AUDIO VISUAL EDUCATION

SCRIPT BOOK

Time: 45 Minutes

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Module III — Projected Aids.
Unit 3 — Filmstrip Projector

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1. FILMSTRIP PROJECTION - BASIC DESIGN.

2. REFER TO WORKBOOK — and read the objectives.
(STOP PRESENTATION FOR ONE MINUTE AND THEN RESTART)
You will operate the film strip projector when you complete this unit.

3. The filmstrip projector has direct projection system. It is used to project filmstrips.

4. The parts of a filmstrip projector are shown here.

5. A lamp with a reflector. The lamp is usually 500W. The type of lamp is specified by the manufacturers.

6. A pair of condenser lenses gather light and direct it to the filmstrip.

7. A heat filter cuts down the intensity of heat passing through the lens system. This does not affect the quantity of light passing through it.

8. A filmstrip carrier to carry filmstrip.

9. Objective lens, also called projection lens or magnifying lens, magnifies the image and projectsan inverted image on the screen. You have the direct projection system.

10. Because the objective lens inverts the image, the picture is placed upside down, to get an upright picture on the screen.

11. Let us see the other important parts. You have a motor and a fan to cool the system;

12. An elevator knob to adjust the height, and consequently the picture;

13. A film advance knob, to advance the film.

14. A framing knob is provided in some projectors to adjust the frame correctly; and

15. To avoid defects such as this.

16. You have the aperture to increase or decrease the size of the picture;

17. a focussing knob to focus the picture on the screen;

18. a switch to provide and cut off power supply.

19. You will switch on the lamp only after switching the fan.

20. Why? To make sure that the heat generated by the lamp is leesened.

21. In some of the projectors, you have a three position switch for OFF,FAN, AND LAMP.

22. The function of the elevator knob is to help you level the projector through a tilting mechanism to get a rectangular image on the centre of the screen.

23. The film advance knob, also called motion sprocket knob pulls the film through the channel. In some projectors the knob turns a toothed wheel called 'Sprocket'.

24. The knob is mostly spring adjusted, so the film can be advanced one frame at a time. One turn advance a single frame, and two turns advance a double frame.

25. The knob can be turned freely, so you can reverse as well as advance the filmstrip.

26. The framer is a device provided in some projectors and located near the film-advance knob, adjusts the frame to aperture size.

27. Without this control, the projection of split frames-- the bottom of one and the top of another-- would result on the screen.

28. Attachment of accessories can make a single frame film-strip projector, a double frame or a 2 X 2 slide projector.

29. The aperture can be adjusted for use with single or double frame filmstrips. Widen the aperture for double frame and close for single frame.

30. To hold the filmstrip in position there is a feed slot.

31. Usually single frame is called half-frame and double frame is called standard frame filmstrip. The size of the single frame is 18x24 mm and double frame 24 x 36mm.

32. Let us review. Essentially you have the projection lamp with reflector, the condenser lenses with heat filter, the objective lens to magnify and project an inverted image,
the screen to receive the image and
the filmstrip carrier to hold the filmstrip.

33. You have also the switch, the fan and motor;
the elevator knob, to raise or lower the projector,
the film advance knob, to advance the film,
the framer, to frame the filmstrip correctly,
the focussing knob, to focus picture on the screen,
the aperture, to increase or decrease the size of picture,
the feed slot to hold the filmstrip in a position.

34. REFER TO WORKBOOK. Answer questions 1 & 2.
You are required to mark the different parts in the picture.
(STOP FOR 3 MINUTES AND THEN RESTART).

35. Have you completed the assignment ? You may compare your answer for question 1 with this. Correct mistakes if any.

36. Similarly compare your answer for question 2 with this slide, and correct mistakes if any. You are doing fine, if there are no mistakes.

37. In case, there are errors go through the picture, given at the end of the unit again and study well. you will be required to identify the parts of a projector before doing the practicals.

