファイル名の両方)、
分類の概要(簡潔に)
を書きなさい。

(例) 国際特許分類

DIALOG の Derwent World Patent Index ファイル

特許文献を技術内容によって分類したもの。5年毎に改訂が有る。

(注1)分類は、複数のデータベースで使用されているものでも、単一のデータベース内のみで使われているものでも可。

(注2)同じ分類を提供データベースのみを変えて3種類書くのは無効。

問 4 以下の設問 4 A から設問 4 E より 2 問を選択して解答しなさい。

4 A : 特許分野のデータベースに関する以下の文章を読み、(1) ~ (4) の間に答えなさい。

A number of industrial property offices have "reclassified," according to the IPC, the patent documents published by them before the introduction of that Classification. Some of the industrial property offices have even reclassified patent documents kept in their collections for search purposes and published by other industrial property offices but not yet classified according to the IPC. When issued, all these documents were published with symbols of classifications other than those of the IPC. In this context, "reclassification" means that on each of these documents, in the collection of the industrial property office concerned, the classification symbols according to the IPC are also inscribed.

In order to make the results of this effort accessible and profitable to others, and more especially to permit information centers in developing countries or regions to establish patent document files arranged according to the IPC, or to reorganize according to the IPC files of patent documents classified according to outdated or national classification systems, WIPO signed, in 1975, with the former International Patent Documentation Center (INPADOC) in Vienna (Austria) the Agreement Concerning the Computerized Administration of Patent Documents Reclassified According to the IPC (CAPRI System).

The aim of the CAPRI System was to collect and store the symbols of the IPC allotted to patent documents issued before 1975. In view of the very high number of such documents, priority was given, at least initially, to the coverage by the CAPRI System of those patent documents which constitute the "minimum documentation" under the PCT, that is, basically the patent documents issued from 1920 onwards by France, Germany, Japan, the former Soviet Union, Switzerland, the United Kingdom and the United States of America.

The industrial property offices of Austria, Germany, Japan and the former Soviet Union and the EPO cooperated in the CAPRI System.

The input to the CAPRI System was in the form of inventories, established by the cooperating offices and recorded on magnetic tape, of the contents of search files rearranged according to the IPC.

Completed in 1988, the CAPRI System database consists of inventories of all IPC subclasses, covering approximately 16 million documents, and of an "inverted file," prepared from the said inventories, giving, for each document stored in numerical order, the appropriate symbol or symbols of the IPC.

After the take-over of INPADOC by the EPO, the CAPRI database is available from the EPO sub-office in Vienna on magnetic tape or COM microfiche.

(1) 以下の文章が、正しければ を、誤りであれば×を、解答欄に記入しなさい。

日本特許庁は、F I 分類をCAPRI Systemによって国際特許分類に変換している。

旧日本特許分類はCAPRI Systemによって国際特許分類に変換できる。

CAPRI Systemによって非特許文献にも国際特許分類が付与された。

CAPRI SystemはINPADOCデータベースに吸収された。

(2) 下線部を和訳しなさい。

(3) "minimum documentation"とは何か。日本語で説明しなさい。

(4) 現在、特許公報に国際特許分類を記入しているにもかかわらず各国独自の国内特許分類を併用している国は、日本国を含めて複数が存在する。国際特許分類のみで特許文献が分類されている場合には、どのような技術分野の特許調査に不都合が生じるか。2種類解答しなさい。

4 B : 次の英文を読み、以下の (1) ~ (3) の問いに答えなさい。

CrossRef

The central source for reference linking

As technology transforms the flow of information and ideas everywhere, we at CrossRef are pleased to offer the scientific and scholarly community a milestone for online publishing -- a collaborative reference linking service -- through which a researcher can click on a reference citation in a journal and immediately access the cited article.

The world's leading scientific, technical, and medical publishers have joined to form the non-profit, independent organization, Publishers International Linking Association, Inc. (PILA), which operates CrossRef. The PILA Board of Directors comprises representatives from AAAS (Science), AIP, ACM, APA, Blackwell Publishing, Elsevier Science, IEEE, Nature, OUP, Sage, Springer, Taylor & Francis, University of Chicago Press, Wolters-Kluwer and Wiley.

To date, there are 122 publishers participating in CrossRef, accounting for over 6,300 journals with over 4.8 million article records in the database. There are also a number of affiliates , library affiliates and associated organizations participating in CrossRef. In the near future, CrossRef will begin incorporating other reference content such as encyclopedias, textbooks, conference proceedings, and other relevant literature. Both the organizational structure and the technology of CrossRef guarantee its rapid and ongoing expansion and its growing service to publishers, libraries, and researchers worldwide.

