

Mphasis Questions Paper

Mphasis aptitude and technical questions:

1. How is linked list implemented

Ans. By referential structures

2. What is meant by functional dependency

3. What is a semaphore

Ans. A method synchronization of multiple processes

4. What is the precedence order from high to low ,of the symbols () ++ /

Ans.() , ++, /

5. Preorder of $A*(B+C)/D-G$

Ans.*+ABC/-DG

6. B-tree (failure nodes at same level)

7. Dense index (index record appears for every search -key in file)

8. What is the efficiency of merge sort

Ans. $O(n \log n)$

9. program on swapping (10,5)was given (candidate cannot recollect)

10. Which of the following sorting algorithm has average sorting behavior -- Bubble sort, merge sort, heap sort, exchange sort

Ans. Heap sort

11. In binary search tree which traversal is used for getting ascending order values--Inorder ,post order,preorder

Ans. Inorder

12. What are device drivers used for

Ans. To provide software for enabling the hardware

13. Irrelevant to unix command (getty)

14. What is fork command in unix

Ans. System call used to create process

15. What is make command in Unix

Ans. Used for creation of more than one file

16. In unix .profile contains

Ans. Start up program

17. In unix echo is used for (answer C)

18. M men agree to purchase a gift for Rs. D. If three men drop out how much more will each have to contribute towards the purchase of the gift/

- A. $D/(M-3)$
- B. $MD/3$
- C. $M/(D-3)$
- D. $3D/(M^2-3M)$

Ans. D

19. A company contracts to paint 3 houses. Mr. Brown can paint a house in 6 days while Mr. Black would take 8 days and Mr. Blue 12 days. After 8 days Mr. Brown goes on vacation and Mr. Black begins to work for a period of 6 days. How many days will it take Mr. Blue to complete the contract?

- A. 7
- B. 8
- C. 11
- D. 12

Ans. C

20. 2 hours after a freight train leaves Delhi a passenger train leaves the same station traveling in the same direction at an average speed of 16 km/hr. After traveling 4 hrs the passenger train overtakes the freight train. The average speed of the freight train was?

- A. 30
- B. 40
- C. 58
- D. 60

Ans. B

21. If $9x-3y=12$ and $3x-5y=7$ then $6x-2y = ?$

- A. -5
- B. 4
- C. 2
- D. 8

Ans. D

22. The office staff of XYZ corporation presently consists of three bookkeepers--A, B, C and 5 secretaries D, E, F, G, H. The management is planning to open a new office in another city using 2 bookkeepers and 3 secretaries of the present staff. To do so they plan to separate certain individuals who don't function well together. The following guidelines were established to set up the new office

- I. Bookkeepers A and C are constantly finding fault with one another and should not be sent together to the new office as a team
- II. C and E function well alone but not as a team, they should be separated
- III. D and G have not been on speaking terms and shouldn't go together
- IV. Since D and F have been competing for promotion they shouldn't be a team

23. If A is to be moved as one of the bookkeepers, which of the following cannot be a possible working unit.

- A. ABDEH
- B. ABDGH
- C. ABEFH
- D. ABEGH

Ans. B

24. If C and F are moved to the new office, how many combinations are possible

- A. 1
- B. 2
- C. 3
- D. 4

Ans. A

25. If C is sent to the new office, which member of the staff cannot go with C

- A. B
- B. D
- C. F
- D. G

Ans. B

26. Under the guidelines developed, which of the following must go to the new office

- A. B
- B. D
- C. E
- D. G

Ans. A

27. If D goes to the new office, which of the following is/are true

- I. C cannot go
- II. A cannot go
- III. H must also go

- A. I only
- B. II only
- C. I and II only
- D. I and III only

Ans. D

28. After months of talent searching for an administrative assistant to the president of the college the field of applicants has been narrowed down to 5--A, B, C, D, E. It was announced that the finalist would be chosen after a series of all-day group personal interviews were held. The examining committee agreed upon the following procedure

- I. The interviews will be held once a week
- II. 3 candidates will appear at any all-day interview session
- III. Each candidate will appear at least once
- IV. If it becomes necessary to call applicants for additional interviews, no more 1 such applicant should be asked

to appear the next week

V. Because of a detail in the written applications, it was agreed that whenever candidate B appears, A should also be present.

VI. Because of travel difficulties it was agreed that C will appear for only 1 interview.

29. At the first interview the following candidates appear A, B, D. Which of the following combinations can be called for the interview to be held next week.

