

**JUNE 1999**

## **PROVINCIAL EXAMINATION**

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**MINISTRY OF EDUCATION**

# **TECHNICAL AND PROFESSIONAL COMMUNICATIONS 12**

### **GENERAL INSTRUCTIONS**

1. Insert the stickers with your Student I.D. Number (PEN) in the allotted spaces above and on the **back** cover of this booklet. **Under no circumstance is your name or identification, other than your Student I.D. Number, to appear on this booklet.**
2. Ensure that in addition to this examination booklet, you have an **Examination Response Form**. Follow the directions on the front of the Response Form.
3. **Disqualification** from the examination will result if you bring books, paper, notes or unauthorized electronic devices into the examination room.
4. All multiple-choice answers must be entered on the Response Form using an **HB pencil**. Multiple-choice answers entered in this examination booklet will **not** be marked.
5. For each of the written-response questions, write your answer in **ink** in the space provided in this booklet.
6. When instructed to open this booklet, **check the numbering of the pages** to ensure that they are numbered in sequence from page one to the last page, which is identified by

**END OF EXAMINATION**.

7. At the end of the examination, place your Response Form inside the front cover of this booklet and return the booklet and your Response Form to the supervisor.

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**TECHNICAL AND PROFESSIONAL COMMUNICATIONS 12  
PROVINCIAL EXAMINATION**

	<b>Value</b>	<b>Suggested Time</b>
1. This examination consists of <b>four</b> parts:		
PART A: Communication Concepts	10	10
PART B: Reading Comprehension	20	40
PART C: Editing and Responding	30	50
PART D: Case Study	40	80
<b>Total:</b>	<b>100 marks</b>	<b>180 minutes</b>

2. A hand-held calculator may be used for this examination; however, computers, calculators with a QWERTY keyboard, and electronic writing pads will not be allowed. Students must not bring any external devices to support calculators such as manuals, printed or electronic cards, printers, memory expansion chips or cards, or external keyboards. Students may have more than one calculator available during the examination. Calculators may not be shared, and must not have the ability to either transmit or receive electronic signals. Other electronic devices, including dictionaries and pagers, are **not** permitted in the examination room.
3. You may use a ruler or geometry set to create any graphics required for the Case Study.
4. The time allotted for this examination is **three hours**.

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## PART A: COMMUNICATION CONCEPTS

