

FINAL EXAMINATION

INSTRUCTIONS

The following multiple choice examination is designed to test your understanding of the material presented in this Individual Learning Program. Besides telling us how well you have learned the subject, this exam provides you with a complete review of the program, and this serves as another learning activity to ensure your understanding of the subject.

This final exam is optional, and you are not obligated to submit it. However, if you have completed the program you will no doubt want to receive some recognition for this accomplishment. If you complete the exam and make a passing grade, you will receive an attractive Certificate of Achievement and Continuing Education Units (CEU) of credit that indicate your participation in and satisfactory completion of an adult continuing education course.

The final exam is an "open book" test. This means that you may refer back to the text material, the cassette tapes, or the experiments in obtaining your answers. You may also use any other reference material available to you. However, you may not receive help from another individual. The work must be entirely your own. To take the exam, read each question completely and select the correct answer. Place a check beside the answer (A, B, C, or D) that you feel is **most** correct. It is usually a good idea to read the question and answers twice to be sure you fully understand what is being asked.

When you have answered all the questions, carefully transfer your answers to the Examination Answer Sheet. Place an "X" in the box labeled with your answer choice (A, B, C, or D). Be sure to fill in your name, address, and course number in the spaces provided. Sign and date your answer sheet as indicated.

Next, fill out the Educational Record and the Educational Survey forms. The Educational Record form will be retained at Heath in a transcript file. When your exam is graded, your grade will be recorded and the form signed. You may request a copy of your transcript for transfer of credit to your employer, and institution recognizing the CEU, or for your own use. Send \$1.00 for each copy requested to Transcript Records, Heathkit Continuing Education, Benton Harbor, Michigan 49022.

The Educational Survey form provides us with useful feedback about you and your opinions. These will help us to improve our present programs and develop new programs based on your needs and interests. Both the Educational Record form and the Educational Survey form must be returned with your final exam. No certificate for credit can be awarded without them.

Mail the Examination Answer Sheet, the Educational Record form, and the Educational Survey form using the return envelope provided for that purpose. Do not mail the Final Examination, as you will need it later to check your answers.

Your Answer Sheet will be graded and returned to you along with a summary of the correct answers. If you correctly answer 70 percent or more of the questions, you will be awarded the Certificate of Achievement and the appropriate Continuing Education Units of credit.

EXAMINATION

1. What binary number is equivalent to 206.0625_{10} ?
 - A. 11001011.001
 - B. 11001110.001
 - C. 11001110.0001
 - D. 11001011.0001

2. What hexadecimal number is equivalent to 10011101.101_2 ?
 - A. 157.625
 - B. 9D.A
 - C. 9D.5
 - D. AD.5

3. What hexadecimal number is equivalent to 1631.25_{10} ?
 - A. F56.4
 - B. 65F.1
 - C. 65F.4
 - D. 56F.1

4. What is the largest unsigned number that can be stored in an 8-bit memory location?
 - A. 256_{10}
 - B. FF_{16}
 - D. 127_{10}
 - D. $65,535_{10}$

5. What is the range of signed numbers that can be expressed by an 8-bit byte?
- A. 0 to $+255_{10}$
 - B. -127_{10} to $+128_{10}$
 - C. 0 to $+65,535$
 - D. -128_{10} to $+127_{10}$
6. The number 11111110 represents:
- A. 254_{10}
 - B. -2_{10}
 - C. -1_{10}
 - D. Either of the above depending on numbering system used.
7. What is the 2's complement representation of -73_{10} ?
- A. 10110111
 - B. 10110110
 - C. 11001001
 - D. 01001001
8. When 11011101 is ANDed with 00111001, the result is:
- A. 11100100
 - B. 11111101
 - C. 00010110
 - D. 00011001
9. When 11011101 is ORed (inclusive) with 00111001, the result is:
- A. 11100100
 - B. 11111101
 - C. 00010110
 - D. 00011001
10. When 11011101 is ORed (exclusive) with 00111001, the result is:
- A. 11100100
 - B. 11111101
 - C. 00010110
 - D. 00011001
11. In a typical microprocessor, the program counter:
- A. holds the data that is to be placed on the data bus.
 - B. contains the address of the next instruction to be executed.
 - C. holds the opcode while it is being decoded.
 - D. contains the address at which the next data byte will be stored.

