GATE 2019

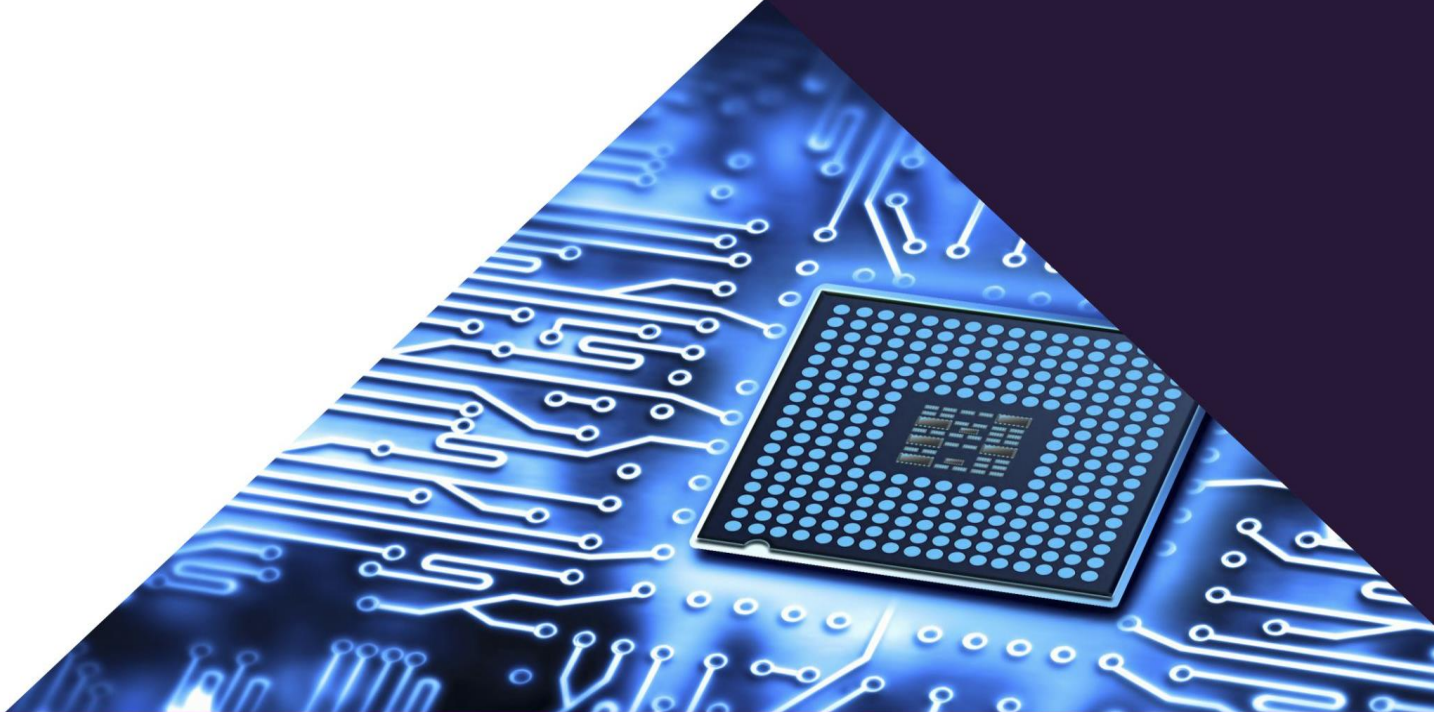## Electronics & Communication Engineering

General Aptitude
Questions & Solutions

1. The strategies that the company _____ to sell its products _____ house-to-house marketing.

A. uses, include   B. used, includes

C. uses, including   D. use, includes

Ans. A

Sol. The strategies that the company uses to sell its products include house to house marketing.

2. The boat arrived _____ dawn.

A. under   B. in

C. on   D. at

Ans. D

Sol. The boat arrived at down

3. Five different books (P, Q, S, R, T) are to be arranged on a shelf. The books R and S are to be arranged first and second, respectively from the right side of the shelf. The number of different orders in which P, Q and T may be arranged is _____.

A. 12   B. 120

C. 6   D. 2

Ans. C

Sol. As the positions of book R & S are fixed. The books P, Q and T can be arranged in 3! = 6 ways

4. When he did not come home, she _____ him lying dead on the roadside somewhere.

A. concluded   B. looked

C. notice   D. pictured

Ans. D

Sol. When he did not come home, she pictured him lying dead on the roadside somewhere.

5. It would take one machine 4 hours to complete a production order and another machine 2 hours to complete the same order. If both machines work simultaneously at their respective constant rates, the time taken to complete the same order is _____ hours.