Value: 10 marks

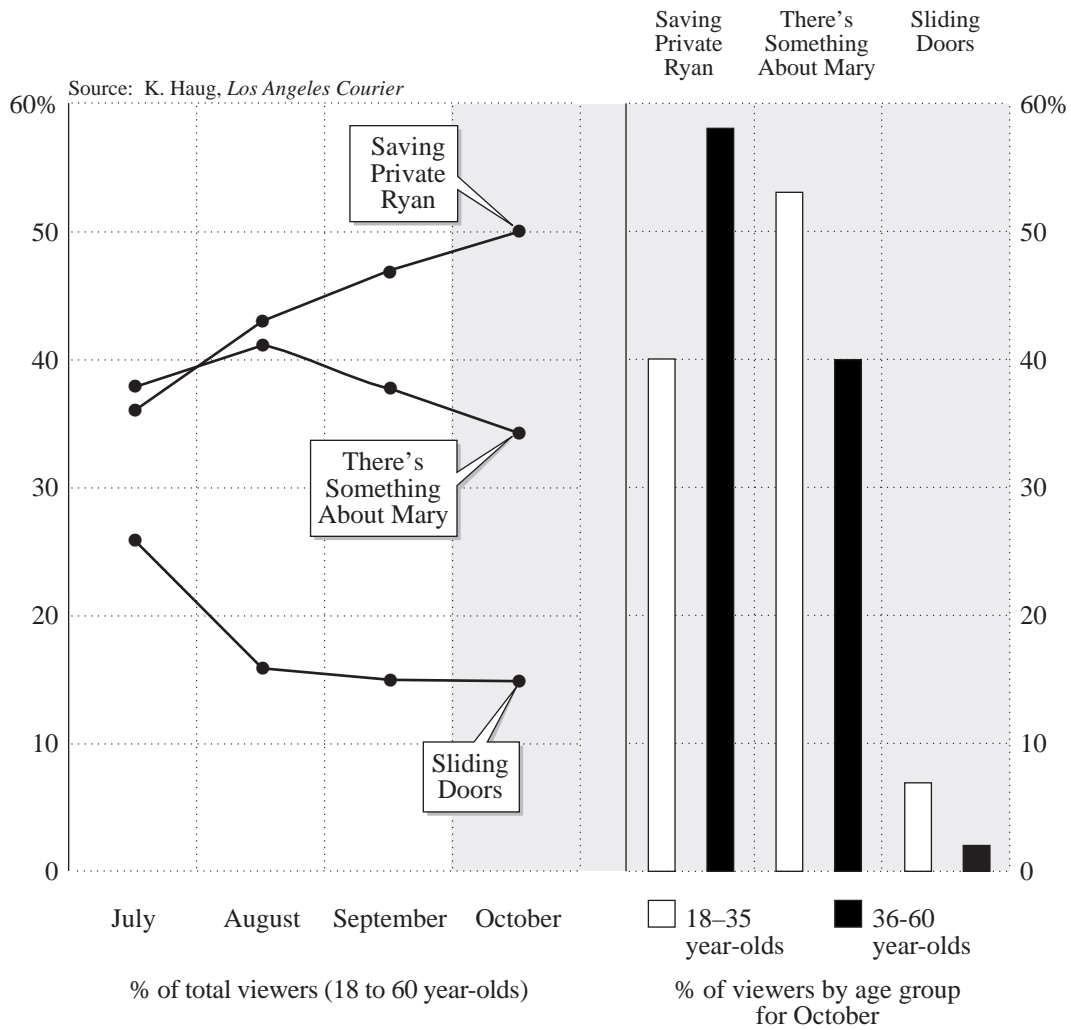
Suggested Time: 10 minutes

**INSTRUCTIONS:** For each multiple-choice question, select the **best** answer and record your choice on the Response Form provided. Using an HB pencil, completely fill in the circle that has the letter corresponding to your answer.

1. The **best** source for the publication details of a book is the
  - A. index.
  - B. copyright page.
  - C. table of contents.
  - D. author's biography.
  
2. When looking for a specific magazine article published last year, where is the **best** place to begin your search?
  - A. an encyclopedia
  - B. a card catalogue
  - C. a periodical index
  - D. a biographical database
  
3. The **best** format for the complete record of a job applicant's work experience is
  - A. a résumé.
  - B. a cover letter.
  - C. a memorandum.
  - D. a business letter.
  
4. When quoting from authoritative texts and articles in a report, a writer should indicate indebtedness to these sources with
  - A. letters of references.
  - B. letters of permission.
  - C. endnotes or footnotes.
  - D. page numbers in quotation marks.

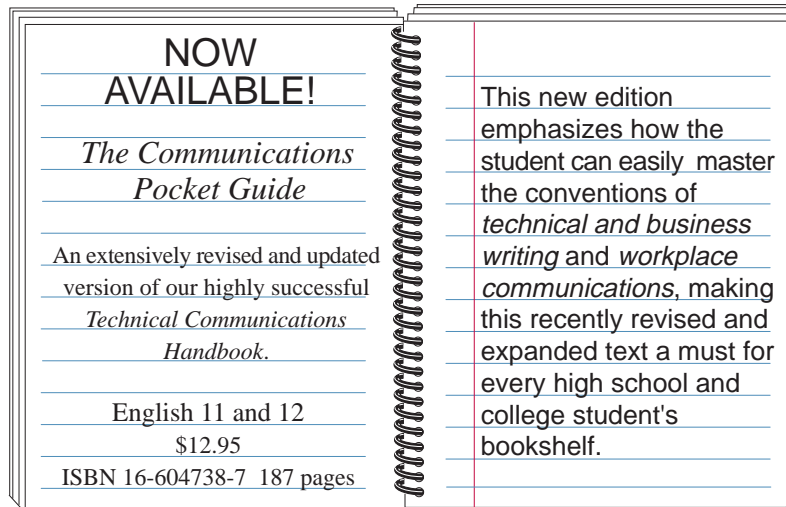
Use the following figure to answer questions 5 and 6.

