

## Analytical Test for HEC HAT 1 Engineering & IT

Sr	Questions	Answers Choice
1	Choose the answer you think is most appropriate among the given options. Six scientists A, B, C, D, E, and F are to present a paper each at a one-day conference. Three of them will present their papers in the morning session before the lunch break whereas the other three will be presented in the afternoon session. The lectures have to be scheduled in such a way that they comply with the following restrictions: B's should present his paper immediately before C's presentation; their presentations cannot be separated by the lunch break. D must be either the first or the last scientist to present his paper. 46. B could be placed for any of the following places in the order of presenters EXCEPT	A. First B. Second C. Third D. Fourth E. Fifth
2	Choose the answer you think is most appropriate among the given options. Six scientists A, B, C, D, E, and F are to present a paper each at a one-day conference. Three of them will present their papers in the morning session before the lunch break whereas the other three will be presented in the afternoon session. The lectures have to be scheduled in such a way that they comply with the following restrictions: B's should present his paper immediately before C's presentation; their presentations cannot be separated by the lunch break. D must be either the first or the last scientist to present his paper. 45. In case C is to be the fifth scientist to present his paper, then B must be.	A. First B. Second C. Third D. Fourth E. Sixth
3	Choose the answer you think is most appropriate among the given options. A bus has exactly six stops on its route. The bus first stops at stop one and then at stops two, three, four, five, and six respectively. After the bus leaves stop six, the bus turns and returns to stop one and repeats the cycle. The stops are at six buildings that are in alphabetical order L, M, N, O, P, and Q. P is the third stop. M is the sixth stop. The stop O is the stop immediately before Q. N is the stop immediately before L. 44. In case a passenger gets on the bus at O, rides past one of the stops, and gets off at P, which of the following must be true?	A. O is stop one. B. Q is stop three. C. P is stop four. D. N is stop five. E. L is stop six.
4	Choose the answer you think is most appropriate among the given options. A bus has exactly six stops on its route. The bus first stops at stop one and then at stops two, three, four, five, and six respectively. After the bus leaves stop six, the bus turns and returns to stop one and repeats the cycle. The stops are at six buildings that are in alphabetical order L, M, N, O, P, and Q. P is the third stop. M is the sixth stop. The stop O is the stop immediately before Q. N is the stop immediately before L. 43. In case L is the second stop, which among the following must be the stop immediately before M?	A. N B. L C. P D. O E. Q
5	Choose the answer you think is most appropriate among the given options. A bus has exactly six stops on its route. The bus first stops at stop one and then at stops two, three, four, five, and six respectively. After the bus leaves stop six, the bus turns and returns to stop one and repeats the cycle. The stops are at six buildings that are in alphabetical order L, M, N, O, P, and Q. P is the third stop. M is the sixth stop. The stop O is the stop immediately before Q. N is the stop immediately before L. 42. In case N is the fourth stop, which among the following must be the stop immediately before P?	A. O B. Q C. N D. L E. M
6	Choose the answer you think is most appropriate among the given options. Multan Institute of Higher Studies plans to show five educational films A, B, C, D, and E to a group of students. The film shows are planned in an order, which conforms to the following conditions: A must be shown earlier than C. B must be shown earlier than D. E should be the fifth film shown. 41. In case exactly one film is shown between A and C, and exactly one film is shown between B and D, which among the following will hold true?	A. B is the film shown between A and C. B. C is the film shown between B and D. C. E is the film shown between A and C. D. D is the last film shown. E. E is the first film shown.
7	Choose the answer you think is most appropriate among the given options. Multan Institute of Higher Studies plans to show five educational films A, B, C, D, and E to a group of students. The film shows are planned in an order, which conforms to the following conditions: A must be shown earlier than C. B must be shown earlier than D. E should be the fifth film shown. 40. In case B, D and E are to be shown one after the other in the given order, the two positions from first to fifth in which A could possibly be shown are	A. First and second. B. First and fourth. C. Second and third. D. Third and fifth. E. Fourth and fifth.
8	Choose the answer you think is most appropriate among the given options. Multan Institute of Higher Studies plans to show five educational films A, B, C, D, and E to a group of students. The film shows are planned in an order, which conforms to the following conditions: A must be shown earlier than C. B must be shown earlier than D. E should be the fifth film shown. 39. In case D and E are shown as far apart from each other as possible which among the following would be true?	A. A is shown earlier than B B. B is shown earlier than C C. C is shown earlier than E D. D is shown earlier than A E. E is shown earlier than B
9	Choose the answer you think is most appropriate among the given options. Multan Institute of Higher Studies plans to show five educational films A, B, C, D, and E to a group of students. The film shows are planned in an order, which conforms to the following conditions: A must be shown earlier than C. B must be shown earlier than D. E should be the fifth film shown. 38. Which among the following is a pair of films that CANNOT both be shown earlier than E?	A. A and B B. A and D C. B and C D. B and D E. C and D
10	Choose the answer you think is most appropriate among the given options. Multan Institute of Higher Studies plans to show five educational films A, B, C, D, and E to a group of students. The film shows are planned in an order, which conforms to the following conditions: A must be shown earlier than C. B must be shown earlier than D. E should be the fifth film shown. 37. Which	A. A, C, B, D, E B. A, C, D, E, B C. B, D, C, A, E D. B, D, E, A, C E. C, A, B, D, E

