A

BUSINESS MATHEMATICS

Monday, June 16, 1975 — 1:15 to 4:15 p.m., only

Instructions for Part I — Mental Calculation Test

Do not turn this sheet over until the signal is given.

All questions on Part I are to be worked mentally and the *answers only* placed on the back of this sheet. At the end of 15 minutes, work must stop and the answer sheet used for this part of the examination must then be immediately handed to the examiner.

Be sure to write your name in the proper space on the back of this sheet.

Do not begin work on the test until your teacher tells you to do so.

All answers must be written with pen and ink.

Scrap paper may not be used, nor may computations be made on the question paper.

When you have completed the examination, you must sign the statement printed at the end of the answer booklet, indicating that you had no unlawful knowledge of the questions or answers prior to the examination and that you have neither given nor received assistance in answering any of the questions during the examination. Your answer booklet cannot be accepted if you fail to sign this declaration.

Part I

MENTAL CALCULATION TEST

Pupil..

Directions (1-18): Write the correct answer to *each* of the following in the blank space at the right of each question.   No written computations are allowed.   [18]

1 Add: 172
            2,069
            24
            753
            1,107
            61
            _____

1.....................

2 Subtract: $89.27
            —6.98
            _____

2....$..............

3 What is the cost of 350 cards at 50¢ per C?

3....$..............

4 What is ½% of $1,600?

4....$..............

5 Which number is ¼ larger than 48?
(12; 50; 60; 66)

5.....................

6 What is 3.865 multiplied by 1,000?
(.3865; 38.65; 386.5; 3,865)

6.....................

7 What is the amount of interest on $1,500 for 60 days at 9%?

7....$..............

8 ¼ of 12 is equal to what part of 15?
(½; ⅓; ¼; ⅕)

8.....................

9 What is .875 expressed as a common fraction in its *lowest terms*?

9.....................

10 What is the cost of 3,000 pounds at $50 per ton?

10....$..............

11 What is the amount of interest on $600 for 90 days at 6%?

11....$..............

12 What is $14.5345 expressed to the *nearest whole cent*?
($15.00; $14.54; $14.53; $14.00)

12....$..............

13 8 jars are what percent of 48 jars?

13.....................

14 A three-year fire insurance policy costs $48.60. What is the average annual cost of this insurance?

14....$..............

15 Subtract: 274
            —89½
            _____

15.....................

16 What is the exact number of days between November 28 and January 17?

16.....................

17 What is 43.61% expressed as a decimal?

17.....................

18 80 is 12½% of (640; 560; 64; 10).

18.....................

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

A

BUSINESS MATHEMATICS

Monday, June 16, 1975 — 1:15 to 4:15 p.m., only

The answers to the questions on the following parts of this examination are to be written in the separate answer booklet. Be sure to fill in the heading of your answer booklet and sign the statement printed at the end.

DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN

Part II

Answer 18 of the 20 questions in this part. Scrap paper may be used. Write only your answers in the separate answer booklet.   [36]

IN RECORDING YOUR ANSWER IN THE ANSWER BOOKLET
BE SURE TO USE THE CORRECT SPACE.

1 During a recent week, Kristin Crounse's gross earnings were $101.84. Deductions from her pay were as follows:

    $ 5.96 for FICA (Social Security)
    16.10 for federal withholding tax
    2.00 for New York State withholding tax
    2.45 for group insurance
    1.50 for a United States Savings Bond

What net amount of money did Crounse receive as her take-home pay for the week?

2 Louis Hoffman insured his household furniture for $5,300 at an annual rate of $.55 per $100. What was the annual premium paid by Hoffman?

3 A machine originally costing $610.20 depreciated an average amount of $94.04 per year. What is the book or carrying value of this machine after four years of use?

4 Multiply 16.88 by 65 and divide the product by 40.

5 John Wilson recently deposited checks in his bank account for the following amounts: $67.14; $89.12; $32.22; $47.; $6.14. What was the total amount of this deposit?

6 In the partnership of Parr and Thorpe, with investments of $13,600 and $27,200, respectively, profits are to be divided in proportion to the partners' investments. What fractional part of the net profit would Parr receive?

7 To encourage retailers to purchase larger quantities, the Apex Manufacturing Company grants a discount of 10% if 100 units are purchased and a discount of 20% if 200 units are purchased. The list price for each unit is $6.80. If Jennifer Wahl orders 200 units, what is the net amount she will need to pay?

8 An electric toaster is listed at $14.40, less 12½%. What is the net cost to a retailer for one toaster?

9 A truck costing $4,800 has an estimated trade-in value of $2,100 at the end of three years. What was the amount of average yearly depreciation on this truck?

10 Lawson can rent a home for a total annual cost of $1,260. What average amount of money must be paid per month?

11 Debbie James, a waitress, has been earning $1.98 an hour for working a 40-hour week, but her hours are to be reduced to 36 hours a week. What rate of pay would she need to receive per hour in order to earn the same weekly gross pay?

12 Nancy Campbell pays $90 rent per month for her apartment. She estimates that the average monthly cost of her utilities is 17½% of her rent. What amount of money must Campbell plan to spend each month for utilities?