Viewer's Choice for Best Picture 1998



5. What percentage of 18-35 year-olds chose *Saving Private Ryan* for best picture in October?
  - A. 40%
  - B. 50%
  - C. 58%
  - D. not enough information given
  
6. In what month was the percentage of 36-60 year-old viewers the highest for *Saving Private Ryan*?
  - A. August
  - B. September
  - C. October
  - D. not enough information given

Use the following advertisement to answer questions 7 and 8.



7. The **main** emphasis in the advertisement is that the book is

- A. concise.
- B. inexpensive.
- C. recently revised.
- D. widely available.

8. The layout of the advertisement is appropriate because it

- A. makes use of centering.
- B. illustrates font types and sizes.
- C. is representative of the product.
- D. shows the product's orientation toward college professors.

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9. A computer file that has been “zipped” or “stuffed” has been

- A. largely distributed over the Internet.
- B. expanded beyond the original version.
- C. produced for a virtual department store.
- D. compressed to save downloading time and disk space.

10. A World Wide Web search engine works by searching Web sites for

- A. available programs.
- B. designated key terms.
- C. a list of service-providers.
- D. authors of articles on the topic requested.

**OVER**

## PART B: READING COMPREHENSION

Value: 20 marks

Suggested Time: 40 minutes

**INSTRUCTIONS:** Read the following article carefully. For questions 11 to 20, select the **best** answer and record your choice on the Response Form provided.

### *Petroleum Exploration and Production*

#### **1. How is petroleum found and produced?**

Petroleum hydrocarbons—crude oil, natural gas and natural gas liquids—are generally found in tiny gaps in sedimentary rocks formed hundreds of millions of years ago. The hydrocarbons are typically in a porous formation under an impermeable layer of rock which prevents them from dispersing and migrating toward the surface.

The petroleum industry therefore faces four key challenges:

- locating the underground formations that may contain hydrocarbons;
- drilling wells into the rock formations;
- encouraging hydrocarbons to flow from the rock formation to the well; and
- bringing hydrocarbons to the surface.

New equipment and techniques are revolutionizing each of these activities. In contrast to earlier predictions that production of oil and gas in Canada would decline, output has actually risen during the 1990s, thanks largely to improved technology.

#### **2. Who locates petroleum-rich areas?**

Before drilling wells, companies acquire a great deal of geological and geophysical information. Some of this information is obtained from geological consultants. Data is also obtained from companies that specialize in analyzing data from existing wells and from surveys that detect tiny variations in the earth's magnetic field. However, the most important information usually comes from the analysis of geophysical data obtained from seismic surveys.

Crews place geophones or “jugs” in carefully

surveyed lines or grid patterns. The geophones are similar to microphones. They pick up the low-frequency sound waves that are generated by explosives or mechanical vibrators and then reflected by underground rock strata.

Sophisticated computer programs are used to process and interpret the digitally recorded data from the survey. Because sound waves travel at different speeds through different kinds of rock, geophysicists can produce quite detailed “maps” of the geography thousands of metres below the surface.

#### **3. Who drills wells?**

While geologists and geophysicists can now pinpoint more accurately the underground formations most likely to contain hydrocarbons, only drilling can determine whether there are actually commercial quantities of oil or gas present. Even in existing production areas, promising prospects may turn out to contain nothing but water or carbon dioxide.