	among the following is an acceptable order for showing the educational films?	E. E, B, C, A, D
11	Choose the answer you think is most appropriate among the given options. Multan Institute of Higher Studies planes to show five educational films A, B, C, D. and E to a group of students. The film shows are planned in an order. which conforms to the following conditions:A must shown earlier than C.B must shown earlier than D.E should be the fifth film shown.36. In case D is to be shown earlier than A Then for which of the following is exactly the one position from first through fifth in which it can be scheduled to be shown?	A. A B. B C. C D. D E. E
12	Choose the answer you think is most appropriate among the given options.Multan Institute of Higher Studies planes to show five educational films A, B, C, D. and E to a group of students. The film shows are planned in an order. which conforms to the following conditions:A must shown earlier than C.B must shown earlier than D.E should be the fifth film shown.35. In case C is shown earlier than E Which among the following will hold true?	A. A is the second film shown. B. B is the second film shown. C. C is the third film shown. D. D is the fourth film shown. E. E is the fourth film shown.
13	Choose the answer you think is most appropriate among the given options.On a factory control room. there are three ON-OFF switches on central control panel, labeled A, B, and C, They are changed from setting to a required setting based on the following rules:In case only switch A is ON in the default setting, then turn switch B ON.In case switches A and B are the only switches On in the default setting, then turn the switch C ON. In case all the three switches are ON in default setting then turn the switch C OFF. For any other default setting, turn ON all switches that are OFF all switches, if any that are ON.34. Which of the following default settings leads to a second setting, where only one switch is OFF?	A. A ON, B ON, C OFF. B. A ON, B OFF, C ON. C. A OFF, B ON, C ON. D. A OFF, B ON, C OFF. E. A OFF, B OFF, C OFF.
14	Choose the answer you think is most appropriate among the given options.On a factory control room. there are three ON-OFF switches on central control panel, labeled A, B, and C, They are changed from setting to a required setting based on the following rules:In case only switch A is ON in the default setting, then turn switch B ON.In case switches A and B are the only switches On in the default setting, then turn the switch C ON. In case all the three switches are ON in default setting then turn the switch C OFF. For any other default setting, turn ON all switches that are OFF all switches, if any that are ON.33. In case only switch B is ON in the second setting, Which of the following could have been the default setting?	A. A ON, B ON, C ON. B. A ON, B OFF, C ON. C. A OFF, B ON, C OFF. D. A OFF, B OFF, C ON. E. A OFF, B OFF, C OFF.
15	Choose the answer you think is most appropriate among the given options.On a factory control room. there are three ON-OFF switches on central control panel, labeled A, B, and C, They are changed from setting to a required setting based on the following rules:In case only switch A is ON in the default setting, then turn switch B ON.In case switches A and B are the only switches On in the default setting, then turn the switch C ON. In case all the three switches are ON in default setting then turn the switch C OFF. For any other default setting, turn ON all switches that are OFF all switches, if any that are ON.32. In case switch A is OFF in the second setting. Which of the following could have been the default setting?	A. A ON, B ON, C ON. B. A ON, B ON, C OFF. C. A ON, B OFF, C ON. D. A ON, B OFF, C OFF. E. A OFF, B ON, C OFF.