38. REFER TO WORKBOOK AGAIN, answer questions 3 to 5.
(STOP FOR 3 MINUTES AND THEN RESTART).

39. Correct answer for questior 3 is (b) i.e. the projection lens inverts the image.

40. Answer for question 4 is (d)
elevator knob.

The elevator knob tilts the projector to get a rectangular image at the centre of the screen.

41. The correct position (c) is shown for question 5.

42. OPERATING THE FILMSTRIP PROJECTOR is simple, and can be easily mastered, once you know your projector. The steps given here are general and refer to most models currently available with us.

43. Place the projection table or stand at a distance needed to obtain desired screen size.

44. Remove the projector from the case, set it on the table, lens facing the screen.

45. Loop tne power cord around the leg of the table or stand to prevent the projector from being pulled off the table or stand by any accident. Do not take any chances, whenever you are advised to observe safety measures.

46. Plug the power cord to wall socket, Do not switch on now.

47. Fix aperture in the filmstrip channel for correct frame size.

48. We have already told you that single frame has a film frame size of 18 x 24 mm and double frame has a film frame size of 24 x 36 mm.

49. PRE-THREADING.

50. Insert the filmstrip carrier in the projector and rotate it to correct position, vertical for single frame and horizontal for double frame.

51. Turn on fan switch first, then the lamp switch.

52. Adjust level of projector by manipulating elevator knob so that a rectangular projection of light is on the screen.

53. Secure approximate focus to get sharp edges of rectangular area by adjusting focussing knob.

54. Turn off lamp, allow cooling fan to operate.

55. THREADING the filmstrip is a simple operation.

56. Check filmstrip. Be sure that starting frames are on the outside winding.

57. Place filmstrip in the filmstrip holder so that

58. the leading edge of the film moves head downwards and

59. remember that the curl of the filmstrip is toward the screen.

60. Another common method of threading is to face the screen, and hold the filmstrip so that you read the title normally.

61. Keeping the filmstrip in the same position, invert it,

62. Insert the end side into the upper filmstrip slot.

63. Continue to slide the filmstrip down, inserting the beginning end into the lower slot .

64. Turn the film advance knob until the sprocket wheels engage the perforations of the filmstrip. Turn on lamp.

65. Move the filmstrip until the focus frame appears. Using elevator knob to centre the frame on the screen, if it is not already done.

66. Focus to obtain a sharp image.

67. Use framer to obtain complete picture of full aperture size on the screen.

68. Advance filmstrip to the title frame.

69. TO OPERATE advance filmstrip by giving film advance knob a quarter turn.

70. If you are skipping some frames, turn off lamp and move rapidly the film advance knob.

71. You may return to a previously shown picture by turning film advance knob backward, if desired.

72. NEVER FORCE FILMSTRIP through the projector if it sticks. Remove it gently and check for damaged edges or sprocket holes.

73. On completion turn off lamp, not the fan switch.

74. Allow time for cooling. Turn off fan.

75. Remove filmstrip from the projector.

76. Rewind by hand. Wind the end into a small roll first. Do not tighten by pulling one end. This may cause scratching as the film surface rub together. Loosely wound filmstrip can grind dirt into the emulsion.

77. Place filmstrip into a container.

78. For PACKING UP disconnect power cord.

79. Unwind it from the table leg.

80. Retract lens into its barrel.

81. Level projector to normal.

82. Store projector and attachments.

83. REMEMBER
to insert filmstrip correctly, as the picture is inverted;
the filmstrip curls toward the screen above and below the channel;
the filmstrip should move freely, and it should be in constant focus throughout.

84. REFER TO WORKBOOK and answer questions 6 to 11.
(STOP PRESENTATION FOR 5 MINUTES AND RESTART)

85. Question 6, the size of the double frame is 24 x 36 mm

86. Answers for questions 7 to 11 are on the screen. Correct your answers, if necessary.

87. You will be required to operate the filmstrip projector. Ensure that you know the fundamentals. You may go through the programme again if you want to.

