

## Analytical Test for HEC HAT 4 Biological, Medical Sciences

Sr	Questions	Answers Choice
1	Choose the answer you think is most appropriate among the given options. Two or more tea leaves out of five varieties-- Livana, Mathia, Novajana, Oxia, and Piask are used in making all branded blends by a marketer following the rules given below. A brand containing Livana should also contain Novajana twice that of Livana. A brand containing Mathia must also have equal quantity of Oxia. A single brand never contains Novajana as well as Oxia. Oxia and Piask should not be used together. A blend containing Piask should contain it in such a proportion that the total amount of Piask present should be greater than the total amount of the other tea leaves. 11. Among the below mentioned brands, which can be made agreeable by the eliminating some or all of one type of tea leaves?	<p>A. One part Livana, one part Mathia, one part Novajana, four parts Piask</p> <p><b>B. One part Livana, two parts Novajana, one part Oxia, four parts Piask</b></p> <p>C. One part Livana, one part Mathia, one part Oxia, one part Piask</p> <p>D. Two parts Livana, two parts Novajana, one part Oxia, two parts Piask</p> <p>E. Two parts Mathia, one part Novajana, two parts Oxia, three parts Piask</p>
2	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. 13. Of the nine individuals, the largest number that can serve together on committee C is	<p>A. 9</p> <p>B. 8</p> <p>C. 7</p> <p><b>D. 6</b></p> <p>E. 5</p>
3	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?	<p>A. A ON, B ON, C OFF.</p> <p>B. A ON, B OFF, C ON.</p> <p>C. A OFF, B ON, C ON.</p> <p><b>D. A OFF, B ON, C OFF.</b></p> <p>E. A OFF, B OFF, C OFF.</p>
4	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?	<p>A. A and B</p> <p>B. A and D</p> <p>C. B and C</p> <p>D. B and D</p> <p><b>E. C and D</b></p>
5	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. 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.	<p><b>A. I only</b></p> <p>B. II only</p> <p>C. III only</p> <p>D. I and II only</p> <p>E. I, II and III</p>
6	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. 16. In case T, S and X are the only individuals serving on committee B, the total membership of committee C should be:	<p><b>A. Z and Y</b></p> <p>B. Z and W</p> <p>C. Y and V</p> <p>D. Y and U</p> <p>E. X and V</p>
7	Choose the best answer; that is the response that most accurately and completely answers the question. Our beliefs regarding the world cannot be certain. Even well confirmed scientific theory is likely to change over a short period if we do not try to understand then it is like to be away from the human race. Undoubtedly life is worth living in other respects as it is no mean thing to be an animal. It is also true that a man wishes to see this speculative domain beyond his next breakfast. From the above discussion it can be concluded that the author believes that	<p>A. Men spend a lot of time on thinking about future</p> <p>B. Science is the major hurdle in development</p> <p>C. Life is contingent so a man should not think about his future.</p> <p>D. Man is a social animal</p> <p><b>E. Men are different from animals on the basis of their reasoning abilities</b></p>
8	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?	<p>A. N</p> <p>B. L</p> <p>C. P</p> <p>D. O</p> <p><b>E. Q</b></p>
	Choose the answer you think is most appropriate among the given options. An Internal	

