

SECTION III
Time—35 minutes
23 Questions

Directions: Each group of questions in this section is based on a set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. Choose the response that most accurately and completely answers each question and blacken the corresponding space on your answer sheet.

Questions 1–7

A concert promoter is filling the six slots at a benefit concert. The slots, from earliest to latest, are numbered slot one through slot six. The slots will be filled by six bands—Uneasy, Vegemite, Wellspring, Xpert, Yardsign, and Zircon. Each band will perform in just one slot. The order must meet the following constraints:

Vegemite performs in an earlier slot than Zircon.

Wellspring and Zircon each perform in an earlier slot than Xpert.

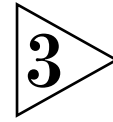
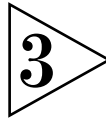
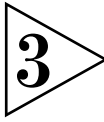
Uneasy performs in one of the last three slots.

Yardsign performs in one of the first three slots.

1. Which one of the following CANNOT be the band that performs in slot five?

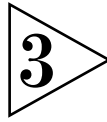
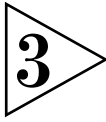
- (A) Uneasy
- (B) Vegemite
- (C) Wellspring
- (D) Xpert
- (E) Zircon

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2. If Zircon performs in an earlier slot than Yardsign, which one of the following is the earliest slot in which Wellspring could perform?
- (A) two
(B) three
(C) four
(D) five
(E) six
3. If Vegemite performs in slot three, which one of the following must be true?
- (A) Uneasy performs in an earlier slot than Xpert.
(B) Wellspring performs in an earlier slot than Zircon.
(C) Xpert performs in an earlier slot than Uneasy.
(D) Yardsign performs in an earlier slot than Wellspring.
(E) Zircon performs in an earlier slot than Uneasy.
4. If Zircon performs immediately before Wellspring, which one of the following must be true?
- (A) Uneasy performs in slot five.
(B) Vegemite performs in slot one.
(C) Xpert performs in slot five.
(D) Yardsign performs in slot two.
(E) Zircon performs in slot three.
5. Which one of the following is a complete and accurate list of bands any one of which could be the band that performs in slot one?
- (A) Yardsign
(B) Vegemite, Wellspring
(C) Vegemite, Yardsign
(D) Vegemite, Wellspring, Yardsign
(E) Vegemite, Wellspring, Yardsign, Zircon
6. If Wellspring performs immediately before Xpert, which one of the following could be true?
- (A) Uneasy performs in slot five.
(B) Vegemite performs in slot three.
(C) Wellspring performs in slot three.
(D) Zircon performs in slot two.
(E) Zircon performs in slot four.
7. Which one of the following, if substituted for the constraint that Wellspring and Zircon each perform in an earlier slot than Xpert, would have the same effect in determining the order in which the bands perform?
- (A) Only Uneasy can perform in a later slot than Xpert.
(B) Vegemite performs in an earlier slot than Wellspring, which performs in an earlier slot than Zircon.
(C) Vegemite and Wellspring each perform in an earlier slot than Xpert.
(D) Xpert performs either immediately before or immediately after Uneasy.
(E) Xpert performs in either slot five or slot six.

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Questions 8–12

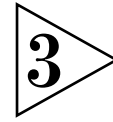
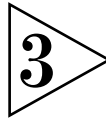
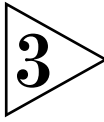
A corporate manager is selecting employees for a research team. The team will include at least four employees, all from among the following eight: Myers, Ortega, Paine, Schmidt, Thomson, Wong, Yoder, and Zayre. The selection is constrained by the following conditions:

- If Myers is on the team, neither Ortega nor Paine can be.
- If Schmidt is on the team, both Paine and Thomson must also be.
- If Wong is on the team, both Myers and Yoder must also be.