88. Write the procedure for operating the filmstrip projector and submit to your instructor. Answer the Unit Test, at the end of this unit, and do self-evaluation.

89. Before you start the operation, you will be required to identify the parts of the projector. Meet the Training Officer in the VISUAL AID WORKSHOP, and get acquainted with the projector, and complete assignment No.35.

90. You will take up slide projector in unit 4.
The end.

M III/3-6/SB

AUDIO VISUAL EDUCATION

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Module III — Projected Aids

Unit 3 — Filmstrip projector

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Instructional Objectives:

1. Identify the operating parts of a given filmstrip projector.

2. Identify all the components contained in the projection system and name the one responsible for image magnification.

3. State the reason for loading filmstrips in inverted position in filmstrip projector.

4. Differentiate between single and double frame film format.

5. Enumerate the procedure of operating a filmstrip projector in the correct order.

6. Operate the filmstrip projector.

AUDIO VISUAL EDUCATION

WORK BOOK

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Module III Projected Aids

Unit 3 Filmstrip Projection

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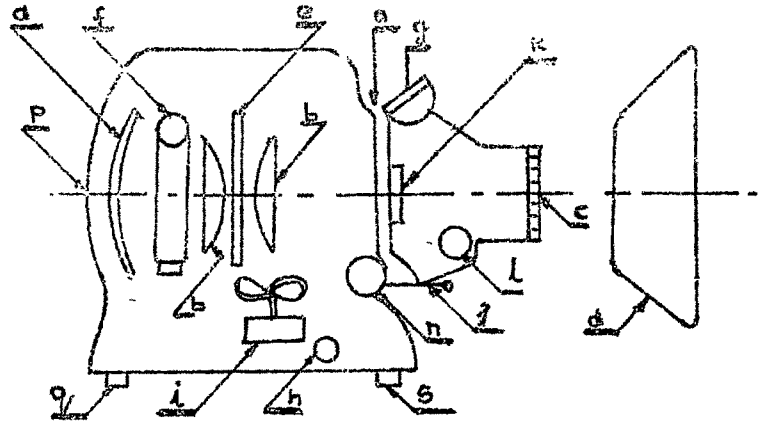
1. Given below is a picture of filmstrip projector. some of the parts are marked as a,b,c, ... j. Names of some of the parts are given below. Mark against these items, the corresponding alphabets.

____1. Reflector
____2. lamp
____3. condenser lenses
____4. heat filter
____5. objective lens
____6. filmstrip carrier
____7. screen.

2. The picture also gives some more parts of a filmstrip projector and are marked as h,i,j,k,l,m,o,.. The name of some of these parts are given below. Mark against these items, the corresponding alphabets.

____1. elevator knob
____2. switch
____3. fan & motor
____4. film advance knob
____5. framer
____6. focussing knob
____7. aperture
____8. feed slot