CrossRef functions as a sort of digital switchboard. It holds no full text content, but rather effects linkages through Digital Object Identifiers (DOI), which are tagged to article metadata supplied by the participating publishers. A researcher clicking on a link (the format of which is determined by publisher preference; for example, a CrossRef button, or "Article" in html) will be connected to a page on the publisher's website showing a full bibliographical citation of the article, and, in most cases, the abstract as well. The reader can then access the full text article through the appropriate mechanism; subscribers will generally go straight to the text, while others will receive information on access via subscription, document delivery, or pay-per-view. CrossRef costs the researcher nothing; its expenses are covered by nominal charges to the publishers for depositing their metadata, annual membership fees, and fees to publishers of abstracting and indexing databases for accessing CrossRef's bank of DOIs to create links to full text articles.

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(1) 下線部を和訳しなさい。

(2) サーチャーにとってCrossRefのメリットは何か記述しなさい。

(3) DOI (Digital Object Identifiers) について説明し、CrossRefとの関係について記述しなさい。

4 C : 以下の (あ) (い) はFDAの発表記事である。以下の英文を読み、(1) ~ (3) の間に答えなさい。

(あ)

FDA WARNS CONSUMERS ABOUT IMPORTED JELLY CUP TYPE CANDY THAT POSES A POTENTIAL CHOKING HAZARD

The FDA is warning consumers of a potential choking hazard posed by conjac jelly cups imported from Asia. Some of the candy bears warning labels, suggesting that it not be eaten by children or the elderly. Other labels warn of a choking hazard and say to chew the candy thoroughly. Some of the candy is sold with no warning label at all.

Local authorities have reported three childrens' deaths from choking in the United States associated with conjac jelly candy. There have also been reports of deaths in other countries.

The candy is sold in several fruit flavors. It is found in small sealed plastic cups that may or may not contain a chunk of fruit. Each jelly cup is about the size of a single-serve coffee creamer.

The candy is sold in retail stores and on the internet and is sold under a variety of names.

FDA continues to investigate this matter.

(い)

FDA ISSUES A SECOND WARNING AND AN IMPORT ALERT ABOUT KONJAC MINI-CUP GEL CANDIES THAT POSE CHOKING RISK

The Food and Drug Administration (FDA) is issuing a second warning and announcing an import alert concerning mini-cup gel candies that contain the ingredient "konjac" (also known as conjac, konnyaku, yam flour, or glucomannan). FDA decided a second warning was warranted (the first was issued on August 17, 2001) after consultation with experts on choking from the Consumer Product Safety Commission (CPSC). CPSC staff confirmed that these candies pose a serious choking risk, particularly to infants, children and the elderly. In addition, the agency has issued an import alert to address the importation of these candies from other countries.

These multi-fruit-flavored candies are typically packaged as individual, mouth-sized servings, and often feature an embedded piece of preserved fruit. Unlike gelatin products commonly found in the U.S., these candies do not readily dissolve when placed in the mouth.

"The public needs to be aware that these candies pose a choking hazard, said Bernard A. Schwetz, D.V.M., Ph.D, FDA's Acting Principal Deputy Commissioner. "We hope to prevent any more of these products from getting into the country, but in the meantime, people need to beware of konjac mini-cup gel candies that may still be in the marketplace."

< 以下略 >

(1) 下線部を和訳しなさい。

(2) FDA (Food and Drug Administration) について簡潔に説明しなさい。

(3) この問題でリコールされた商品の調査を行う際のポイントを述べなさい。

4 D : 下記の英文は、化合物データベース REGISTRY ファイルのオンラインヘルプからの内容である。以下の英文を読み、(1) ~ (4) の間に答えなさい。

The Material Composition (/MAC) field allows alloys to be searched on the basis of their composition, by specification of the desired components and their weight percentages. Alloy components may be specified via element symbols, line formulas, CA Index Names, or CAS Registry Numbers. Percentages may be specified as single values, ranges or relationships. Components and percentages may be specified in either order, and component-percentage pairs may be combined with AND, OR, or NOT logic. Typical /MAC queries are:

90-95 FE/MAC	(FE 74 AND CR 18 AND NI 8)/MAC
AL2O3 >= 85/MAC	ALUMINUM OXIDE <= 5/MAC
0-5 GRAPHITE/MAC	< 5 1344-28-1/MAC

The word MAJOR is posted for any component of an alloy that can be its most prevalent component. For example, (FE MAJOR AND CR 18 AND NI 8)/MAC would retrieve alloys having iron as the most abundant component and Cr and Ni in the required percentages, for example, 73% Fe, 18% Cr, 8% Ni, and 1% Mn. When composition ranges overlap, multiple elements may be posted as the MAJOR component, for example, both Fe and Cr in the alloy 50% Fe, 50% Cr.

The word UNKNOWN is posted as a percentage for each component of an alloy having only qualitative composition data.

The absence of an element should be specified via NOT logic, using, for example, NOT CU/MAC instead of AND CU 0/MAC.

Component synonyms (e.g., ALUMINA) are not posted in /MAC. Search these in the Chemical Name (/CN) field, then use the CAS Registry Number to search /MAC.

The Relative Composition (/RC) field allows alloys to be searched by specifying their principal components, without concern to what the specific weight percentages of the components might be. Thus, the term FE.CR.NI?/RC could be used to retrieve alloys having iron as the most abundant component, followed by chromium and then nickel.

