

GATE 2019

Computer Science & IT

▶ **General Aptitude
(Question With Solution)**

SET-1

1. The expenditure on the project _____ as follows: equipment Rs.20 lakhs, salaries Rs.12 lakhs, and contingency Rs.3 lakhs.

- A. break down B. break
C. breaks down D. breaks

Ans. C

Sol. **Break down** means to separate something into smaller parts. The subject-word agreement states that Singular nouns go with singular verbs while plural nouns go with plural verbs. Expenditure is singular noun and its plural form is expenditures. The expenditure (**singular noun**) in the project breaks (**singular verb used in the phrase**) down as follows. The above statement satisfies the subject verb agreement and hence, the correct option is C

2. The search engine's business model _____ around the fulcrum of trust.

- A. revolves B. plays
C. sinks D. bursts

Ans. A

Sol. The search engine business model revolves around the fulcrum of trust. Fulcrum is any thing that plays a central or essential role in an activity, event, or situation.

3. Two cars start at the same time from the same location and go in the same direction. The speed of the first car is 50 km/h and the speed of the second car is 60 km/h. The number of hours it takes for the distance between the two cars to be 20 km is _____.

- A. 1
B. 2
C. 3
D. 6

Ans. B

Sol. Speed of car A = 50 km/hr

Speed of car B = 60 km/hr

Since, both cars A and B are moving in same direction, the relative speed = $60 - 50 = 10$ km/hr

Distance required between them = 20 km

$$\therefore \text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{20}{10} = 2 \text{ hrs}$$

4. Ten friends planned to share equally the cost of buying a gift for their teacher. When two of them decided not to contribute, each of the other friends had to pay Rs 150 more. The cost of the gift was Rs. _____.

- A. 666 B. 3000
C. 6000 D. 12000

Ans. C

Sol. Let share of each student = x

Total cost of gift = $10 * x$

$$10x = 8(x + 150)$$

$$10x = 8x + 1200$$

$$2x = 1200$$

$$x = 600$$

Total cost of gift = $10 \times 600 = 6000$

5. A court is to a judge as _____ is to a teacher.

- A. a student B. a punishment
C. a syllabus D. a school

Ans. D

Sol. A 'court' is for a 'judge' as a 'school' is for a 'teacher'.

Court is a place where a judge works.

Similarly, school is a place where a teacher works.

6. The police arrested four criminals – P, Q, R and S. The criminals knew each other. They made the following statements:

P says "Q committed the crime."

Q says "S committed the crime."

R says "I did not do it."

S says "What Q said about me is false."

Assume only one of the arrested four committed the crime and only one of the statements made above is true. Who committed the crime?

- A. P
- B. R
- C. S
- D. Q

Ans. B

Sol. Case I:

Criminals	P	Q	R	S
Assumption	F	T	F	F
Result	Q _{NC}	S _C	R _C	S _C

S and R are criminal in the result is impossible because only one person committed the crime.

Case II:

Criminals	P	Q	R	S
Assumption	T	F	F	F
Result	Q _C	S _{NC}	R _C	S _C

Q and R are criminal in the result is impossible because only one person committed the crime.

Case III:

Criminals	P	Q	R	S
Assumption	F	F	T	F
Result	Q _{NC}	S _{NC}	R _{NC}	S _C

S_{NC} and S_C in the result which is contradiction. [S committed crime and same time not committed crime which is contradiction]

Case IV:

Criminals	P	Q	R	S
Assumption	F	F	F	T
Result	Q _{NC}	S _{NC}	R _C	S _{NC}

R is criminal in the result.

Alternative way-

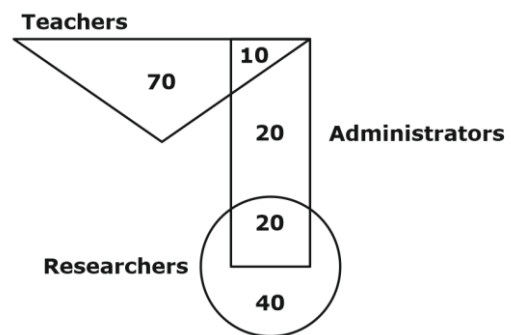
Assuming S is saying the truth.

P says Q committed the crime (FALSE) means Q has not

Q says S committed the crime(FALSE) means S has not

R says I did not (FALSE) means R has committed the crime.

7. In the given diagram, teachers are represented in the triangle, researchers in the circle and administrators in the rectangle. Out of the total number of the people, the percentage of administrators shall be in the range of _____.



- A. 0 to 15
- B. 16 to 30
- C. 31 to 45
- D. 46 to 60

Ans. C

Sol. Total number of administrators
= 10+20+20 = 50

Now the total number of person
= 80+20+20+40 = 160

Hence the percentage of administrators
required = $(50/160) * 100 = 31.25\%$

∴ Option **the answer is C.**

31 to 45 is the correct answer.