- 4
12. Using this addressing mode, the data word that is to be operated upon is the byte following the opcode. This is called:
 - A. direct addressing.
 - B. implied addressing.
 - C. relative addressing.
 - D. immediate addressing.

 13. In the inherent addressing mode,
 - A. there is never an operand.
 - B. if there is an operand, its location is implied by the instruction itself.
 - C. the address of the operand may be the second byte of the instruction.
 - D. there is always an operand.

 14. The ADDA instruction adds one operand to another. When this instruction is executed:
 - A. one operand must be in memory; the other must be in accumulator A.
 - B. both operands must be in memory.
 - C. one operand must be in accumulator A; the other must be in accumulator B.
 - D. both operands must be stored in the ALU.

 15. During the fetch and execute phases of the "ADDA direct" instruction, the information on the data bus will be:
 - A. The opcode followed by the operand.
 - B. The opcode, followed by the address of the operand, followed by the operand.
 - C. The program count, followed by the opcode, followed by the address of the operand, followed by the operand.
 - D. The operand address followed by the operand.

 16. The diamond shaped block in a flowchart would probably correspond to which of the following instructions?
 - A. BRA
 - B. ADDA
 - C. WAI
 - D. BEQ

 17. The second byte of the BRA instruction is:
 - A. added to the address in the index register.
 - B. the address of the next opcode to be executed.
 - C. added to the address in the program counter.
 - D. the next opcode to be executed.

18. The numbers 10110000 and 10101011 are added. Immediately after the ADD instruction is executed, the condition codes will indicate:
- A. C=1, N=0, Z=0, V=1
 - B. C=1, N=1, Z=0, V=0
 - C. C=1, N=1, Z=0, V=1
 - D. C=0, N=0, Z=1, V=0
19. In the indexed addressing mode, the second byte of the instruction:
- A. is the higher order address byte.
 - B. is the lower order address byte.
 - C. is added to the 16-bit address in the index register.
 - D. is a signed two's complement number.
20. Which of the following instructions will cause the MPU to ignore interrupt requests?
- A. CLI
 - B. SEI
 - C. RTI
 - D. SWI
21. In 6800 based microcomputers, the stack is a portion of:
- A. RAM that acts as a first-in, first-out memory.
 - B. ROM that acts as a first-in, first-out memory.
 - C. RAM that acts as a last-in, first-out memory.
 - D. ROM that acts as a last-in, first-out memory.
22. Which of the following instructions does not affect the stack pointer?
- A. PULA
 - B. RTI
 - C. BSR
 - D. BRA

23. When the 6800 MPU is reset, the program counter:
- A. is reset to 0000_{16}
 - B. is set to $FFFF_{16}$
 - C. is loaded from memory locations $FFFE_{16}$ and $FFFF_{16}$.
 - D. is loaded from memory locations 0000_{16} and 0001_{16} .
24. At what time during the MPU cycle is data from memory first placed on the data bus?
- A. At the rising edge of the $\phi 1$ clock signal.
 - B. At the falling edge of the $\phi 1$ clock signal.
 - C. At the rising edge of the $\phi 2$ clock signal.
 - D. At the falling edge of the $\phi 2$ clock signal.
25. A disadvantage of direct addressing is:
- A. It requires more machine cycles to execute a given instruction than does extended addressing.
 - B. It requires more bytes per instruction than does extended addressing.
 - C. The operand must be in the first 256_{10} bytes of memory.
 - D. All the above.
26. One difference between the JMP and JSR instructions is that when the JSR instruction is executed:
- A. The contents of all MPU registers are saved in the stack.
 - B. The contents of the program counter are saved in the stack.
 - C. The interrupt mask is set.
 - D. The address of the next opcode is pulled from the stack.

27. Which of the following instructions could be used to output data to a display?
- A. STX
 - B. STAA
 - C. STS
 - D. All the above
28. Which of the following instructions causes the greatest change in the stack pointer?
- A. STS
 - B. JSR
 - C. RTS
 - D. RTI
29. Which of the following is **least** likely to damage an MPU integrated circuit?
- A. Excessive supply voltages.
 - B. Improper handling during assembly due to static electricity.
 - C. A faulty control program.
 - D. Excessive heat during soldering.
30. When attached to a keyboard, the MPU is often programmed to:
- A. determine which switch is closed.
 - B. debounce the switches.
 - C. produce a different number for each switch closure.
 - D. all the above.