16	Choose the answer you think is most appropriate among the given options.On a factory control room. there are three ON-OFF switches on central control panel, labeled A, B, and C, They are changed from setting to a required setting based on the following rules:In case only switch A is ON in the default setting, then turn switch B ON.In case switches A and B are the only switches On in the default setting, then turn the switch C ON. In case all the three switches are ON in default setting then turn the switch C OFF. For any other default setting, turn ON all switches that are OFF all switches, if any that are ON.31. In case all the three switches are ON in the second setting, which among the following could have been the default setting?	A. A ON, B ON, C ON. B. A ON, B ON, C OFF. C. A ON, B OFF, C ON. D. A ON, B OFF, C OFF. E. A OFF, B ON, C OFF.
17	Choose the answer you think is most appropriate among the given options.On a factory control room. there are three ON-OFF switches on central control panel, labeled A, B, and C, They are changed from setting to a required setting based on the following rules:In case only switch A is ON in the default setting, then turn switch B ON.In case switches A and B are the only switches On in the default setting, then turn the switch C ON. In case all the three switches are ON in default setting then turn the switch C OFF. For any other default setting, turn ON all switches that are OFF all switches, if any that are ON.30. In case only switch B is ON in the default setting.what must be the second setting?	A. A ON, B ON, C ON. B. A ON, B ON, C OFF. C. A ON, B OFF, C ON. D. A OFF, B OFF, C ON. E. A OFF, B OFF, C OFF.
18	Choose the answer you think is most appropriate among the given options.On a factory control room. there are three ON-OFF switches on central control panel, labeled A, B, and C, They are changed from setting to a required setting based on the following rules:In case only switch A is ON in the default setting, then turn switch B ON.In case switches A and B are the only switches On in the default setting, then turn the switch C ON. In case all the three switches are ON in default setting then turn the switch C OFF. For any other default setting, turn ON all switches that are OFF all switches, if any that are ON.29. In case in default setting the swithes A and B are ON and the switch C is OFF, then what could be the second setting?	A. A ON, B ON, C ON. B. A ON, B OFF, C ON. C. A ON, B OFF, C OFF. D. A OFF, B ON, C OFF. E. A OFF, B OFF, C ON.
19	Choose the answer you think is most appropriate among the given options.New specie of bacteria A, causes the infectious disease A. The first symptoms appear after two days since the bacteria A enters the body of the victim. The carrier for the bacteria is some flies, mosquitoes, and bees.A mosquito bit Javed on Monday, February 6. Farooq worked with javed the next day, Tuesday, February 7. There were no other possibilities of exposure to disease A.28. In a particular code, the digits from 0 to 9 inclusive are each represented by a different letter of the alphabet, the letter always representing the same digit. In case the following sumZ M P Z+ S K Z-----C R Z Qholds true when it is expressed in digits, which of the following cannot be properly inferred:	A. Z cannot be 0. B. Z must be less than 5. C. Q must be even. D. M + S must be greater than 8. E. C must be greater than Z by 1.
20	Choose the answer you think is most appropriate among the given options. New specie of bacteria A, causes the infectious disease A. The first symptoms appear after two days since the bacteria A enters the body of the victim. The carrier for the bacteria is some flies, mosquitoes, and bees.A mosquito bit Javed on Monday, February 6. Farooq worked with javed the next day, Tuesday, February 7. There were no other possibilities of exposure to disease A.27. In case Farooq displayed symptoms of Disease A. which of the following would be true?m. Farooq was bitten by a bee on February 6.n. Farooq ate food, which contained the bacteria A.o. Farooq also worked with Javed on February 6.	A. I only B. II only C. III only D. I and II only E. I, II and III