13 If the present FICA contribution rate for self-employed persons is 7.9%, what amount of money would Cowan, a self-employed accountant, contribute on earnings of $1,150 for the month of January?

14 Hamilton bought 20 shares of American Paper stock at 58¾, plus brokerage charges of $18.75. What was the total cost of the purchase to Hamilton?

15 On October 1, Bird's bank statement showed a balance of $1,985.76. Outstanding checks totaled $305.25. A deposit of $138.95 mailed to the bank on September 30 did not appear on the bank statement. What was Bird's correct available bank balance on October 1?

16 Divide 124.312 by 75.8.

17 A suit that cost $60 was sold for $70.80. What was the percent of gain based on the cost?

18 A high school graduating class presented a scoreboard to the school as its class gift. The class was billed on June 16 for the purchase and installation of the scoreboard. The contractor's bill was for $720, terms 5/10, n/90. If this bill was paid on June 25, what amount of money was paid to the contractor?

19 Bob Wieck earned $146 last week. If the current rate for FICA taxes is 5.85%, what amount should be withheld from his pay?

20 The property tax rate in a community is $45.50 per $1,000 of assessed valuation. What should be the amount of the property tax on a house and lot that is assessed at $8,000?

Part III

This part consists of five groups of questions. Choose four of these five groups. Be sure to answer all questions in each group chosen. Use scrap paper for your work. Write only your answers on the separate answer sheet.   [16]

Group 1

Directions (21-22): Base your answers to questions 21 and 22 on the information below.

Susan Barrons is buying a television set on the installment plan for a total price of $450. She has agreed to make a downpayment of $150, and to pay the balance in 20 equal monthly payments.

21 What will be the amount of each monthly payment?   [2]

22 What percent of the installment price is the downpayment?   [2]

Group 2

Directions (23-24): Base your answers to questions 23 and 24 on the information below.

Test Marks for the Week of June 2, 1975
Monday Through Thursday

Student	M	T	W	TH
Baker	81	64	80	88
Coffin	90	82	93	86
Daly	91	88	96	82
Gratton	80	65	89	100
Hart	78	83	86	67

23 What was the class average for Monday?   [2]

24 What grade must Hart obtain on Friday in order to have a weekly average of 80%?   [2]

Group 3

Directions (25-26): Base your answers to questions 25 and 26 on the information given below.

John Moore purchased 400 shares of stock. The stock was bought at $76 per share. The annual dividend is $6.50 per share.

25 What was the total amount of money Moore invested in this stock? [Disregard brokerage charges.]   [2]

26 What was the total amount of money Moore could expect as annual dividends from this stock?   [2]

Group 4

Directions (27-28): Base your answers to questions 27 and 28 on the information given below.

Scott Jackson opened an $800 account in a savings bank that currently pays 5% interest, compounded quarterly.

27 What is the rate of interest paid each quarter?   [2]

28 If Jackson had deposited his money in another bank that paid 6% interest, compounded quarterly, what would be the balance in his savings account at the end of two quarterly interest periods?   [2]

Group 5

Directions (29-30): Base your answers to questions 29 and 30 on the information below.

Ann Doran needed money to pay some medical bills. On September 9 she discounted at 9% her own 90-day promissory note for $1,200 at the bank.

29 What amount of money did Doran receive from the bank as net proceeds from the note?   [2]

30 On what date will Doran's debt to the bank come due?   [2]

Part IV

Answer any five of the seven questions in this part. All work must be shown in the answer booklet. [30]

31 On July 1, Frank Sturdevant's bank statement showed a balance of $390.75. His checkbook on that date showed a balance of $356.34. The bank statement showed that a service charge of $1.15 had been deducted from his bank balance. Checks were outstanding for $10.30, $30.26, and $20.00; and a deposit for $25.00, made June 28, was not recorded by the bank on the statement. Prepare a reconciliation statement and indicate the correct checkbook balance.

32 Segal and Williams formed a partnership with investments of $9,000 and $6,000, respectively. The partnership agreement provided that the net profit was to be divided as follows: Each partner was to receive 6% interest annually on his investment with any remaining profit to be divided equally. In a recent year, the firm's net profit was $21,500. How much money did Segal receive as his share of the net profit?

33 Members of an FBLA chapter, in an effort to raise funds in part payment for a trip to New York City, bought 152 pounds of candy for $70. They sold the candy at $1.10 per pound. It will cost approximately $6. for each of the 30 members of the club to make the one-day trip. What additional sum of money must *each* of the 30 members pay to cover the cost of the trip?

34 Kathy Furman can buy an office duplicating machine for $700, less 10% and 10%, from the Fairchild Supply Company. She can buy the same model from the Janke Equipment Company for $1,000, less 40%, terms 3/10, n/60. If Furman can pay cash, what amount of money would she save by taking the better offer?

35 Walter Huston purchased a house for $24,000. He is paying 8% interest on an $18,000 mortgage. Other annual expenses are: taxes, $580; insurance, $100; depreciation, 2% of the purchase price; and miscellaneous, $300. What is the annual cost of owning Huston's home?