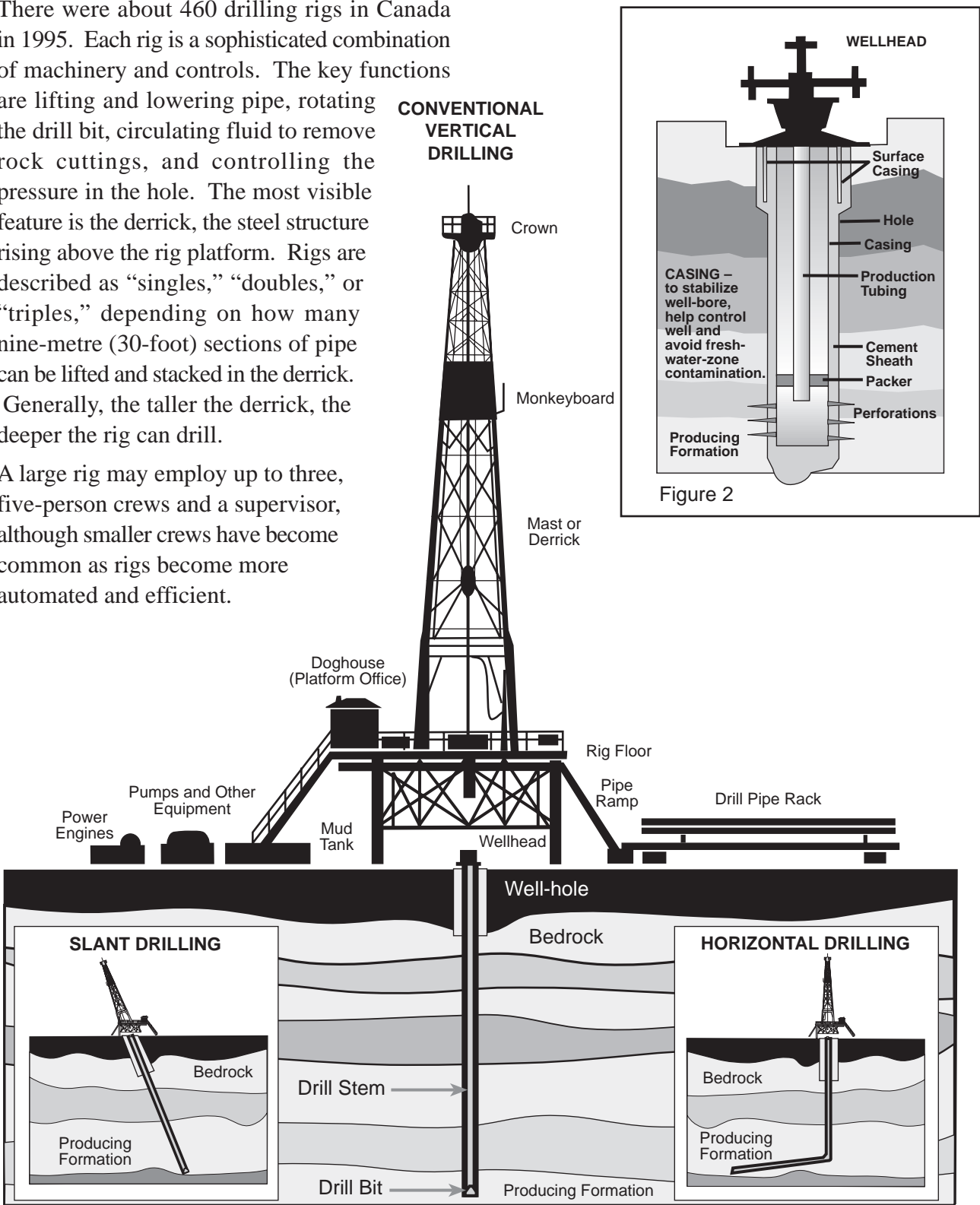
The Canadian petroleum industry drilled more than 11 000 wells in 1995. The average well in 1995 was about 1 000 metres deep, required about eight days to drill and cost about \$400 000. This does not include “completion,” the additional equipment and procedures needed to bring a successful well into production.

However, there is an enormous variation among wells depending on the location, depth, rock formations and anticipated reservoir pressure. A shallow well on the Prairies can reach target depth of 400–500 metres in two days at a cost of \$100 000 or less. A deep well in the Rockies can be more than 3 000 metres deep, requiring several months to drill and costing \$4 million or more.



There were about 460 drilling rigs in Canada in 1995. Each rig is a sophisticated combination of machinery and controls. The key functions are lifting and lowering pipe, rotating the drill bit, circulating fluid to remove rock cuttings, and controlling the pressure in the hole. The most visible feature is the derrick, the steel structure rising above the rig platform. Rigs are described as “singles,” “doubles,” or “triples,” depending on how many nine-metre (30-foot) sections of pipe can be lifted and stacked in the derrick. Generally, the taller the derrick, the deeper the rig can drill.