3. The image projected through a filmstrip projector is kept upside down in the filmstrip projector. Why ? because,

____ a. the condenser lens inverts the image

____ b. the projection lens inverts the image

____ c. the reflector inverts the image

____ d. the aperture inverts the image.

4. Centering the frame on the screen is done by using the:

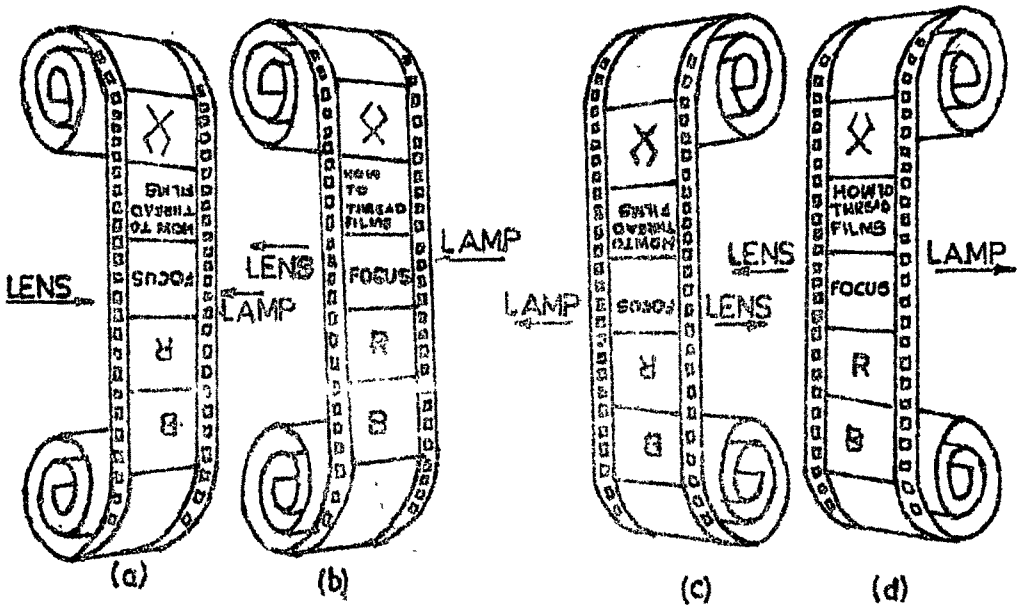
____ a. film advance knob

____ b. focussing knob

____ c. framer

____ d. elevator knob.

5. Which one of the following position of filmstrip is a correct one to insert into the projector ? Circle or tick alphabet a,b,c or d.



6. Which one of the following is the correct size of a double frame filmstrip format ?

____ a. 35 mm x 35 mm

____ b. 35 mm x 24 mm

____ c. 24 mm x 36 mm

____ d. 36 mm x 18 mm

*** The following projection errors as seen on the screen are corrected by adjusting one of the following. Write in the space provided against each figure, the alphabet denoting the adjustments.

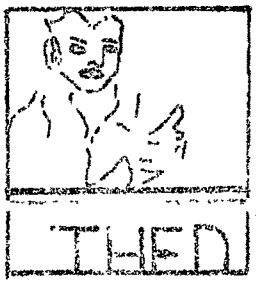
a. Open aperture for double frame.

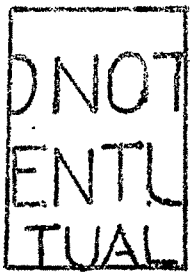
b. Close aperture for single frame.

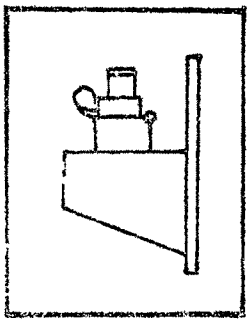
c. Rotate carrier for double frame.

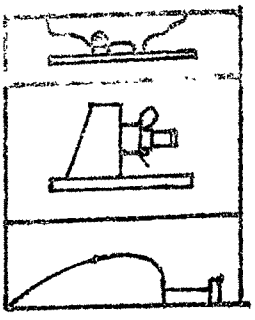
d. Focussing.

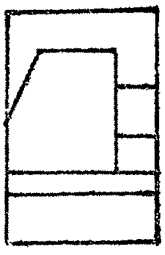
You may use alphabet more than once or do not use some at all.

7. _____ 


8. _____ 


9. _____ 

10. _____ 

11. _____ 

MODULE - III. Projected Aids Time: 2 hrs.

Unit - 3 Filmstrip Projector.

Practical Exercise No.35 - Operating Filmstrip Projector.

A. PROBLEM. Operate a filmstrip projector to show half-frame and double-frame filmstrip

a. Setting up
b. Operation
c. Putting away

} Plan as per performance check list. Total time allowed for final presentation five minutes.

B. EQUIPMENT & MATERIALS.

a. Filmstrip Projector.
b. Screen
c. One half-frame and one double-frame filmstrip.

C. GRADING POINTS.

a. Setting up
b. Operating Filmstrip Projector
c. Placing filmstrip correctly
d. Focussing each frame
e. Putting away.