For questions 31 through 35 refer to the program shown in Figure 1. This program adds two 10-digit BCD numbers.

31. On the first pass through the program, the LDAA,X instruction loads the accumulator from memory location:
- A. 0013_{16}
 - B. 0018_{16}
 - C. 0014_{16}
 - D. $001D_{16}$
32. On the first pass through the program, which instruction is executed immediately after the BNE instruction?
- A. LDAA,X
 - B. WAI
 - C. TPA
 - D. LDX
33. What do the instructions in locations $000E_{16}$ through 0012_{16} do?
- A. They convert the binary sum to BCD.
 - B. They attach the proper sign bit to the sum.
 - C. They form the least significant digit of the sum.
 - D. They attach the carry bit to the sum as the most significant digit.
34. After the numbers are added, in what memory locations is the resulting sum stored?
- A. 0014_{16} through 0018_{16} .
 - B. 0019_{16} through $001D_{16}$.
 - C. $001E_{16}$ through 0023_{16}
 - D. $001F_{16}$ through 0024_{16} .
35. How many times is the program loop executed?
- A. Ten times
 - B. Five times
 - C. Twice
 - D. Once

HEX ADDRESS	HEX CONTENTS	MNEMONICS/ CONTENTS	COMMENTS
0000	0C	CLC	
0001	CE	LDX#	
0002	00	00	
0003	05	05	
0004	A6	LDAA,X	
0005	13	13	
0006	A9	ADCA,X	
0007	18	18	
0008	19	DAA	
0009	A7	STAA,X	
000A	1E	1E	
000B	09	DEX	
000C	26	BNE	
000D	F6	F6	
000E	07	TPA	
000F	84	ANDA#	
0010	01	01	
0011	97	STAA	
0012	1E	1E	
0013	3E	WAI	
0014	98	98	} MSD
0015	76	76	
0016	54	54	
0017	32	32	} LSD
0018	10	10	
0019	99	99	} MSD
001A	88	88	
001B	77	77	} 10-digit BCD Augend (9,988,776,655 ₁₀)
001C	66	66	
001D	55	55	

Figure 1.
This program adds two 10-digit BCD numbers.

36. What is the minimum number of 1024 by 1 RAM IC's required to develop a memory of 8-bit words?
- one
 - two
 - four
 - eight

Refer to Figure 2 for questions 37 through 39.

37. Which of the following addresses will enable the addressable latch?
- 40F8
 - 80FF
 - 20FF
 - 00F8
38. A data byte is transferred to the addressable latch:
- serially via the LSB of the data bus.
 - in parallel via the data bus.
 - via address lines A_0 , A_1 , and A_2 .
 - via pin 8 of IC-3.
39. IC-2 and IC-3:
- form the address decoder for the latch and display.
 - convert parallel data to serial data.
 - convert serial data to parallel data.
 - determine the character displayed.

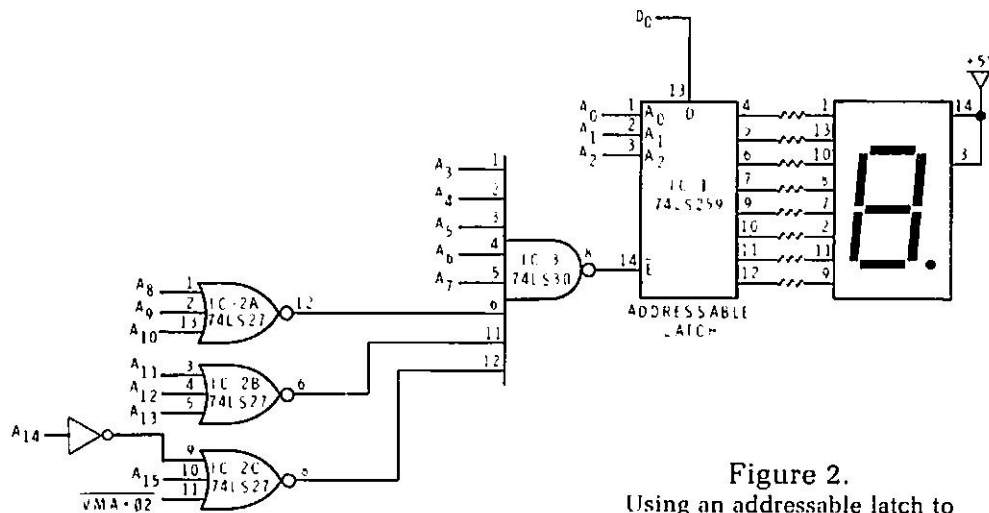


Figure 2.
Using an addressable latch to
drive a display.