9	<p>Services Manager at a large corporation has been assigned the task of allotting offices to six of the staff members. The offices are titled A through F. Mrs. Ruby needs to use the telephone quite often throughout the day. Mr. Mujahid and Mr. Zahid need adjacent offices as they need to consult each other often while working. Mrs. Fauzia is a senior employee and has to be allotted the office marked E, having the biggest window. Mr. Abid requires silence in the offices next to his Mr. Shahid Mr. Mujahid, and Mr. Abid are all smokers. Mrs Fauzia requires non-smoker neighbors. Unless specifically stated all the employees maintain an atmosphere of silence during office hours. 4. The ideal candidate to occupy the office farthest from Mr. Zahid would be</p>	<p>A. Mrs. Fauzia B. Mr. Mujahid C. Mr. Shahid D. Mr. Abid E. Mrs. Ruby</p>
10	<p>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. 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.</p>	<p>A. I only B. II only C. III only D. I and II only E. II and III only</p>
11	<p>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?</p>	<p>A. A spoke sometime before L. B. D spoke sometime before O. C. L spoke sometime before O. D. O spoke sometime before L. E. O spoke sometime before N.</p>
12	<p>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 sum <math>ZMPZ + SKZ = CRZ</math> holds true when it is expressed in digits, which of the following cannot be properly inferred:</p>	<p>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.</p>
13	<p>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?</p>	<p>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.</p>
14	<p>Choose the best answer; that is the response that most accurately and completely answers the question. Professor Taimoor told his class that teacher's evaluation by students is not a valid measure of teaching quality. For this evaluation students should fill out questionnaires at the end of the course. Which of the following is true supports professor Taimoor's suggestion?</p>	<p>A. Students evaluation of teachers is a wrong method. B. Students opinions against teachers are filtered during course. C. Professor Taimoor had received low rating from his students. D. Teachers are not interested in any survey. E. Students show interest in teacher evaluation.</p>
15	<p>Choose the answer you think is most appropriate among the given options. Two or more tealeaves out of five varieties-- Livana, Mathia, Novajana, Oxia, and Piask are used in making all branded blends by a marketer following the rules given below. A brand containing Livana should also contain Novajana twice that of Livana. A brand containing Mathia must also have equal quantity of Oxia. A single brand never contains Novajana as well as Oxia. Oxia and Piask should not be used together. A blend containing Piask should contain it in such a proportion that the total amount of Piask present should be greater than the total amount of the other tealeaves. 10. Among the following which combination cannot be used together in an agreeable brand containing two or more types of tealeaves?</p>	<p>A. Livana and Mathia B. Livana and Novajana C. Livana and Piask D. Mathia and Oxia E. Piask and Novajana</p>
16	<p>Choose the best answer; that is the response that most accurately and completely answers the question. In an in vitro study 160 white cats were injected with Salt X. 160 other white cats were injected with placebo. In two weeks 39% of the white cats who were injected with Salt X showed symptoms of Key fever? Hence it can be concluded that key fever is caused by some elements similar to the elements in Salt X. 3. Wall chalking on public property should be outlawed. Radicals and fanatics have no right to use public property when promoting their unsavory views. The argument above is based on the idea.</p>	<p>A. The general public has an interest in the free exchange of different political views. B. Every person who uses wall chalking for the promotion of ideas is a radical or fanatic. C. Radicals and fanatics prefer the use of public property while propagating their viewpoint. D. Legal constraints should be equal for all E. Any promotional activity which is against public interest should be protected by law</p>
17	<p>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. 25. In case Farooq displayed symptoms of disease A. which among the following would be true? a. Javed contracted the Disease A from Farooq. b. Javed first noticed symptoms</p>	<p>A. I only B. II only C. III only D. II and III only E. I and III</p>

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.

C. i, ii and iii

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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
- D. A was the fourth speaker after M
- E. The captains spoke in the order M, N, O, L

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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?

- A. In case the second speaker was a captain, the seventh speaker was a first mate.
- 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.

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Choose the answer you think is most appropriate among the given options. Three men (Tahir, Pervaiz, and Javed) and three women (Elena, Ayesha, and Kiran) are spending a few months at Abbottabad. They are to stay in a row of nine cottages each one living in his or her own cottage. There are no others staying in the same row of houses.i. Ayesha, Tahir, and Javed do not want to stay in any cottage which is at the end of the row.ii. Elena and Ayesha are unwilling to stay besides any occupied cottage.iii. Kiran is next to Pervaiz and Javed.iv. Between Ayesha and Javed's cottage there is just one vacant house.v. None of the girls occupies adjacent cottages.vi. The house occupied by Tahir is next to an end cottage.1. Which of the above statements can be said to have been derived from two other statements?

- A. Statement 1
- B. Statement 2
- C. Statement 3
- D. Statement 5
- E. Statement 6