Try each operation within a time limit of 60 seconds. Up to three trials are allowed for practice.

D. Deadline for completion - June Ist.

MODULE - III. Projected Aids

Unit - 3. Filmstrip Projector

Practical Exercise No.35 : Performance check list for operating filmstrip projector.

A. Setting up

1) Place the projector and screen
2) Connect the power cord
3) Switch on motor/lamp
4) Center the light on screen
5) Focus image.

B. Operation

1) Properly insert half frame filmstrip into holder.
2) Place the holder on projector correctly.
3) Focus.
4) Project frame
5) Adjust frame line.
6) Back up frame upto two frames.
7) Focus again and project
8) Skip two frames
9) Adjust frame line and project.
10) Insert double frame filmstrip
11) Project the double frame filmstrip.
12) Correct double frame exposure and focus.

C. Putting away

1) Switch off.
2) Disassemble.
3) Store all cords, filmstrips & Projector.

AUDIO VISUAL EDUCATION

| Module III | Projected Aids |
|---|---|
| Unit 3 | Filmstrip Projectors 35 |

The check list given under are not in a sequence. Put Numbers 1,2,3 ...., against each step in the correct sequence, for A,B and C separately.

A. SETTING UP

_____ a. Swich on motor/lamp.
_____ b. Connect the power cord.
_____ c. Focus.
_____ d. Place the projector and screen.
_____ e. Centre the light on screen.

B. OPERATION

_____ a. Place the holder on projector correctly.
_____ b. Properly insert half frame filmstrip into holder.
_____ c. Adjust frame line.
_____ d. Project frame.
_____ e. Focus.
_____ f. Insert double frame filmstrip lastly.
_____ g. Focus again and project
_____ h. Back up frame upto two frames.
_____ i. Adjust frame line and project.
_____ j. Correct double frame exposure and focus.
_____ k. Skip two frames.
_____ l. Project the double frame filmstrip.

C. PUTTING AWAY

_____ a. Disassemble.
_____ b. Store all cords, filmstrips & projector.
_____ c. Switch off.

AUDIO VISUAL EDUCATION

| | | |
|---|---|---|
| Module III | Projected Aids | Key to Pr. Ex.35 |
| Unit 3 | Filmstrip Projectors | |

The check list given under are not in a sequence. Put Numbers 1,2,3 ..... against each step in the correct sequence, for A,B and C separately.

A. SETTING UP

3 a. Switch on motor/lamp.
2 b. Connect the power cord.
5 c. Focus.
1 d. Place the projector and screen.
4 e. Centre the light on screen.

B. OPERATION

2 a. Place the holder on projector correctly.
1 b. Properly insert half frame filmstrip into holder.
5 c. Adjust frame line.
4 d. Project frame.
3 e. Focus.
10 f. Insert double frame filmstrip lastly.
7 g. Focus again and project
6 h. Back up frame upto two frames.
9 i. Adjust frame line and project.
11 j. Correct double frame exposure and focus.
8 k. Skip two frames.
12 l. Project the double frame filmstrip.

C. PUTTING AWAY

2 a. Disassemble.
3 b. Store all cords, filmstrips & projector.
1 c. Switch off.