40. The 6800 MPU can be stopped by:
- A. the SWI instruction.
 - B. forcing the $\overline{\text{halt}}$ line low.
 - C. forcing the $\overline{\text{BA}}$ line low.
 - D. forcing the $\overline{\text{reset}}$ line low.
41. Three state logic gates
- A. have enable/disable inputs as well as the normal data inputs.
 - B. are effectively disconnected from the circuit when disabled.
 - C. are generally used when two or more gates drive the same bus line.
 - D. all the above.
42. Which of the following types of interrupts does not cause data to be pushed into the stack?
- A. Software Interrupt
 - B. Non-maskable Interrupt
 - C. Reset Interrupt
 - D. Interrupt Request

Refer to Figure 3 for questions 43 through 45.

43. The ROM has:

- A. 1024_{10} bytes and a starting address of $FC00_{16}$.
- B. 512_{10} bytes and a starting address of $FC00_{16}$.
- C. 1024_{10} bytes and a starting address of $F800_{16}$.
- D. 512_{10} bytes and a starting address of $FD00_{16}$.

44. Which of the following lines is bi-directional?

- A. A_0
- B. VMA
- C. DB_0
- D. Reset

45. Which one of the following statements is true?

- A. An additional address decoder (not shown) is required to define the addresses of the I/O devices.
- B. This system uses a 128-byte RAM.
- C. The PIA responds to addresses $FC00$ through $FC03_{16}$.
- D. The PIA responds to only four different addresses.

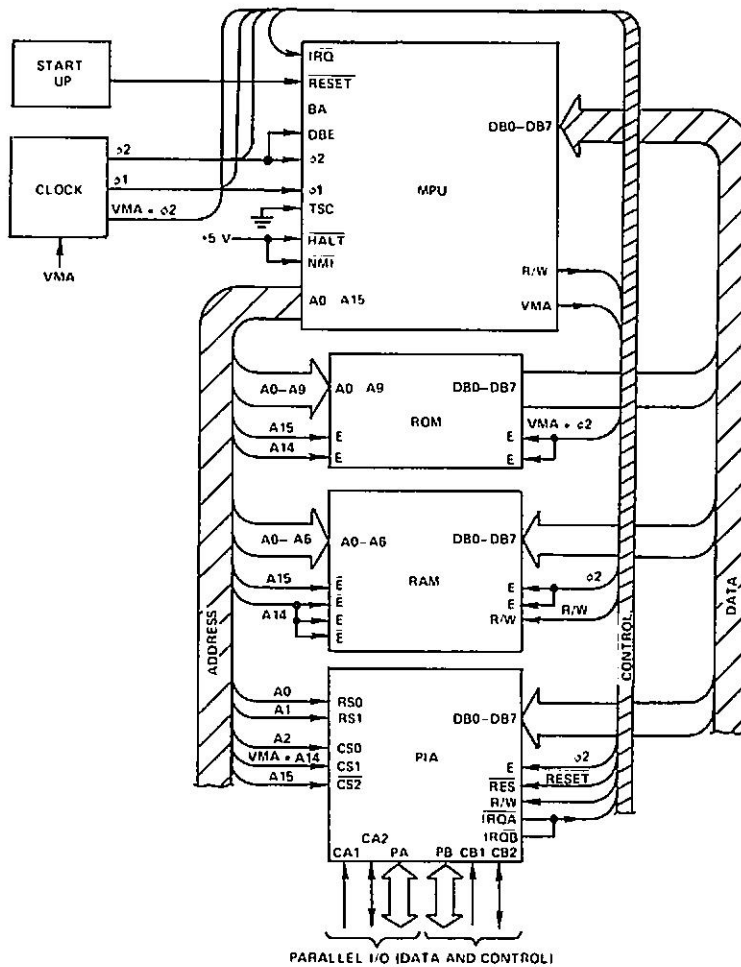


Figure 3.
A microprocessor system.