A. 2/3   B. 3/4

C. 4/3   D. 7/3

Ans. C

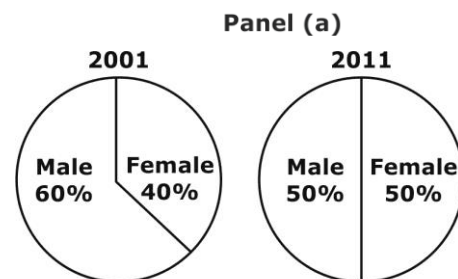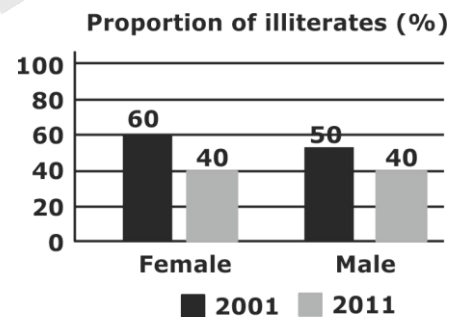**Sol.** Let t be the time taken by the machines when they work simultaneously.

$$\therefore \frac{1}{t} = \frac{1}{4} + \frac{1}{2}$$

$$\therefore \frac{1}{t} = \frac{3}{4}$$

$$\therefore t = \frac{4}{3}$$

6. The bar graph in Panel (a) shows the proportion of male and female iliterates in 2001 and 2011. The proportions of males and females in 2001 and 2011 are given in Panel (b) and (c), respectively. The total population did not change during this period.

The percentage increase in the total number of litertes from 2001 to 2011 is _____.

Proportion of illiterates (%)

Panel (a)

Panel (b) — 2001: Male 60%, Female 40%

Panel (c) — 2011: Male 50%, Female 50%

A. 34.43   B. 35.43

C. 30.43   D. 33.43

Ans. C

Sol. Given is the % of illiterates

So % of literates will be

	F	M
2001	40%	50%
2011	60%	60%

And population distribution is

	F	M
2001	40%	60%
2011	50%	50%

Let total population in both the years as T.

So total literate in 2001 will be

$0.4 \times 0.4 + 0.5 \times 0.6 = 0.46T$

And total literate in 2011 will be

$0.5 \times 0.6 + 0.5 \times 0.6 = 0.6T$

∴ Increase = 0.6T – 0.46T = 0.14T

∴ % increase $= \dfrac{0.14T}{0.46T} \times 100 = 30.43$

7. Four people are standing in a line facing you. They are Rahul, Mathew, Seema and Lohit. One is an engineer, one is a doctor, one a teacher and another a dancer. You are told that :

1. Mathew is not standing next to Seema

2. There are two people standing between Lohit and the engineer

3. Rahul is not a doctor

4. The teacher and the dancer are standing next to each other

5. Seema is turning to her right to speak to the doctor standing next to her

Who among them is an engineer?

A. Seema

B. Rahul

C. Lohit

D. Mathew

Ans. D

Sol.

Lohit	Seema	Rahul	Mathew
Doctor	Dancer	Teacher	Engineer

8. "Indian history was written by British historians – extremely well documented and researched, but not always impartial. History had to serve its purpose: Everything was made subservient to the glory of the Union Jack. Latter-day Indian scholars presented a contrary picture."

From the text above, we can infer that :

Indian history written by British historians _____

A. was not well documented and researched and was always biased

B. was not well documented and researched and was sometimes biased

C. was well documented and researched but was sometimes biased

D. was well documented and not researched but was always biased

Ans. C

Sol. As first line says Indian history was written by British historians was extremely well documented and researched, but not always impartial.

So option (C) can be interfered from given passage.

9. Two design consultants, P and Q started working from 8 AM for a client. The client budgeted a total of USD 3000 for the consultants. P stopped working when the hour hand moved by 210 degrees on the clock. Q stopped working when the hour hand moved by 240 degrees. P took two tea breaks of 15 minutes each during her shift, but took no lunch break. Q took only one lunch break for 20 minutes, but no tea breaks. The market rate for consultants is USD 200 per hour and breaks are not paid. After paying the

consultants, the client shall have USD _____ remaining in the budget.

A. 000.00   B. 166.67

C. 300.00   D. 433.33

Ans. B

Sol.

	P	Q
Start time	8 AM	8 AM

Working $\dfrac{210}{360} \times 12 = 7$ hrs $\dfrac{210}{360} \times 12 = 8$ hrs

Breaks   15 minutes each   20 minute break

         (2 breaks)   (1 break)

         = 30 minutes   = 20 minutes

∴ paid working hours = 7 hrs + 8 hrs – 30 minutes – 20 minutes

= 14 hrs 10 minutes

∴ Paid = 14 × 200 + $\dfrac{10}{60} \times 200$

∴ Paid = 2833.33

∴ Budget left = 3000 – 2833.33 = 166.67

10. Five people P, Q, R, S and T work in a bank. P and Q don't like each other but have to share an office till T gets a promotion and moves to the big office next to the garden. R, who is currently sharing an office with T wants to move to the adjacent office with S, the handsome new intern. Given the floor plan, what is the current location of Q, R and T?

(O = Office, WR = Washroom)

A.

WR	O1 P,Q	O2	O3 R,T	O4 S

Manager		Teller	Teller
	Entry		

Garden

B.

WR	O1 P,Q	O2	O3 R	O4 S

Manager T		Teller 1	Teller 2
	Entry		

Garden

C.

WR	O1 P	O2 Q	O3 R	O4 S

Manager		Teller 1	Teller 2
	Entry		

Garden

D.

WR	O1 P,Q	O2	O3 T	O4 R,S

Manager		Teller 1	Teller 2
	Entry		

Garden

Ans. D

Sol. As it is given that R is sharing an office with T. So only option (D) is correct.

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