Choose the answer you think is most appropriate among the given options. New specie of

21	Choose the answer you think is most appropriate among the given options. New species of bacteria A, causes the infectious disease A. The first symptoms appear after two days since the bacteria A enters the body of the victim. The carrier for the bacteria is some flies, mosquitoes, and bees. A mosquito bit Javed on Monday, February 6. Farooq worked with Javed the next day, Tuesday, February 7. There were no other possibilities of exposure to disease A. 26. In case Javed displayed symptoms of disease A, which would be true? j. Javed was also bitten by a fly on February 5. k. Javed was bitten by a mosquito, which carried the bacteria A. l. Farooq contracted Disease A from Javed.	A. I only B. II only C. III only <b>D. I and II only</b> E. II and III only
22	Choose the answer you think is most appropriate among the given options. New species of bacteria A, causes the infectious disease A. The first symptoms appear after two days since the bacteria A enters the body of the victim. The carrier for the bacteria is some flies, mosquitoes, and bees. A mosquito bit Javed on Monday, February 6. Farooq worked with Javed the next day, Tuesday, February 7. There were no other possibilities of exposure to disease A. 25. In case Farooq displayed symptoms of disease A, which among the following would be true? g. Javed contracted the Disease A from Farooq. h. Javed first noticed symptoms of Disease A on February 8. i. The fly that Javed was bitten by was not a carrier of the bacteria A.	A. I only B. II only C. III only <b>D. II and III only</b> E. I, II and III
23	Choose the answer you think is most appropriate among the given options. New species of bacteria A, causes the infectious disease A. The first symptoms appear after two days since the bacteria A enters the body of the victim. The carrier for the bacteria is some flies, mosquitoes, and bees. A mosquito bit Javed on Monday, February 6. Farooq worked with Javed the next day, Tuesday, February 7. There were no other possibilities of exposure to disease A. 24. In case Javed showed symptoms of disease A, which of the following statements would be true? d. Javed contracted the Disease A from Farooq. e. Javed first noticed symptoms of Disease A on February 8. f. The fly that Javed was bitten by was not a carrier of the bacteria A.	A. I only <b>B. II only</b> C. III only D. I and II only E. I and III only
24	Choose the answer you think is most appropriate among the given options. Four captains and the first mates of three of them were called to attend the annual meeting at head quarters. The captains were Luqman, Manzoor, Nauman and Osaf: the first mates were Ayesha, Durya and Gia. Each person in turn delivered a report to the chairperson as follows: Each of the first mates delivered their report exactly after her captain. The first captain to speak was Manzoor, and captain Nauman spoke after him. (Represent the person with first letter of his name) 23. Among the following statements, which would make M, D, N, G, L, O, A the only possible sequence of speakers?	A. D is M's first mate; G is N's first mate; A is O's first mate. <b>B. D is M's first mate; G is first mate; A was the second to speak after L.</b> C. The order of the first four speakers was M, D, N, G. D. The order of the last three speakers was L, O, A E. The order in which the captains spoke was M, N, L, O.
25	Choose the answer you think is most appropriate among the given options. Four captains and the first mates of three of them were called to attend the annual meeting at head quarters. The captains were Luqman, Manzoor, Nauman and Osaf: the first mates were Ayesha, Durya and Gia. Each person in turn delivered a report to the chairperson as follows: Each of the first mates delivered their report exactly after her captain. The first captain to speak was Manzoor, and captain Nauman spoke after him. (Represent the person with first letter of his name) 22. In case L speaks after A, and A is the third of the first mates to speak, then among the following statements which would be untrue?	A. O spoke immediately after G B. The order of the first four speakers was M, G, N, D C. O's first fourth mate was present <b>D. A was the fourth speaker after M</b> E. The captains spoke in the order M, N, O, L