46. What type of displays are used?
- A. All displays are common-cathode types.
 - B. All displays are common-anode types.
 - C. Displays 0 through 3 are common-cathode types but displays 4 through 7 are common-anode types.
 - D. Displays 0 through 3 are common-anode types but displays 4 through 7 are common-cathode types.
47. To which of the following addresses will this PIA respond?
- A. 4004 through 4007₁₆
 - B. 4008 through 400B₁₆
 - C. 8004 through 8007₁₆
 - D. 8008 through 800B₁₆
48. When this PIA is reset:
- A. all of its internal registers are reset to 0.
 - B. all peripheral bus lines are set up as outputs.
 - C. PA0 through PA7 become inputs while PB0 through PB7 become outputs.
 - D. PA0 through PA7 become outputs while PB0 through PB7 become inputs.
49. To display the number 5 on display 7, what binary numbers must be stored in output registers A and B?
- A. ORA = 00000101; ORB = 11100000
 - B. ORA = 10110110; ORB = 11100000
 - C. ORA = 01001001; ORB = 10000000
 - D. ORA = 10010010; ORB = 10000000
50. Assume that the PIA has been reset. Which of the following will initialize the PIA in the proper configuration?
- | | | | |
|----|--|----|--|
| A. | LDAA # FF
STAA 4008
STAA 400A
LDAA # 04
STAA 4009
STAA 400B | B. | LDAA # 00
STAA 4008
STAA 400A
LDAA # 80
STAA # 4009
STAA # 400B |
| C. | LDAA # FF
STAA 4004
STAA 4006
LDAA # 04
STAA 4005
STAA 4007 | D. | LDAA # 00
STAA 4004
STAA 4006
LDAA # 80
STAA # 4005
STAA # 4007 |