CRITERION TEST

Module III Projected Aids

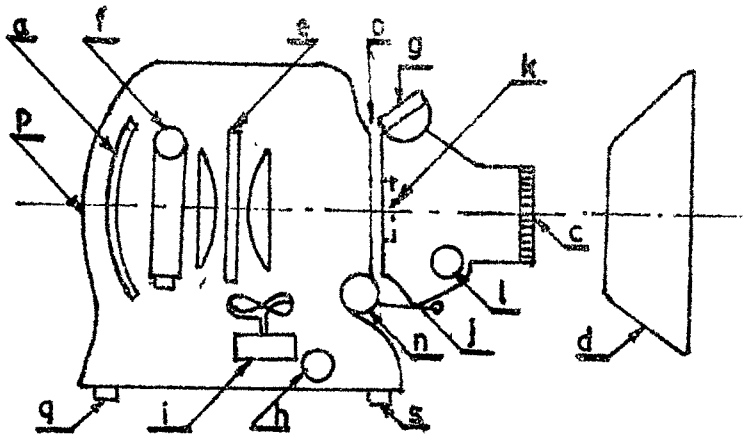
Unit 3 Filmstrip Projector

1. Given below is a picture of filmstrip projector. Some of the parts are marked as a,b,c,...j. Names of some of the parts are given below. Mark against these items, the corresponding alphabets.

____ 1. reflector
____ 2. lamp
____ 3. condenser lenses
____ 4. heat filter

2. The picture also gives some more parts of a filmstrip projector and are marked as h,i,j,k,l,m,o, .... . The name of some of these parts are given below. Mark against these items, the corresponding alphabets.

____ 1. elevator knob
____ 2. switch
____ 3. fan & motor
____ 4. film advance knob
____ 5. framer
____ 6. focussing knob
____ 7. aperture
____ 8. feed slot



3. The image projected through a filmstrip projector is kept upside down in the filmstrip projector. Why ? because,

____a. the condenser lens inverts the image.

____b. the projection lens inverts the image.

____c. the reflector inverts the image.

____d. the aperture inverts the image.

4. Centering the frame on the screen is done by using the:

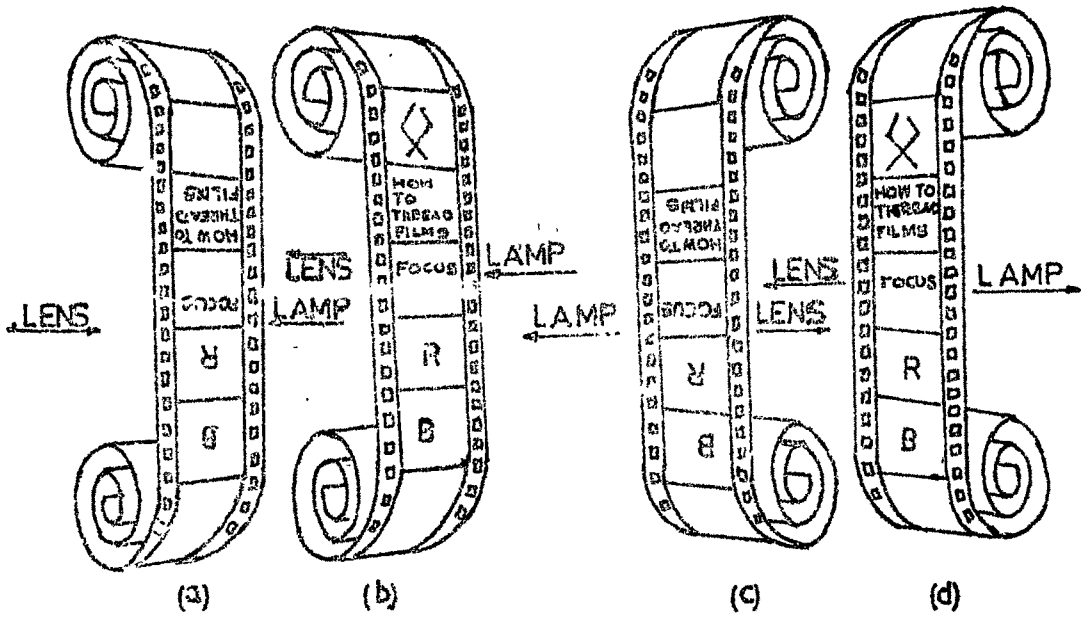
____ a. film advance knob

____ b. focussing knob

____ c. framer

____ d. elevator knob

5. Which one of the following position of filmstrip is a correct one to insert into the projector ? Circle or tick correct alphabet a,b,c, or d.




