Logical Reasoning

Directions for questions 1 to 5: Read the following passage below and solve the questions based on it.

There are seven professors A, B, C, D, E, F and G teaching seven subjects History, Geography, Physics, Chemistry, Maths, Biology and English from Monday to Friday at Gaya College. Each professor teaches a different subject and not more than two subjects are taught on any one of the days.

(i) Chemistry is taught by Professor B on Tuesday.
(ii) Professor D teaches on Friday but neither Geography nor Physics.
(iii) Professor F teaches History but neither on Thursday nor on Friday.
(iv) Professor A teaches English on the day on which History is taught.
(v) Professor C teaches Maths on Monday.
(vi) Geography and Chemistry are taught on the same day.
(vii) Professor G teaches on Thursday.

1. On which of the following days is English taught?
(a) Wednesday
(b) Monday
(c) Tuesday
(d) Cannot be determined

2. Which of the following subjects is taught by professor G?
(a) Biology (b) Geography
(c) Physics (d) Chemistry

3. On which of the following days is Geography taught?
(a) Monday (b) Tuesday
(c) Wednesday (d) Thursday

4. Which subject is taught on Friday?
(a) Physics (b) History
(c) Geography (d) Biology

5. Which of the following pairs of professors teaches on Tuesday?

(a) B and D (b) A and B
(c) B and F (d) None of these
Directions for questions 6 to 10: Read the information given
below and solve the questions based on it.
K, L, M, N, P, Q, R, S, U and W are the only ten members in a
department. There is a proposal to form a team from within the
members of the department, subject to the following conditions:
A team must include exactly one among P, R, and S.
A team must include either M or Q, but not both.
If a team includes K, then it must also include L, and vice
versa.
If a team includes one among S, U, and W, then it must also
include the other two.

L and N cannot be members of the same team.
L and U cannot be members of the same team.
The size of a team is defined as the number of members
in the team.

6. Who cannot be a member of a team of size 3?
(a) L (b) M
(c) N (d) P
(e) Q

7. Who can be a member of a team of size 5?
(a) K (b) L
(c) M (d) P
(e) R

8. What would be the size of the largest possible team?
(a) 8 (b) 7
(c) 6 (d) 5
(e) cannot be determined

9. What could be the size of a team that includes K?
(a) 2 or 3 (b) 2 or 4
(c) 3 or 4 (d) Only 2
(e) Only 4

10. In how many ways a team can be constituted so that
the team includes N?
(a) 2 (b) 3
(c) 4 (d) 5
(e) 6

11. If X is the brother of the son of Y's son, how is X related to Y?
a) Grandson b) Son
c) Cousin d)Cannot be determined

12. Amit introduces Rahul as the son of the only brother of his father's wife. How is Rahul related to Amit?
(a) Cousin (b) Son
(c) Uncle (d) Son-in-law

13. A + B means A is the mother of B
A – B means A is the brother B
A @ B means A is the father of B and
A × B means A is the sister of B,
Which of the following shows that P is the maternal uncle of Q?
(a) Q – N + M × P (b) P + S × N – Q
(c) P – M + N × Q (d) Q – S @ P

14. A + B means A is the sister of B
A – B means A is the brother of B
A × B means A is the daughter of B.
Which of the following options show that E is the maternal uncle of D?
(a) D + F – E (b) D – F × E
(c) D × F + E (d) None of these

15. Introducing a boy, a girl said, "He is the son of the daughter of the father of my uncle." How is the boy related to the girl?
(a) Cousin (b) Nephew
(c) Uncle (d) Son-in-law

16. Neha Kavi moved a distance of 75 metres towards the north. She then turned to her left and walked for 25 metres, turned left again and walked 80 metres. Finally, she turned to the right at an angle of 45o. In which direction was she moving finally?
(a) North-east (b) North-west
(c) South (d) South-west

17. One day, Dileep left his home and walked 10 km southwards, turned right and walked 5 km, turned

right and walked 10 km, walked left and then walked 10 km. How many kilometres will he have to walk to reach his home straight?
(a) 10 km (b) 15 km
(c) 20 km (d) 25 km

18. Tanay is standing facing north. Turning to his right, he walks 25 metres. He then turns to his left and walks 30 metres. He, further, walks 25 metres to his right. He then walks to his right again and walks 55 metres. Finally, he turns to the right and walks 40 metres. In which direction is he now from his starting point?
(a) South-west (b) South
(c) North-west (d) South-east

19. Kaveri walks 10 km towards North. From there she walks 6 km towards South. Then, she walks 3 km towards East. How far and in which direction is she with reference to her starting point?
(a) 10km Northwest (b) 6km Southwest
(c) 5km Southwest (d) 5km Northeast

20. Gyan Prakash left for his college in his car. He drove 15 km towards north and then 10 km towards west. He then turned to the south and covered 5 km. Further, he turned to the east and moved 8 km. Finally, he turned right and drove 10 km. how far and in which direction is he from his starting point?
(a) 2 km West (b) 5 km East
(c) 3 km North (d) 6 km South

Directions for questions 21 to 25: Read the following passage and solve the questions based on it.