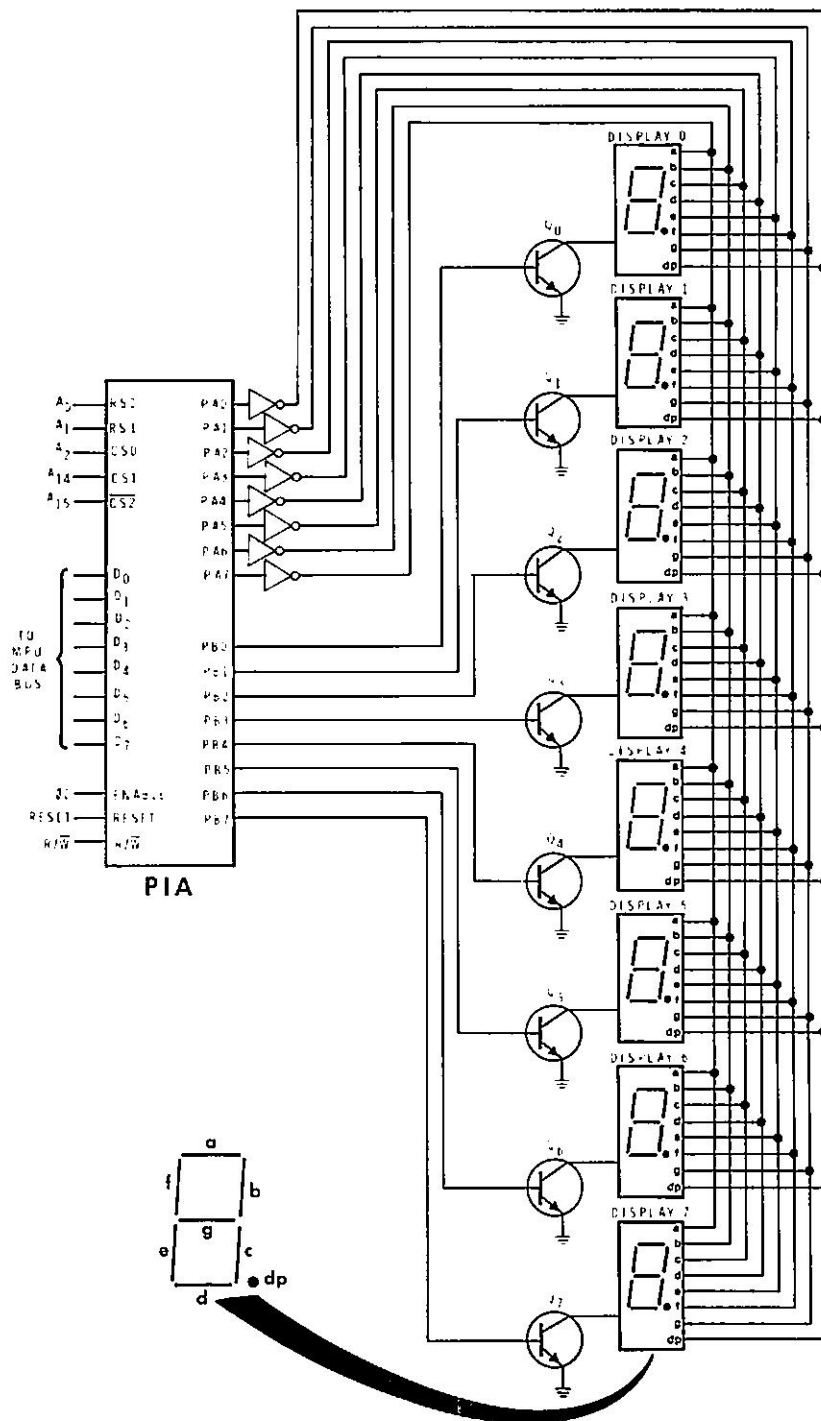


Figure 4.
Using the PIA to
multiplex displays.



HEATH COMPANY
BENTON HARBOR, MICHIGAN 49022
PHONE 616-982-3200 TLX 72-9421

**Educational
Systems**

EDUCATIONAL SURVEY

Dear Customer:

The purpose of this survey is to give you an opportunity to express your opinions and ideas about Heath Individual Learning Programs. The information that you provide here will help us to improve our existing programs and give us guidelines for developing new programs of interest to you. This feedback benefits you as well as Heath Continuing Education.

Please fill out this form and return it to us with your final examination answers and Educational Record form. If you elect not to take the final examination, please use the envelope to return this form.

Louis E. Frenzel
Director of Education

Place a check in the space adjacent to your answer.

1. What Individual Learning Program did you take? _____
Fill in Model No.

2. How many Heath products have you purchased prior to this one?
- None
 - 1 or 2
 - 3-5
 - 6-10
 - More than 10

Have your previous Heath purchases generally been:

- Technical products (amateur radio, instruments, computers, etc.)
- Consumer products (audio, TV, clocks, etc.)
- Both

3. How many hours did it take you to complete this course of instruction?
- Less than 15 hours
 - 15-25 hours
 - 26-35 hours
 - 36-50 hours
 - More than 50 hours
4. How many "study sessions" did you take to complete this course of instruction?
- Less than 10
 - 10-20
 - 21-35
 - 36-50
 - More than 50

5. On the average, how long did each "study session" last?
- Less than 15 minutes
 - 15-30 minutes
 - 31 minutes-1 hour
 - 1-2 hours
 - More than 2 hours

6. What was your general motivation or interest in purchasing this course? Why did you buy it?

- Hobby
 - General interest
 - Job improvement
 - Other (please specify): _____
-
-
-

7. Will you purchase another Heath Individual Learning Program?

- Yes
 - No
- If no, why not? _____
-
-

8. How important is formal recognition of your achievement (Continuing Education Units, certificate of completion, college credit, etc.)?

- Very important
- Desirable but could live without
- Not necessary

9. How would you rate the "level of difficulty" of this course of instruction?

- Much too easy
- Too easy
- About right
- Too difficult
- Much too difficult

10. What did you think about this "kind" of learning experience?

- Hated it
- Disliked it
- OK
- Liked it
- Loved it

11. What about the sections that were in a "programmed learning" format?
- Not very helpful
 - Not helpful
 - OK
 - Helpful
 - Very helpful
12. Were the audio-visual materials an effective training aid?
- Not very helpful
 - Not helpful
 - OK
 - Helpful
 - Very helpful
13. How much do you feel you learned from this course of instruction?
- A lot
 - A little
 - None
14. Prior to this course, have you ever participated in any type of "home study" course?
- Yes
 - No

If yes, what?

Course subject _____

School name _____

15. Have you ever participated in other forms of adult continuing education programs?
- Yes
 - No

If yes, what type?