8. Which one of the following is a possible selection of employees for the team?

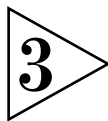
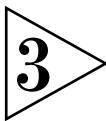
- (A) Myers, Paine, Schmidt, and Thomson
- (B) Ortega, Paine, Thomson, and Zayre
- (C) Paine, Schmidt, Yoder, and Zayre
- (D) Schmidt, Thomson, Yoder, and Zayre
- (E) Thomson, Wong, Yoder, and Zayre

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9. Which one of the following is a pair of employees who CANNOT be on the team together?
- (A) Myers and Thomson
 - (B) Ortega and Yoder
 - (C) Paine and Zayre
 - (D) Schmidt and Wong
 - (E) Wong and Yoder
10. If Yoder is not on the team, then any of the following could be on the team EXCEPT:
- (A) Zayre
 - (B) Thomson
 - (C) Paine
 - (D) Ortega
 - (E) Myers
11. If Paine is not on the team, which one of the following could be true?
- (A) Neither Myers nor Ortega is on the team.
 - (B) Neither Myers nor Thomson is on the team.
 - (C) Neither Myers nor Zayre is on the team.
 - (D) Neither Ortega nor Thomson is on the team.
 - (E) Neither Ortega nor Yoder is on the team.
12. Which one of the following is a pair of employees at least one of whom must be on the team?
- (A) Ortega and Schmidt
 - (B) Ortega and Wong
 - (C) Paine and Schmidt
 - (D) Thomson and Yoder
 - (E) Yoder and Zayre

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Questions 13–18

Exactly five movies are showing at the repertory theater this evening: a horror film, a mystery, a romance, a sci-fi film, and a western. Each movie is shown exactly once, on one of the theater's three screens: screens 1, 2, and 3. Screens 1 and 2 show two movies each, one beginning at 7 P.M. and the other at 9 P.M.; screen 3 shows exactly one movie, at 8 P.M. The following conditions apply to this evening's schedule:

The western begins at some time before the horror film does. The sci-fi film is not shown on screen 3.

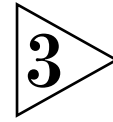
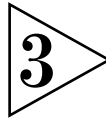
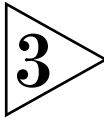
The romance is not shown on screen 2.

The horror film and the mystery are shown on different screens.

13. Which one of the following is an acceptable schedule of the movies for this evening?

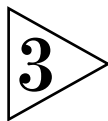
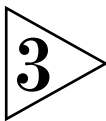
- (A) screen 1: romance at 7 P.M., horror film at 9 P.M.
screen 2: western at 7 P.M., sci-fi film at 9 P.M.
screen 3: mystery at 8 P.M.
- (B) screen 1: mystery at 7 P.M., romance at 9 P.M.
screen 2: horror film at 7 P.M., sci-fi film at 9 P.M.
screen 3: western at 8 P.M.
- (C) screen 1: western at 7 P.M., sci-fi film at 9 P.M.
screen 2: mystery at 7 P.M., horror film at 9 P.M.
screen 3: romance at 8 P.M.
- (D) screen 1: romance at 7 P.M., mystery at 9 P.M.
screen 2: western at 7 P.M., horror film at 9 P.M.
screen 3: sci-fi film at 8 P.M.
- (E) screen 1: western at 7 P.M., mystery at 9 P.M.
screen 2: sci-fi film at 7 P.M., romance at 9 P.M.
screen 3: horror film at 8 P.M.