Amit, Bharat, Chandan, Dinesh, Eeshwar and Ferguson are cousins. None of them are of the same age, but all of them have birthdays on the same date. The youngest of them is 17 years old and Eeshwar, who is the eldest, is 22 years old. Ferguson is somewhere between Bharat and Dinesh in age. Amit is elder to Bharat and Chandan is older than Dinesh.

21. Which of the following is not possible?
(a) Dinesh is 20 years old

(b) Ferguson is 18 years old
(c) Ferguson is 19 years old
(d) Ferguson is 20 years old

22. If Bharat is 17 years old, then which of the following
could be the ages of Dinesh and Chandan
respectively?
(a) 18 and 19 (b) 19 and 21
(c) 18 and 20 (d) 18 and 21

23. If two of the cousins are between Chandan and
Ferguson in age, then which of the following must be
true?
(a) Amit is between Ferguson and Dinesh in age
(b) Bharat is 17 years old
(c) Bharat is younger than Dinesh
(d) Ferguson is 18 years old

24. If Amit is one year elder to Chandan, the number of
logically possible orders of all six cousins by
increasing age is
(a) 2 (b) 3
(c) 4 (d) 5

25. If Chandan is 19 years old, which of the following
must be true?
(a) Amit is 20 years old and Dinesh is 21 years old
(b) Bharat is 18 years old and Amit is 20 years old
(c) Bharat is 20 years old and Amit is 21 years old
(d) Dinesh is 17 years old and Bharat is 21 years old
Directions for questions 26 to 29: Read the following passage
and solve the questions based on it.
The Hotel Leela in Goa has two wings, the East wing and the
West wing. Some East wing rooms, but not all, have an ocean
view. All the West wing rooms have a harbor view. The charges
for all the rooms are the same, except:
(i) There is an extra charge for all harbour view rooms on or
above the third floor.
(ii) There is an extra charge for all ocean view rooms, except
those without a balcony.
(iii) Some harbour view rooms on the first two floors and some
East wing rooms without an ocean view have kitchen
facilities, for which there is an extra charge.
(iv) Only the ocean view and the harbour view rooms have

balconies.

26. A guest can avoid an extra charge by requesting:

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(a) a West wing room on one of the first two
floors
(b) a West wing room on the fourth floor without a
balcony
(c) an East wing room without an ocean view
(d) an East wing room without a balcony

27. Which of the following must be true if all the
conditions are as stated?
(a) all rooms above the third floor involve an extra
charge
(b) no room without an ocean or a harbour view or
kitchen facilities involves an extra charge.
(c) there is no extra charge for any East wing room
without an ocean view
(d) there is no extra charge for any room without
kitchen facilities.

28. Which of the following must be false if all the
conditions are applied?
(a) some ocean view rooms do not involve an extra
charge
(b) all rooms with kitchen facilities involve an extra
charge
(c) some West wing rooms above the second floor
do not involve an extra charge
(d) some harbour view rooms do not involve an extra
charge

29. Which of the following cannot be determined on the
basis of the information given?
I. whether there are any rooms without a balcony for
which an extra charge is imposed
II. whether any room without a kitchen or a view
involves an extra charge
III. whether two extra charges are imposed for any room
(a) I only
(b) II only

(c) I and III only
(d) II and III only

30. The CEO of a company must appoint a committee of
5 persons from different fields to serve as committee
members. He must select two MBAs from A, B and C
and three Engineers from F, G and H.
(i) Both B and H, cannot be appointed in the
committee.
(ii) Both G and F, cannot be appointed in the
committee.
(iii) Both E and H, cannot be appointed in the
committee.

