

Mphasis Sample Paper

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COMPUTER AWARENESS TEST

1. In the command scanf, h is used for

Ans. Short int

2. A process is defined as

Ans. Program in execution

3. A thread is

Ans. Detachable unit of executable code)

4. What is the advantage of Win NT over Win 95

Ans. Robust and secure

5. How is memory management done in Win95

Ans. Through paging and segmentation

6. What is meant by polymorphism

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

7. What is the essential feature of inheritance

Ans. All properties of existing class are derived

8.What does the protocol FTP do

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

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

Ans. Connection oriented

10.Why is a gateway used

Ans. To connect incompatible networks

11.How is linked list implemented

Ans. By referential structures

12.What method is used in Win95 in multitasking

Ans. Non preemptive check

13.What is meant by functional dependency

14.What is a semaphore

Ans. A method synchronization of multiple processes

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

Ans.() , ++, /

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

Ans.*+ABC/-DG

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

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

20.What is the efficiency of merge sort

Ans. $O(n \log n)$

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

22.In which layer are routers used

Ans.In network layer

23. In which layer are packets formed (in network layer)

24. heap (priority queue)

25. copy constructor (constant reference)

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

Ans. Heap sort

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

Ans. Inorder

28. What are device drivers used for

Ans. To provide software for enabling the hardware

29. Irrelevant to unix command (getty)

30. What is fork command in unix

Ans. System call used to create process

31. What is make command in unix

Ans. Used for creation of more than one file

32. In unix .profile contains

Ans. Start up program

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

34. In unix 'ls' stores contents in

Ans. inode block

QUANTITATIVE SECTION

1. In a class composed of x girls and y boys what part of the class is composed of girls

- A. $y/(x + y)$
- B. x/xy
- C. $x/(x + y)$
- D. y/xy

Ans.C

2.What is the maximum number of half-pint bottles of cream that can be filled with a 4-gallon can of cream(2 pt.=1 qt. and 4 qt.=1 gal)

- A.16
- B.24
- C.30
- D.64

Ans.D

3.If the operation, $^$ is defined by the equation $x \wedge y = 2x + y$,what is the value of a in $2 \wedge a = a \wedge 3$

- A.0
- B.1
- C.-1
- D.4

Ans.B

4.A coffee shop blends 2 kinds of coffee,putting in 2 parts of a 33p. a gm. grade to 1 part of a 24p. a gm.If the mixture is changed to 1 part of the 33p. a gm. to 2 parts of the less expensive grade,how much will the shop save in blending 100 gms.

- A.Rs.90
- B.Rs.1.00
- C.Rs.3.00
- D.Rs.8.00

Ans.C

5.There are 200 questions on a 3 hr examination.Among these questions are 50 mathematics problems.It is suggested that twice as much time be spent on each maths problem as for each other question.How many minutes should be spent on mathematics problems

- A.36
- B.72
- C.60
- D.100

Ans.B

6. 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

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

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

Ans.C

8. 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

9. In June a baseball team that played 60 games had won 30% of its games 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

10. 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

11. 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

12. 2 hours after a freight train leaves Delhi a passenger train leaves the same station travelling in the same direction at an average speed of 16 km/hr. After travelling 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

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

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

Ans. D

ANALYTICAL ABILITY

1. 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 seperated
- 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

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

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

Ans.B

2.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

3.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

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

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

Ans.A

5.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

2.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 additonal 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.

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

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

Ans.B

2.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

3.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

4.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

3. 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 farenheit afternoon service is cancelled in either the A line or the 3 line,
but not both.

When the temperature rises over 90 degrees farenheit, 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.

Q1. 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

Q2. On Aug 15th with the temperature at 97 degrees farenheit 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

Ans. C

Q3. On which of the following occasions would service be on the greatest number of lines disrupted.

- (A) A snowy afternoon with the temperature at 45 degree farenheit
- (B) A snowy morning with the temperature at 45 degree farenheit
- (C) A rainy afternoon with the temperature at 45 degree farenheit
- (D) A rainy afternoon with the temperature at 95 degree farenheit

Ans. B

4. In a certain society, there are two marriage groups, red and brown. No marriage is permitted within a group. On marriage, males become part of their wives groups; women remain in their own group. Children belong to the same group as their parents. Widowers and divorced males revert to the group of their birth. Marriage to more than one person at the same time and marriage to a direct descendant are forbidden

Q1. A brown female could have had

- I. A grandfather born Red
- II. A grandmother born Red
- III Two grandfathers born Brown

- (A) I only
- (B) III only
- (C) I, II and III
- (D) I and II only

Ans. D

Q2. A male born into the brown group may have

- (A) An uncle in either group
- (B) A brown daughter
- (C) A brown son
- (D) A son-in-law born into red group

Ans. A

Q3. 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
- (C) A widower marrying his wife's sister
- (D) A widow marrying her divorced daughter's ex-husband

Ans. B

Q4. 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

- 5. I. All G's are H's
- II. All G's are J's or K's
- III All J's and K's are G's
- IV All L's are K's
- V All N's are M's
- VI No M's are G's

Q1. If no P's are K's which of the following must be true

- (A) No P is a G
- (B) No P is an H
- (C) If any P is an H it is a G
- (D) If any P is a G it is a J

Ans. D

Q2. Which of the following can be logically deduced from the stated conditions

- (A) No M's are H's
- (B) No H's are M's
- (C) Some M's are H's
- (D) No N's are G's

Ans. D

Q3. Which of the following is inconsistent with one or more conditions

- (A) All H's are G's
- (B) All H's are M's
- (C) Some H's are both M's and G's
- (D) No M's are H's

Ans. C

Q4. The statement "No L's are J's" is

- I. Logically deducible from the conditions stated
- II Consistent with but not deducible from the conditions stated
- III. Deducible from the stated conditions together with the additional statements "No J's are K's"

- (A) I only
- (B) II only
- (C) III only
- (D) II and III only

Ans. D