An RC term cites the two to five most abundant alloy components in order of decreasing percent composition. If the percentages overlap, terms are posted for all possible orderings leading to a valid alloy. For example, for the alloy Ni 65-70, Cr 15-20, Co 15-20, Mo 4-5, Fe 0-3, Al 0-2, six terms would be posted:

Ni.Co.Cr.Mo	Ni.Co.Cr.Mo.Fe	Ni.Cr.Co.Mo.Al
Ni.Co.Cr.Mo.Al	Ni.Cr.Co.Mo	Ni.Cr.Co.Mo.Fe

Most RC terms contain five components. RC terms with fewer than five components are posted for cases where some components need not be present (Fe and AL in the example) and when alloys contain fewer than five components.

Components are represented by their element symbols or line formulas. The word UNSPECIFIED is used for components whose formulas are unknown, for example, for iron oxide when the valence of iron

is indeterminate.

The word UNKNOWN is posted for alloys that have only qualitative composition data and for a very few alloys which would otherwise have more than 10,000 /RC terms posted because of overlapping percentage composition ranges.

(1) 上記文章の下線部分を和訳しなさい。

<下線1>

The Material Composition (/MAC) field allows alloys to be searched on the basis of their composition, by specification of the desired components and their weight percentages.

<下線2>

The Relative Composition (/RC) field allows alloys to be searched by specifying their principal components, without concern to what the specific weight percentages of the components might be.

(2) MAJOR とは何か、説明しなさい。

(3) UNKNOWN とは何か、説明しなさい。

(4) UNSPECIFIED とは何か、説明しなさい。

4 E : 下記の英文は、Kirk Tyson International 社長の Kirk Tyson 氏が CI (Competitive Intelligence) について定義しているものです。以下の英文を読み、(1) ~ (4) の間に答えなさい。

What is Competitive Intelligence?

Here is how Kirk Tyson, Chair of Kirk Tyson International, defines CI:

CI is the analytical process that transforms disaggregated market and competitor data into relevant and usable strategic knowledge about competitors' position, performance, capabilities, and intentions.

People professionally involved in the field of information are aware of the newly emerging and important role of Competitive Intelligence (CI). CI is an approach to information gathering that adds value so that management can make strategic decisions with confidence.

Its functions are

- to prevent surprises that could hurt your business**
- to identify opportunities for your organization**
- to gain competitive advantage by reducing reaction time**
- to improve long and short term planning.**

Competitive Intelligence has grown up along with changes in strategic planning. These changes have evolved in response to globalization of competition and rapid changes in political and technological environments. CI supports new strategic planning methods and is critical to its success.

How does it affect the way business is done?

Using Competitive Intelligence, the focus for an organization changes

• from in-depth studies of its current competitors and what they have done and are currently doing to what they are about to do and what they seem to be planning to do in the future

• from market share to market opportunity how to shape the market of the future to your company's benefit

• from studying the past to creating the future

• from reacting to acting

• from following the market to driving the market.

This may seem like a tall order for Competitive Intelligence, but its practitioners have evolved methods that, when embraced by companies, have led to increased profits and market share.

Intelligence...the critical components

There are three components to CI: information gathering, analysis, and dissemination.

The information gathering component of CI is a natural for Information Professionals (IPs), the acknowledged experts in an array of sources for data. Online services are providing more ways to analyze search results. IPs can now present information in "intelligent" reports more easily than ever before. And IPs, because of their company-wide contacts, are naturals to initiate the communication needed to move intelligence to where it is needed. These channels may already exist through the networks many IPs have already established.

Starting your own Competitive Intelligence effort

You can begin to implement CI techniques in your own workplace without much change or expense. To begin, all you need to do is learn to shift your focus by gaining a better understanding of the new environments that companies, businesses, universities, and research facilities work in. This helps you to focus on what your clients' information needs are and allows you to supply enough added value so that you are actually providing intelligence for decision-makers.

To implement competitive intelligence techniques, you can start by reading in two areas: competitive intelligence and strategy for the next century. See the accompanying reading list for suggested titles.

Next, you can begin proactively to monitor changes in the environment that can impact your organization. Things that can cause radical shifts or discontinuities should be picked up and passed on to those who need to know. Watching competitors and your industry segment are the two most crucial things to do. Examples of things that can impact the future are

- changes in top management (what is the new management's style, focus?)
- shifts in research emphasis
- changes in the regulatory environment
- new technology for improved production or delivery of services.

Emerging competitors must be identified as early as possible. Changes in the environment in which your organization operates must also be scanned and analyzed. Changes in political leadership, new laws or regulations, or new technology, all can create serious threats to, or provide new opportunities for, organizations. Anticipation and planning can help mitigate the threats and let you act on opportunity.

(1) 下線部を和訳しなさい。

(2) C I はどのように定義されているか、述べなさい。

(3) C I の目的を述べなさい。

(4) 重要な情報としての競争情報の三要素を述べなさい。