A large rig may employ up to three, five-person crews and a supervisor, although smaller crews have become common as rigs become more automated and efficient.



# D R I L L I N G   R I G

## (Main Components)

Figure 1

In addition, a total of about 60 other people are employed in various ways during the drilling of a typical well. These include truckers, construction workers, and caterers, as well as technology providers.

#### **4. How are wells “completed” and serviced?**

Before oil and gas can be produced from a well, various types of equipment must be installed and several procedures performed. These “completion” operations are performed by a service rig, which is usually truck-mounted and much smaller than a drilling rig. Service rigs also return to wells periodically to perform maintenance, replace equipment or enhance production.

There were about 600 service rigs in Canada in 1995. The first step in completion is the

installation of production tubing, a pipe of up to 114 millimetres in diameter which facilitates well control and protects the production casing from corrosion. The tubing can be replaced if necessary, while it would be difficult and expensive to replace the casing.

After the production tubing is in place, the casing must be perforated to allow a flow of hydrocarbons from the producing rock strata into the well. This is done by lowering a device called a perforating gun to the depth of the producing formation. An electrical pulse sent from the surface detonates shaped explosive charges in the gun to create perforations through the production casing. The well may also be “stimulated” by hydraulic fracturing (often known as “fracing”) to facilitate the movement of hydrocarbons through reservoir rock.

©Petroleum Communication Foundation

11. Because of changes in technology, oil and gas production in Canada has
- A. risen.
  - B. declined.
  - C. stayed the same.
  - D. become unpredictable.
12. In section 2, on page 4, quotation marks enclose the word “jugs” because it is
- A. slang.
  - B. a quote.
  - C. a metaphor.
  - D. a euphemism.
13. In section 3, on page 5, the sentence beginning “The key functions are...”
- A. is a periodic sentence.
  - B. uses parallel structure.
  - C. is a complex sentence.
  - D. uses the subjunctive mood.
14. A rig in which 18 metres of pipe can be stacked is known as a
- A. triple.
  - B. single.
  - C. double.
  - D. derrick.
15. What is the most appropriate heading for Figure 2, on page 5?
- A. Initial Drilling
  - B. Well Completion
  - C. Seismic Surveying
  - D. Derrick Construction
16. What is the closest approximate ratio of drilling rigs to the number of wells drilled in Canada in 1995?
- A. 1 : 2
  - B. 1 : 10
  - C. 1 : 20
  - D. 1 : 100

17. Up to how many people in total may be employed during a typical large drilling operation?
- A. 15
  - B. 16
  - C. 60
  - D. 76
18. On page 5, the label “Producing Formation” near the bottom of the sketches refers to the
- A. method of drilling.
  - B. impermeable layer of rock.
  - C. accessible petroleum source.
  - D. anticipated reservoir pressure.
19. The method of development used in the article is
- A. spatial.
  - B. sequential.
  - C. comparison.
  - D. cause and effect.
20. The article is written in the form of
- A. a report.
  - B. an essay.
  - C. a proposal.
  - D. a summary.

**INSTRUCTIONS:** Answer questions 1 to 3 based on the article “Petroleum Exploration and Production.” Complete sentences are not required.

1. According to the article, impermeable layers of rock can be both an advantage and a disadvantage to the petroleum industry. Give **one** example of each. **(2 marks)**

Advantage: \_\_\_\_\_  
\_\_\_\_\_

Disadvantage: \_\_\_\_\_  
\_\_\_\_\_

2. Explain the terms “exploration” and “completion” of an oil well, and describe a step involved in each process. **(4 marks)**

Explanation of exploration: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Step: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Explanation of completion: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Step: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Name **two** visual devices used to assist the reader in accessing information from the article.  
Explain how each device enhances the reader's understanding. **(4 marks)**

Device 1: \_\_\_\_\_

Explanation: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Device 2: \_\_\_\_\_

Explanation: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## PART C: EDITING AND RESPONDING

Value: 10 marks

Suggested Time: 15 minutes

**INSTRUCTIONS:** You are an editor. Consider the following article as if it were presented for publication. For questions 21 to 30, select the **best** answer and record your choice on the Response Form provided.