If C is not selected in the committee then
any of the following could be in the committee except
(a) D (b) H
(c) E (d) G

Directions for questions 31 to 32: Read the following passage
and solve the questions based on it.
(i) Seven friends P, Q, R, S, T, U and W have gathered at
the Patna airport. However, only five of them are
scheduled to go to five different places Delhi, Chennai,
Lucknow, Bangalore and Kolkata.
(ii) Five of them are executives with specializations in
Administrative (Admn), Human Resource Management
(HRM), Marketing, Systems and Finance.
(iii) T is an executive and he is going to Chennai and his
specialization is neither Finance nor Marketing.
(iv) W is a system specialist and is going to Delhi. U is an
executive but is not going anywhere.
(v) Q is an executive with specialization in HRM but has
come at the airport to see his friends only.
(vi) P is an executive but not from Marketing and is going to
one of the destinations but not to Bangalore or Kolkata.

31. Who among the following specializes in Marketing?
(a) S (b) P
(c) U (d) Cannot be determined

32. What is the specialization of R?
(a) Finance
(b) Marketing

(c) Either Marketing or Finance
(d) None of these
Directions for questions 33 to 34: Read the following passage
and solve the questions based on it.
(i) Six men B, D,C,M, J and K are split in two groups of three
each and are made to stand in two rows, such that a man
in one row is exactly facing a man in the other row.
(ii) M is not at the ends of any row and is to the right ofJ, who
is facing C. K is to the left of D, who is facing M.

33. Which of the following groups of men are in the same
row?
(a) BMD (b) MJK
(c) BDC (d) None of these

34. Who is to the immediate left of B?
(a) M (b) D
(c) J (d) Data inadequate

Directions for questions 35 to 37: Read the following passage
and solve the questions based on it.

A, B, C, D, E, F and G are seven persons who travel to office
everyday by a particular train which stops at five stations 1,
2, 3, 4 and 5 respectively after leaving its base station.
(i) Three among them get on the train at the base station.
(ii) D gets down at the next station at which F gets down.
(iii) B does not get down either with A or F.
(iv) G alone gets on at station 3 and gets down with C after
having passed one station.
(v) A travels between only two stations and gets down at
station 5.
(vi) None of them gets on at station 2.
(vii) C gets on with F but does not get on with either B or D.
(viii) E gets on with two others and gets down alone after D.
(ix) B and D work in the same office and they get down
together at station 3.
(x) None of them get down at station 1.

35. At which station does E get down?
(a) 2 (b) 3
(c) 4 (d) Cannot be determined

36. At which station do both C and F get on?

(a) 1 (b) 2
(c) 4 (d) None of these

37. At which of the following stations do B and D get on?
(a) 1 (b) 2
(c) 3 (d) Cannot be determined

Directions for questions 38 to 40: Read the following passage
and solve the questions based on it.
A business school publishes three issues of their research
Journal in a year. The editor decided that the upcoming three
issues April, August and December would carry articles
written by seven of the most reputed professors of the school.
Each of the seven authors (T, U, V, W, X, Y and Z) will have
at least one article published but some may have more than
one article published. The following restrictions apply to the
publication of the articles:
(i) Each of the issues being prepared must contain at least
two articles.
(ii) Only these seven professors' articles can appear in the
upcoming April, August and December issues.
(iii) No author may publish in each of the two consecutively
published issues or twice in the same issue.
(iv) If an article written by T appears in an issue, then an
article written by U must also appear in that issue.
(v) If an article written by W appears in an issue, then an
article written by Y must appear in the immediately
preceding issue.
(vi) An article written by Y cannot be published in an issue
that contains an article written by Z.

38. If the April issue consists exclusively of articles written by
T and U, then the August issue can consist exclusively of articles written by which of the
following group of
authors?
(a) V and X (b) V and Y
(c) W and Z (d) V, Y and Z

39. If the April issue consists exclusively of articles written by
U, V and Z, then the August issue must contain an
article written by which of the following authors?
(a) W (b) X
(c) Y (d) Z

40. If the December issue consists exclusively of articles written by U, V and W, then the August issue must have consisted of articles written by which of the following groups of authors?
(a) T and Z (b) U and Y
(c) X and Y (d) X and Z

ANSWERS
1. (a) 2. (c) 3. (b) 4. (d) 5. (d)
6. (a) 7. (c) 8. (d) 9. (e) 10. (e)
11 (a) 12. (a) 13. (c) 14. (d) 15 (a)
16. (d) 17. (b) 18. (d) 19. (d) 20. (a)
21. (d) 22. (b) 23. (d) 24. (a) 25. (c)
26. (d) 27. (b) 28. (c) 29. (a) 30. (b)
31. (c) 32. (d) 33. (d) 34. (a) 35. (c)
36. (d) 37. (d) 38. (b) 39. (c) 40. (c)