BYJU'S EXAM PREP

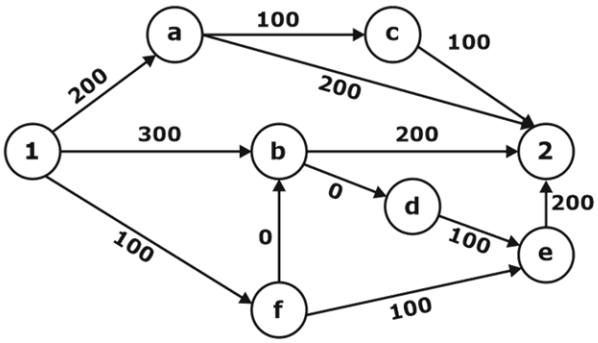
GATE 2020

Computer Science & IT

General Aptitude (Question With Solution)

SET-1

1. There are multiple routes to reach from node 1 to node 2, as shown in the network.



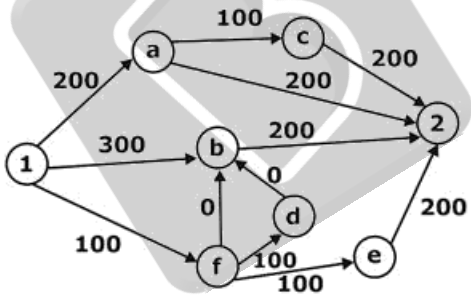
The cost of the travel on an edge between nodes is given in rupees. Nodes 'a', 'b', 'c', 'd', 'e' and 'f' are toll booths. The toll price at toll booths marked 'a' and 'e' is Rs. 200, Rs. 100 for the other toll booths. Which is the cheapest route from node 1 to 2?

A. 1-b-2 B. 1-f-e-2

C. 1-a-c-2 D. 1-f-b-2

Ans. D

Sol.



Source (1), Destination (2)

from Node (1) shortest is (1) → (f)

From (f) → (e) cost 100

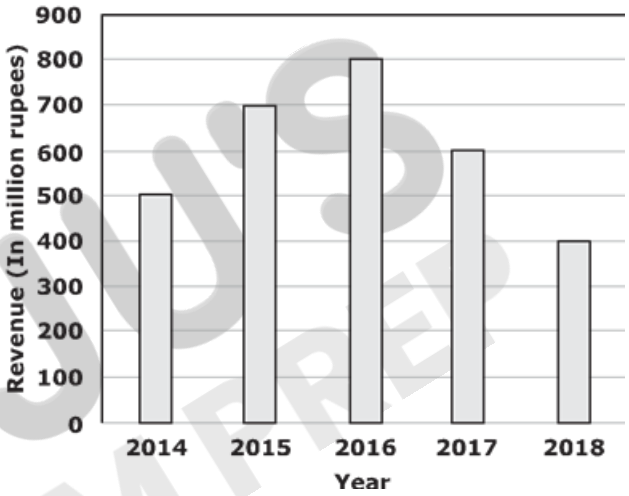
(f) → (b) cos 0

So, (f) → (b) is selected.

Then (b) → (2) is selected

⇒ so, (1) → (f) → (b) → (2)

2. The total revenue of a company during 2014-2018 is shown in the graph. If the expenditure of the company in each year is 500 million rupees, then the aggregate profit loss (in percentage) on the total expenditure of the company during 2014-2018 is _____



A. 20% profit B. 16.67% loss

C. 16.67 profit D. 20% loss

Ans. A

Sol. Total expenditure = 2500 million

Total revenue = 3000 million

$$\text{profit \%} = \frac{500}{2500} \times 100$$

profit % = 20

3. Select the words that fits the analogy:

Cook : Cook :: Fly : _____

A. Flew B. Flighter

C. Flyer D. Flying

Ans. C

Sol. Cook : Cook :: Fly : _____

The correct answer is Option C: Flyer.

As, a person who Cook's is a Cook and they cook.

Similarly, someone who flies is a Flyer and they fly.

Option B is the misleading option.

Option A is the past tense of fly, but the corresponding word is cook, so is incorrect

Option D is the present continuous of fly.

Hence **Option C is the correct answer.**

4. Raman is confident of speaking English _____ six months as he has been practicing regularly _____ the last three weeks.