### (Title)

- 1 The success of Web sites is often measured in terms of “hits,” a feeble, even nonsensical index of how many people have visited your site on the Internet.
- 2 Technically, a hit is a request by a remote user for a page, text item, image; or any other Web site element. It doesn’t provide an indication of the number of *different* users.
- 3 A page which has several links may be visited at any moment in time by a particular given user who has hit that self-same page on numerous occasions. If you counted the hits and divided them by some number between 10 and 100, you might have some idea of how many different users actually visited your site.
- 4 This is where John Coate’s 1992 article “Cyberspace Innkeeping: Building an Online Community” ([gopher.well.com:70/1/community](http://gopher.well.com:70/1/community)) becomes relevant. If you were what Coate calls an “innkeeper” who attempts to make his or her site welcoming and comfortable for users, you would be more interested in the number of people who made *return* visits to your site—a statistic that no one seems to have considered.
- 5 One way to track return users to a Web site would be to require new visitors to sign in. At the least, you would then know who thought enough of your site to fill out an online form. However, you run the risk of users surfing over to a site that doesn’t require any work. Fortunately, today’s technology can take us to a new level of tracking, thanks to an innkeeping device known as a “cookie.”
- 6 A cookie is a very small computer program that a software manager of a remote Web site will place on your computer to report back to the cookie’s owner on who you are, when you last visited the site, what kind of computer you use, and so on.
- 7 On the one hand, cookies are an invasion of a computer-user’s privacy. \_\_\_\_\_, a well-designed cookie provides you with information about your visitors.
- 8 In order to invite hits, as an innkeeper, I would try to make my Web site visually—and practically—more like a family room than a formal dining room. I would strive for a design more like *The Reader’s Digest* than *The Globe and Mail*.
- 9 The graphic identity of your Web site sends a strong nonverbal message to all visitors. A site can look like a war room, a community centre, a library, or could resemble a room for the family. If you decide to do a bit of innkeeping in Web space, consider the physical places you have visited that did not make you feel particularly welcome. How were you greeted? What did you see? What did you do there? How did your host act?

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21. For the article as a whole, paragraph 1 provides
- A. a supporting point.
  - B. a precise definition.
  - C. an objective observation.
  - D. an introductory statement.
22. In paragraph 2, the semicolon in the segment "...text item, image; or any other..."
- A. is correct.
  - B. should be a dash.
  - C. should be a colon.
  - D. should be a comma.
23. In paragraph 3, what is the **best** revision for sentence 1?
- A. A page with several links may be hit repeatedly by a user.
  - B. A page with several links would be hit on numerous occasions by a particular user.
  - C. A page with several links on it would be visited any time by a user more than once.
  - D. A page with several links may be visited at any given time by a particular user more than once.
24. In paragraph 4, the word "return" is in italics because it is
- A. a metaphor.
  - B. a technical term.
  - C. repeating an idea.
  - D. being emphasized.
25. In paragraph 5, the language is predominantly
- A. jargon.
  - B. formal.
  - C. literary.
  - D. pretentious.
26. Which of the following **best** completes the second sentence in paragraph 7?
- A. Meanwhile
  - B. Consequently
  - C. On the other hand
  - D. Also, what is more

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27. Paragraph 8 should
- A. remain as written.
  - B. be joined to paragraph 7.
  - C. introduce the entire article.
  - D. describe *The Reader's Digest*.
28. In paragraph 9, the end of sentence 2 would **best** be written as
- A. ...a library, or a family room.
  - B. ...a library, or a room for the family.
  - C. ...a library, in addition, a family room.
  - D. ...like a library, or can look like a family room.
29. Which of the following is the **best** conclusion to the article?
- A. I invite readers for comments and suggestions.
  - B. Putting yourself in the shoes of your Web site visitors can be important.
  - C. Innkeeping won't solve the earth's energy shortage or over-population, but it's a start toward a kinder, gentler Internet.
  - D. Remember, it's not necessarily the number of visitors to your inn that counts, but how long those visitors stay and how often they return.
30. The **primary** purpose of the article is to
- A. censor cookie users.
  - B. entertain new Internet users.
  - C. ridicule the emphasis placed on the counting of hits.
  - D. emphasize that appealing Web sites attract return visitors.