M III/3-2/CT

6. Which one of the following is the correct size of a double frame filmstrip format ?

____ a. 35 mm x 35 mm

____ b. 35 mm x 24 mm

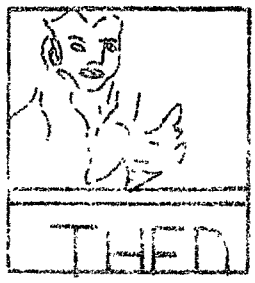
____ c. 24 mm x 36 mm

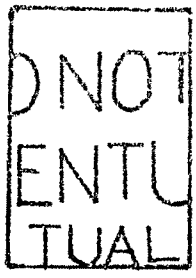
____ d. 36 mm x 18 mm

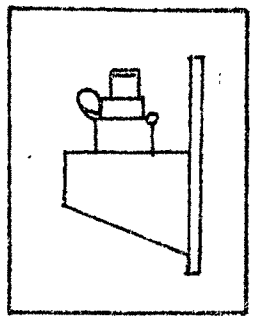
* * * The following projection errors as seen on the screen are corrected by adjusting one of the following. Write in the space provided against each figure, the alphabet denoting the adjustments.

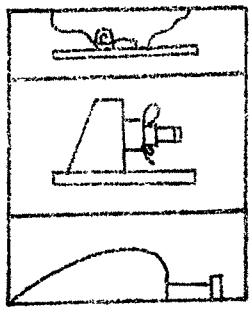
a. open aperture for double frame.
b. close aperture for single frame.
c. rotate carrier for double frame.
d. focussing

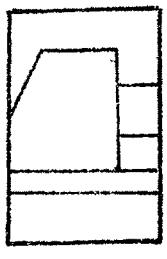
You may use alphabet more than once or do not use some at all.

7. _____ 


8. _____ 


9. _____ 

10. _____ 

11. _____ 

KEY TO
CRITERION TEST

Module III Projected Aids

Unit 3 Filmstrip Projection

1. Given below is a picture of a filmstrip projector. Some of the parts are marked as a,b,c . . . Names of the some of the parts are given below. Mark against these items, the corresponding alphabets.

| | | | |
|---|---|---|---|
| a | 1. reflector | c | 5. Objective lens |
| f | 2. lamp | g | 6. filmstrip carrier |
| b | 3. condenser lenses | d | 7. screen |
| e | 4. heat filter | | |

2. The picture also gives some more parts of a filmstrip projector and are marked as h,i,j,k,l,m,n,o, . . . . . The name of the some of these parts are given below. Mark against these items, the corresponding alphabets.

| | | | |
|---|---|---|---|
| h | 1. elevator knob. | l | 6. focussing knob. |
| m | 2. switch | k | 7. aperture |
| i | 3. fan & motor | o | 8. feed slot |
| n | 4. film advance knob | | |
| j | 5. frame | | |

3. The image projected through a filmstrip projector is kept upside down in the filmstrip projector. Why ? because,

____ a. the condenser lens inverts the image.
* b. the projection lens inverts the image.
____ c. the reflector inverts the image.
____ d. the aperture inverts the image.

4. Centering the frame on the screen is done by using the:

____ a. film advance knob
____ b. focussing knob
____ c. framer
* d. elevator knob.

5. Which one of the following position of filmstrip is a correct one to insert into the projector ? Circle or tick alphabet a,b,c or d.

c

6. Which one of the following is the correct size of a double frame filmstrip format ?

____a. 35 mm x 35 mm

____b. 35 mm x 24 mm

** c. 24 mm x 36 mm

____d. 36 mm x 18 mm

* * * * The following projection errors as seen on the screen are corrected by adjusting one of the following. Write in the space provided against each figure, the alphabet denoting the adjustments.

a. open aperture for double frame.
b. close aperture for single frame.
c. rotate carrier for double frame.
d. focussing.

You may use alphabet more than once or do not use some at all

7. a

8. c

9. c

10. b

11. a