8. "A recent High Court judgement has sought to dispel the idea of begging as a disease — which leads to its stigmatization and criminalization — and to regard it as a symptom. The underlying disease is the failure of the state to protect citizens who fall through the social security net."

Which one of the following statements can be inferred from the given passage?

- A. Beggars are lazy people who beg because they are unwilling to work
- B. Beggars are created because of the lack of social welfare schemes
- C. Begging is an offence that has to be dealt with firmly
- D. Begging has to be banned because it adversely affects the welfare of the state

Ans. B

Sol. The passage states that the underlying disease behind begging is the failure of the state to protect citizens who fall through the social security net.

option b can be concluded from the above.

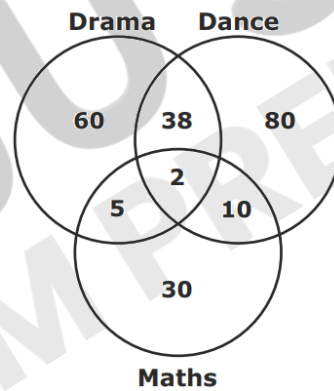
9. In a college, there are three student clubs. Sixty students are only in the Drama club, 80 students are only in the Dance club, 30 students are only in the Maths club, 40

students are in both Drama and Dance clubs, 12 students are in both Dance and Maths clubs, 7 students are in both Drama and Maths clubs, and 2 students are in all the clubs. If 75% of the students in the college are not in any of these clubs, then the total number of students in the college is _____.

- A. 1000
- B. 975
- C. 900
- D. 225

Ans. C

Sol.



Total number of students in the all three clubs = 60 + 38 + 80 + 5 + 2 + 10 + 30 = 225

Total number of students in the college = X
Given that 75% of students are not of any of these three clubs.

Remaining 25% of X = 225

$$0.25X = 225 \Rightarrow X$$

$$= 225/0.25$$

$$= 900$$

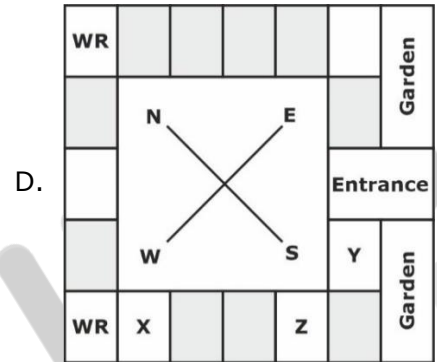
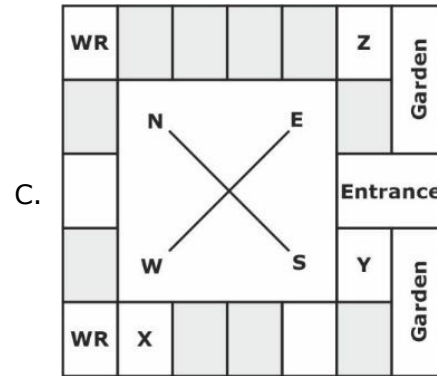
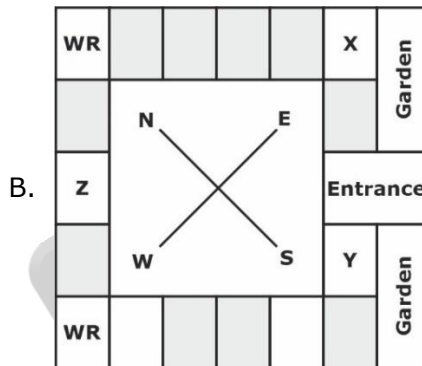
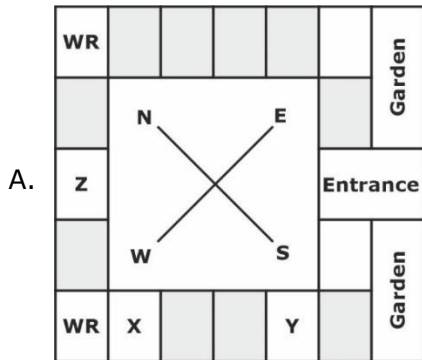
10. Three of the five students allocated to a hostel put in special requests to the warden. Given the floor plan of the vacant rooms, select the allocation plan that will accommodate all their requests.

Request by X: Due to pollen allergy, I want to avoid a wing next to the garden.

Request by Y: I want to live as far from the washrooms as possible, since I am very sensitive to smell.

Request by Z: I believe in Vaastu and so want to stay in the South-west wing.

The shaded rooms are already occupied. WR is washroom.



Ans. D

Sol. In such type of question use the **Option elimination method**

Because of Request from X : Option B is eliminated as it can not be satisfied in that option.

Because of Request from Y : None of the option can be eliminated as it can be satisfied in all options.

Because of Request from Z : We can select D as an answer because none of the other option satisfy it.

So according to conditions mentioned in the question 'D' is the best suited option.