**Organization and Planning**  
**(this will not be marked)**



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**Organization and Planning**  
**(this will not be marked)**



## PART D: CASE STUDY

**Value: 40 marks (Content: 20 marks; Visual Design: 20 marks)      Suggested Time: 80 minutes**

**INSTRUCTIONS:** Read the scenario below and write a standard business memorandum or letter as appropriate. For ease of navigation, it is expected that you will include supporting visuals. For emphasis in your work

- underline words to indicate *italics*,
- **circle** words to indicate **bold**.

### Scenario:

You are Pat Wilkinson (123 Elm Street, Greenwood, BC, V0H 1H0), a Grade 12 student at Forest Hills Secondary. Your Career and Personal Planning 12 class has decided to stage a regional Healthy-Living Conference May 5-6 as its major project for the course, and you are chairing the organizational committee. To help stage the event, you will have to apply for a \$1 250 grant from the Ministry of Health's "Healthy Schools" program.

To qualify for a grant from the Ministry of Health's "Healthy Schools" budget, you will have to outline a list of your anticipated costs and events. You also will have to demonstrate that this conference will be about teen issues—conceptualized, planned and organized by teens for teens. You must apply to the Ministry of Health no later than March 1, 2000. Before you can contact the Ministry, you must obtain approval for the conference from your principal, Ms. Chris Schroeder.

You intend to charge students \$10 and adults \$15; you estimate that 250 students and 50 adults will attend. Your class will enlist the help of local cable companies and newspapers to advertise the conference to local and surrounding communities. You are confident that your committee can persuade several local businesses to donate door prizes in exchange for free advertising on the conference program. The programs are being produced at no cost by the Technical and Professional Communications 12 class.

You need to book the foyer for Friday night registration from 6:30 p.m. to 8:30 p.m., a classroom block (which contains 10 rooms) from 10:00 a.m. to 2:00 p.m. on the Saturday, and the gym for the closing session at 2:30 p.m. You plan to have 30 workshop sessions in all. There will be two 50-minute sessions in the morning and one in the afternoon, each followed by a 10-minute break. You will be providing beverages and appetizers on the Friday night, and lunch at the school for all registrants on Saturday. The Ministry grant will help defer the cost of hiring a local caterer to supply the food and refreshments. You have an estimate from Carter's Catering for \$4 500.

The goal of your conference is to motivate teens to take positive action either in their own lives or in the greater community. Your committee has decided to present workshops on the following topics: substance abuse, violence, relationships, pregnancy, AIDS, depression/suicide, gang activity, first aid, esteem-building, stress management, drinking and driving, volunteering, fitness for life, peer counselling, and consensus-building. You need to identify the "keynote" speaker to kick off the conference on the Friday night, as well as decide which member of the school administration will address the closing session.

### Task:

Write to Ms. Chris Schroeder, Principal, Forest Hills Secondary School (6748 Birch Street, Greenwood, BC, V0H 1H0) regarding your plans for the conference to be held in four months. Ask her to confirm the room bookings for the conference and to write a letter to the Ministry of Health, offering the school administration's backing of the event. Outline your anticipated events and costs and your qualifications for the "Healthy Schools" grant. Date your correspondence January 31, 2000.

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**Organization and Planning**  
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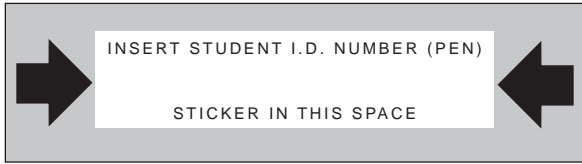




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**TECHNICAL AND  
PROFESSIONAL  
COMMUNICATIONS 12**

**June 1999**

Course Code = TPC

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**TECHNICAL AND  
PROFESSIONAL  
COMMUNICATIONS 12**

**June 1999**

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Score for  
Question 1:

1.           
(2)

Score for  
Question 2:

2.           
(4)

Score for  
Question 3:

3.           
(4)

Score for  
Question 4:

4.           
(20)

Score for  
Question 5:

5.           
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