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14. Which one of the following CANNOT be an accurate list of the movies scheduled to be shown on screen 2 this evening, listing the 7 P.M. movie first?
- (A) the sci-fi film, the horror film
 - (B) the sci-fi film, the mystery
 - (C) the sci-fi film, the western
 - (D) the western, the horror film
 - (E) the western, the mystery
15. If the western and the sci-fi film are scheduled to be shown on the same screen, then which one of the following could be true of this evening's schedule?
- (A) The horror film is shown on screen 2.
 - (B) The mystery begins at 9 P.M.
 - (C) The romance is shown on screen 3.
 - (D) The sci-fi film begins at 7 P.M.
 - (E) The western begins at 8 P.M.
16. If the romance is scheduled to begin before the western does, then which one of the following must be true of this evening's schedule?
- (A) The horror film is shown on screen 1.
 - (B) The mystery begins at 7 P.M.
 - (C) The mystery is shown on screen 2.
 - (D) The sci-fi film begins at 9 P.M.
 - (E) The sci-fi film is shown on screen 2.
17. Which one of the following CANNOT be an accurate list of the movies scheduled to be shown on screen 1 this evening, listing the 7 P.M. movie first?
- (A) the sci-fi film, the horror film
 - (B) the sci-fi film, the mystery
 - (C) the western, the horror film
 - (D) the western, the mystery
 - (E) the western, the sci-fi film
18. If the sci-fi film and the romance are to be shown on the same screen, then which one of the following must be true of this evening's schedule?
- (A) The western begins at 7 P.M.
 - (B) The sci-fi film begins at 9 P.M.
 - (C) The mystery begins at 8 P.M.
 - (D) The romance begins at 9 P.M.
 - (E) The horror film begins at 8 P.M.

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Questions 19–23

A naturalist will give five lectures, each on a different type of bird: oystercatchers, petrels, rails, sandpipers, or terns. The lectures must be given in either Gladwyn Hall or Howard Auditorium, in an order that meets the following conditions:

The first lecture is in Gladwyn Hall.

The fourth lecture is in Howard Auditorium.

Exactly three of the lectures are in Gladwyn Hall.

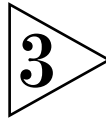
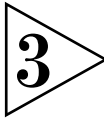
The lecture on sandpipers is in Howard Auditorium and is given earlier than the lecture on oystercatchers.

The lecture on terns is given earlier than the lecture on petrels, which is in Gladwyn Hall.

19. Which one of the following is an acceptable order for the lectures, from first to fifth?

- (A) oystercatchers, petrels, rails, sandpipers, terns
- (B) petrels, sandpipers, oystercatchers, terns, rails
- (C) rails, sandpipers, terns, petrels, oystercatchers
- (D) sandpipers, terns, oystercatchers, rails, petrels
- (E) terns, petrels, sandpipers, oystercatchers, rails

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20. Which one of the following must be false?
- (A) The first and second lectures are both in Gladwyn Hall.
 - (B) The second and third lectures are both in Howard Auditorium.
 - (C) The second and fifth lectures are both in Gladwyn Hall.
 - (D) The third and fourth lectures are both in Howard Auditorium.
 - (E) The third and fifth lectures are both in Gladwyn Hall.
21. If the lecture on terns is given in Howard Auditorium, which one of the following could be true of the third lecture?
- (A) It is on oystercatchers and is in Gladwyn Hall.
 - (B) It is on rails and is in Howard Auditorium.
 - (C) It is on rails and is in Gladwyn Hall.
 - (D) It is on sandpipers and is in Howard Auditorium.
 - (E) It is on terns and is in Howard Auditorium.
22. Which one of the following could be true of the fifth lecture?
- (A) It is on oystercatchers and is in Gladwyn Hall.
 - (B) It is on petrels and is in Howard Auditorium.
 - (C) It is on rails and is in Howard Auditorium.
 - (D) It is on sandpipers and is in Howard Auditorium.
 - (E) It is on terns and is in Gladwyn Hall.
23. If the third lecture is on sandpipers, which one of the following could be true?
- (A) The second lecture is on oystercatchers and is in Gladwyn Hall.
 - (B) The fifth lecture is on oystercatchers and is in Howard Auditorium.
 - (C) The second lecture is on rails and is in Howard Auditorium.
 - (D) The second lecture is on terns and is in Gladwyn Hall.
 - (E) The fourth lecture is on terns and is in Howard Auditorium.

S T O P

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT WORK ON ANY OTHER SECTION IN THE TEST.