26	Choose the answer you think is most appropriate among the given options. Four captains and the first mates of three of them were called to attend the annual meeting at head quarters. The captains were Luqman, Manzoor, Nauman and Osaf: the first mates were Ayesha, Durya and Gia. Each person in turn delivered a report to the chairperson as follows: Each of the first mates delivered their report exactly after her captain. The first captain to speak was Manzoor, and captain Nauman spoke after him. (Represent the person with first letter of his name) 21. In case A spoke immediately after L and immediately before O, and O was not the last speaker, L spoke	A. Second B. Third <b>C. Fourth</b> D. Fifth E. Sixth
27	Choose the answer you think is most appropriate among the given options. Four captains and the first mates of three of them were called to attend the annual meeting at head quarters. The captains were Luqman, Manzoor, Nauman and Osaf: the first mates were Ayesha, Durya and Gia. Each person in turn delivered a report to the chairperson as follows: Each of the first mates delivered their report exactly after her captain. The first captain to speak was Manzoor, and captain Nauman spoke after him. (Represent the person with first letter of his name) 20. Among the following statements which statement must be true?	<b>A. In case the second speaker was a captain, the seventh speaker was a first mate.</b> B. In case the second speaker was a first mate, the seventh speaker was captain. C. In case the third speaker was a first mate, the seventh speaker was captain. D. In case the third speaker was a captain, the seventh speaker was a first mate. E. In case the seventh speaker was a first mate, the first and third speakers were captains.
28	Choose the answer you think is most appropriate among the given options. Four captains and the first mates of three of them were called to attend the annual meeting at head quarters. The captains were Luqman, Manzoor, Nauman and Osaf: the first mates were Ayesha, Durya and Gia. Each person in turn delivered a report to the chairperson as follows: Each of the first mates delivered their report exactly after her captain. The first captain to speak was Manzoor, and captain Nauman spoke after him. (Represent the person with first letter of his name) 19. In case A is the third of the first mates to speak, and L is the captain whose first mate is not present, which among the following statements must be true?	A. A spoke sometime before L <b>B. D spoke sometime Before O.</b> C. L spoke sometime Before O. D. O spoke sometime Before L. E. O spoke sometime Before N.
29	Choose the answer you think is most appropriate among the given options. Four captains and the first mates of three of them were called to attend the annual meeting at head quarters. The captains were Luqman, Manzoor, Nauman and Osaf: the first mates were Ayesha, Durya and Gia. Each person in turn delivered a report to the chairperson as follows: Each of the first mates delivered their report exactly after her captain. The first captain to speak was Manzoor, and captain Nauman spoke after him. (Represent the person with first letter of his name) 18. Which of the following order of delivering report is not conformable with the	A. M, A, N, G, O, L, D B. M, D, N, G, L, O, A C. M, N, A, L, D, O, G D. M, N, A, O, D, L, G <b>E. M, N, G, D, O, L, A</b>

name) to. which of the following order of delivering report is not conformable with the conditions?

30

Choose the answer you think is most appropriate among the given options. Nine individuals - Z, Y, X, W, V, U, T, S and R - are the only candidates who can serve on three committees labeled A, B and C. Each candidate should serve on exactly one of the committees. Committees A should consist of exactly one member more than that of committees B. It is possible that there are no members of committees C. Among Z, Y and X none can serve on committee A. Among W, V and U none can serve on committee C. Among T, S and R none can serve on committee C. 17. Among the following combinations which could constitute the membership of committee C?

- A. Y and T
- B. X and U
- C. Y, X and W
- D. W, V and U
- E. Z, X, U and R