36 Phyllis Norton works as a saleswoman in a variety store. Part of the time she sells cosmetics on which she receives a commission of 5% and the rest of the time she sells kitchen utensils on which she receives a commission of 8%. She also receives a base salary of $125 a week. Last week she sold $310.20 worth of cosmetics and $119.25 worth of kitchen utensils. What were her gross earnings for that week?

37 During 1974, the Norwood Paint Company purchased paint at $3.50 per gallon from the Pennsylvania Paint Company. During January they purchased 50 gallons, receiving a quantity discount of 2%; during April they purchased 120 gallons, receiving a quantity discount of 3%; and during August they purchased 250 gallons, receiving a quantity discount of 4%. What *total* amount of money did Norwood Paint Company *save* during the year on purchases by taking advantage of these discounts?

A

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

BUSINESS MATHEMATICS

Monday, June 16, 1975 — 1:15 to 4:15 p.m., only

ANSWER BOOKLET

Pupil...Teacher..

School...

Part II [36 credits]
Answer only 18 questions.

1...............	6...............	11...............	16...............
2...............	7...............	12...............	17...............
3...............	8...............	13...............	18...............
4...............	9...............	14...............	19...............
5...............	10...............	15...............	20...............

Part III

Answer the questions in only four of the five groups in this part. Be sure to write in the properly numbered spaces the answers to the groups of questions you have chosen. Leave blank the spaces for the group of questions you do not choose to answer.

Group 1
21...............[2]
22...............[2]

Group 3
25...............[2]
26...............[2]

Group 4
27...............[2]
28...............[2]

Group 2
23...............[2]
24...............[2]

Group 5
29...............[2]
30...............[2]

Part IV

Answer only five of the seven questions in this part. Be sure to write the number of the problem in the proper space. All work for this part must be shown in the spaces provided.

[Use this space for computation.]

Problem Number: ....

Answer:..................[6]

[Use this space for computation.]

Problem Number: ....

Answer:..................[6]

[2]

[Use this space for computation.]

Problem Number: ....

Answer:.................[6]

[Use this space for computation.]

Problem Number: ....

Answer:.............____[6]

[3]

Problem Number: ....

Answer:................. [6]

I do hereby affirm, at the close of this examination, that I had no unlawful knowledge of the questions or answers prior to the examination, and that I have neither given nor received assistance in answering any of the questions during the examination.

_____
Signature

[4]

FOR TEACHERS ONLY

BM

SCORING KEY

BUSINESS MATHEMATICS

A

Monday, June 16, 1975 — 1:15 to 4:15 p.m., only

Use only *red* ink or *red* pencil in rating Regents papers. Do not attempt to *correct* the pupil's work by making insertions or changes of any kind. Use checkmarks to indicate pupil errors.

Scores should be cumulated within parts of the examination and transferred to the cover of the answer booklet.

Part I — Mental Calculation Test

Allow a total of 18 credits, one credit for each of the following. [Allow no partial credit.]

(1) 4,186	(6) 3,865	(11) $9	(16) 50
(2) $82.29	(7) $22.50	(12) $14.53	(17) .4361
(3) $1.75	(8) $\frac{1}{5}$	(13) $16\frac{2}{3}\%$	(18) 640
(4) $8	(9) $\frac{7}{8}$	(14) $16.20	
(5) 60	(10) $75	(15) $184\frac{1}{2}$	

Part II

Allow credit for only 18 of the 20 questions in this part. If more than 18 questions are answered, only the first 18 answered should be considered. Allow a total of 36 credits, two credits for each correct answer. [Allow no partial credit.]

(1) $73.83	(11) $2.20
(2) $29.15	(12) $15.75
(3) $234.04	(13) $90.85
(4) 27.43	(14) $1,193.75
(5) $241.62	(15) $1,819.46
(6) $33\frac{1}{3}\%$ *or* $\frac{1}{3}$	(16) 1.64
(7) $1,088	(17) 18%
(8) $12.60	(18) $684
(9) $900	(19) $8.54
(10) $105	(20) $364

[1]

[OVER]

Part III

Allow a total of 16 credits, 4 credits for each of four groups. If more than four groups are answered, only the first four answered should be considered. [Allow no partial credit for any one question.]

Group 1

(21) $15   [2]

(22) 33⅓%   [2]

Group 2

(23) 84 *or* 84%   [2]

(24) 86 *or* 86%   [2]

Group 3

(25) $30,400   [2]

(26) $2,600   [2]

Group 4

(27) 1¼% *or* 1.25%   [2]

(28) $824.18   [2]

Group 5

(29) $1,173   [2]

(30) Dec. 8   [2]

Part IV

Allow a total of 30 credits, 6 credits for each of five questions. If more than five questions are answered, only the first five answered should be considered. [Allow partial credit as indicated in the 1974 edition of "Guide for Rating Regents Examinations and Competency Tests in Business Subjects."]

(31) $355.19

(32) $10,840

(33) $2.76

(34) $15

(35) $2,900

(36) $150.05

(37) $51.10

[2]