A. BCD

B. CDE

C. ABE

D. ABC

Ans. B

30. Which of the following is a possible sequence of combinations for interviews in 2 successive weeks

A. ABC; BDE

B. ABD; ABE

C. ADE; ABC

D. BDE; ACD

Ans. C

31. If A, B and D appear for the interview and D is called for additional interview the following week, which 2 candidates may be asked to appear with D ?

I. A

II. B

III. C

IV. E

A. I and II

B. I and III only

C. II and III only

D. III and IV only

Ans. D

32. Which of the following correctly state's the procedure followed by the search committee

I. After the second interview all applicants have appeared at least once

II. The committee sees each applicant a second time

III. If a third session, it is possible for all applicants to appear at least twice

A. I only

B. II only

C. III only

D. Both I and II

Ans. A

33. A certain city is served by subway lines A, B and C and numbers 1, 2 and 3. When it snows, morning service on B is delayed. When it rains or snows, service on A, 2 and 3 are delayed both in the morning and afternoon. When temp. falls below 30 degrees fahrenheit afternoon service is cancelled in either the A line or the 3 line, but not both. When the temperature rises over 90 degrees fahrenheit, the afternoon service is cancelled in

either the line C or the 3 line but not both. When the service on the A line is delayed or cancelled, service on the C line which connects the A line, is delayed. When service on the 3 line is cancelled, service on the B line which connects the 3 line is delayed.

34. On Jan 10th, with the temperature at 15 degree farenheit, it snows all day. On how many lines will service be affected, including both morning and afternoon.

- (A) 2
- (B) 3
- (C) 4
- (D) 5

Ans. D

35. On Aug 15th with the temperature at 97 degrees Fahrenheit it begins to rain at 1 PM. What is the minimum number of lines on which service will be affected?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

36. What is meant by polymorphism

Ans. Redefinition of a base class method in a derived class

37 . What is the essential feature of inheritance

Ans. All properties of existing class are derived

38 . What does the protocol FTP do

Ans. Transfer a file b/w stations with user authentication

39 . In the transport layer ,TCP is what type of protocol

Ans. Connection oriented

40 . Why is a gateway used

Ans. To connect incompatible networks

41 . Preorder of $A*(B+C)/D-G$

Ans. $*+ABC/-DG$

42. Dense index (index record appers for every search -key in file)

43. A program on swaping (10,5)was given (candidate cannot recollect)

44. In a group of 15,7 have studied Latin, 8 have studied Greek, and 3 have not studied either.How many of these studied both Latin and Greek

- A.0
- B.3
- C.4
- D.5

Ans.B

45. If $13 = 13w/(1-w)$, then $(2w)^2 =$

- A. $1/4$
- B. $1/2$
- C. 1
- D. 2

Ans. C

46. If a and b are positive integers and $(a-b)/3.5 = 4/7$, then

- (A) $b < a$
- (B) $b > a$
- (C) $b = a$
- (D) $b \geq a$

Ans. A

47 In June a baseball team that played 60 games had won 30% of its game played. After a phenomenal winning streak this team raised its average to 50%. How many games must the team have won in a row to attain this average?

- A. 12
- B. 20
- C. 24
- D. 30

Ans. C

48 . M men agree to purchase a gift for Rs. D. If three men drop out how much more will each have to contribute towards the purchase of the gift/

- A. $D/(M-3)$
- B. $MD/3$
- C. $M/(D-3)$
- D. $3D/(M^2-3M)$

Ans. D

49 . At the first interview the following candidates appear A,B,D. Which of the following combinations can be called for the interview to be held next week.

- A. BCD
- B. CDE
- C. ABE
- D. ABC

Ans. B

50. Which of the following is not permitted under the rules as stated.

- (A) A brown male marrying his father's sister
- (B) A red female marrying her mother's brother
- Â© A widower marrying his wife's sister
- (D) A widow marrying her divorced daughter's ex-husband

Ans. B

51. If widowers and divorced males retained their group they had upon marrying which of the following would be permissible (Assume that no previous marriage occurred)

- (A) A woman marrying her dead sister's husband
- (B) A woman marrying her divorced daughter's ex-husband
- (C) A widower marrying his brother's daughter
- (D) A woman marrying her mother's brother who is a widower.

Ans. D

52. Irrelevant to unix command (getty)

53. What is fork command in unix

Ans. System call used to create process

54. What is make command in unix

Ans. Used for creation of more than one file

55. In unix .profile contains

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