A. within, for B. during, for

C. for, in D. for, since

Ans. A

Sol. within, for

5. Goods and Services Tax (GST) is an indirect tax introduced in India in 2017 imposed on the supply of goods and services, and it subsumes all indirect taxes except few. It is a destination-based tax imposed on goods and services used, and it is not imposed the point of origin from where goods come. GST also has a few components specific to state governments, central government and Union Territories (UT's).

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

A. GST does not have a component specific to UT.

B. GST is imposed at the point of usage of goods and services.

C. GST is imposed on the production of goods and services.

D. GST includes all indirect taxes.

Ans. B

Sol. GST is imposed at the point of usage of goods and services.

6. If P = 3, R = 27, T = 243, then Q + S = _____

A. 90 B. 80

C. 40 D. 110

Ans. A

Sol. $P = 3^1$

$Q = 3^2 = 9$

$R = 3^3 = 27$

$S = 3^4 = 81$

$T = 3^5 = 243$

So, Q + S = 9 + 81 = 90

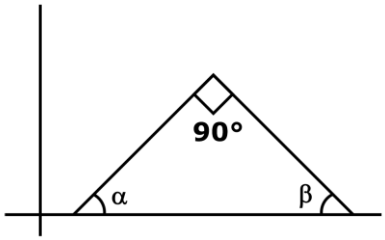
7. Two straight lines are drawn perpendicular to each other in X–Y plane. If α and β are the acute angles the straight lines make with the X-axis then α + β is _____ .

A. 180^0 B. 60^0

C. 120^0 D. 90^0

Ans. D

Sol.



we know that the sum of the angles of a triangle is 180 degree

In the above-given triangle α + β + 90 = 180

α + β = 90

8. His knowledge of the subject was excellent, but his classroom performance was_____.

A. good B. praiseworthy

C. desirable D. extremely poor

Ans. D

Sol. His knowledge of the subject was excellent, but his classroom performance was extremely poor.

9. The dawn of the 21st century witnessed the melting glaciers oscillating between giving much and too little to billions of people who depend on them for fresh water. The UN climate report estimates that without deep cuts to man-made emissions, at least 30% of the northern hemisphere's surface permafrost could melt by the end of the century. Give situation of imminent global exodus of billions of people displaced by rising seas, nation-states need to rethink their cartoon footprint for political concerns, if not for environmental ones.

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

A. Nation-states do not have environmental concerns.

B. Billions of people are affected by melting glaciers.

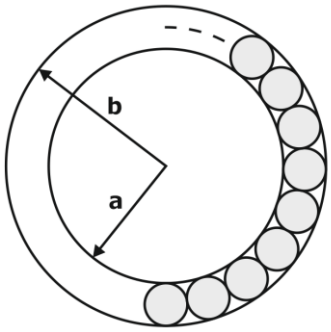
C. Nation-states are responsible for providing fresh water to billions of people

D. Billions of people are responsible for man-made emissions.

Ans. B

Sol. Billions of people are affected by melting glaciers.

10. The figure below shows an annular ring with outer and inner radii as b and a, respect. The annular space has been painted in the form of blue colour circles touching the and inner periphery of annular space. If maximum n number of circles can be painted, then the unpainted area available in annular space is _____.



A. $\pi\left[(b^2-a^2)+\frac{n}{4}(b-a)^2\right]$

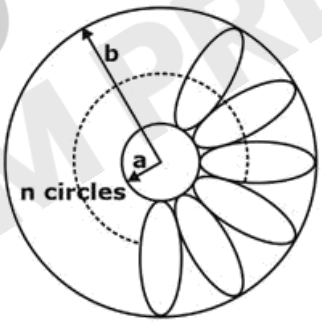
B. $\pi\left[(b^2-a^2)-\frac{n}{4}(b-a)^2\right]$

C. $\pi\left[(b^2-a^2)-n(b-a)^2\right]$

D. $\pi\left[(b^2-a^2)+n(b-a)^2\right]$

Ans. B

Sol.



Radius of inner circle = a

Radius of outer circle = b

Radius of small circle = $\frac{b-a}{2}$

area of donut shaped figure = $\pi(b^2 - a^2)$

Area of each small circle = $\pi\left(\frac{b-a}{2}\right)^2$

total area of all small circle = $n\pi\left(\frac{b-a}{2}\right)^2$

Area of remaining portion

$= \pi\,(b^2-a^2)-n\pi\left(\frac{b-a}{2}\right)^2$

$= \pi\left[(b^2-a^2)-\frac{n}{4}(b-a)^2\right]$

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