- Employer sponsored in-house courses
- Conferences or seminars
- Courses at local high school or community college
- Evening university courses for credit toward a degree
- Other (please specify): _____
- _____
- _____
- _____

16. Would you purchase a comprehensive, career-level, home study course that is priced in the \$500 to \$1000 range?

- Yes
- No

17. Of the ideas for future Heathkit Individual Learning Programs listed below, which one would you be most interested in taking?

- Automotive
- Digital computer operation
- Computer languages and programming
- TV servicing
- Audio Hi-Fi
- Commercial FCC license preparation
- Photography
- Welding
- Electronic circuit design
- Weather
- Astronomy
- Math
- Foreign languages
- Other (please specify): _____
- _____

Now a few questions for the purpose of classification.

18. What is your sex?

- Female
- Male

19. What is your occupation?

- Engineer
- Professional
- Business Executive
- Technician
- Educator
- Factory Worker
- Student
- Retired
- Other (please specify): _____

20. What is your highest level of education?

- Completed elementary school (1-8)
- In high school (9-12)
- Completed high school (9-12)
- In college or university
- In technical school or junior college
- Completed college or university
- Completed technical school or junior college
- Graduate school

21. What is your age?

- Under 15
- 15-20
- 21-30
- 31-40
- 41-60
- Over 60

22. If you have any additional comments regarding this course of instruction or any of our Heath Individual Learning Programs or program ideas, please feel free to comment.

23. How many Heath Continuing Education courses have you purchased?

- 1
- 2
- 3
- more than 3

24. Excluding trainers, how many Heathkit products have you purchased for use with your Heath Continuing Education program (Oscilloscope, Meters, etc.)?

- 1
- 2
- 3
- more than 3

25. How many textbooks have you purchased in the last two years?

- 1-3
- 4-6
- more than 6



Educational Systems

EDUCATIONAL RECORD

This form is an official transcript indicating your successful completion of an Individual Learning Program and the award of Continuing Education Units. Fill it out completely and return it with your Final Examination answer sheet. Be sure to sign and date this form in the space provided. No Certificate of Achievement or CEU credit can be awarded without this information. Please type or print plainly.

Name (full) _____
 Address _____
 City _____ State _____ Zip _____
 Telephone Number (include area code) _____
 Social Security Number _____
 Course Title _____
 Course Number _____
 Date of Final Examination _____

I hereby certify that I have fully completed all of the learning activities in this Individual Learning Program and have taken the final examination without the help of another individual.

Signed _____ Date _____

THIS INFORMATION WILL BE FILLED IN BY HEATHKIT CONTINUING EDUCATION

Grade _____
 CEU's _____
 Date _____
 Approval _____

HEATH COMPANY
 Benton Harbor,
 Michigan 49022

(Must be supplied for CEU award.)

FULL NAME
 LAST
 FIRST
 MIDDLE
 SOCIAL SECURITY NUMBER

EXAMINATION ANSWER SHEET

NAME _____

COURSE NUMBER _____

ADDRESS _____

DATE _____

CITY _____ STATE _____ ZIP _____

GRADE _____

IMPORTANT NOTICE

Photo copies of this answer sheet will not be graded.

INSTRUCTIONS

1. Read each question in the Final Examination and select the correct answer choice. Place a check adjacent to your answer.
2. Transfer your answers to the opposite side of this answer sheet. Use a pencil to mark an X in the square corresponding to your answer choice. Be careful in transferring your answers. If you should mark the wrong square, erase it completely. Double check this answer sheet against your choices on the Final Examination.
3. Fill in the remainder of this answer sheet. Write your complete name and address in the spaces provided. Be sure to include the course number which appears at the top of the Final Examination.
4. Fill in the Educational Record form and sign it. This form becomes your official transcript. No Certificate of Achievement or CEU credit can be awarded without this form.
5. Fill in the Educational Survey form.
6. Mail this answer sheet, the Educational Record form and the Educational Survey form to Heathkit Continuing Education. Use the enclosed return envelope.

	A	B	C	D
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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22.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	A	B	C	D
26.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	A	B	C	D
51.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
65.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
66.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
67.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
68.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
71.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
72.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
73.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
74.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
75.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	A	B	C	D
76.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
77.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
78.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
79.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
81.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
82.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
83.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
84.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
86.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
87.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
88.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
89.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
91.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
92.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
93.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
94.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
95.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
96.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
97.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
98.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>