Batch 373

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Part II

SECTION - II

"QUESTION NO- 06"

(A)

Let the three digit number is 'ABC'

We know

ABC, when added.

$A+B+C = 15$ (Given) — ①

$B+C = 12$ (Given) — ②

$B-A = 2$ (Given) — ③.

Solution:

Using above equations.

Put ② in ①.

$A + 12 = 15$

$A = 15 - 12$ — ③

$\boxed{A = 3}$ — ④

put ④ in ③.

$B - 3 = 2$

$B = 2 + 3 = 5$

$\boxed{B = 5}$ — ⑤

From ④ & ⑤ it is clear that $C = 7$.

So the number is 357

5

Q No-06

(B)

Data:

Given:

No. of slices = 18

Three pizzas

Ratio of slices 2:3:4,

Ratio of 18 slices 4:6:8

weight per slice = 40 g.

Solution

total weight = 18 × 40 g

= 720 g (total pizza)

price of first pizza = 320.

price of 2nd pizza = 480

price of 3rd pizza = 640.

320 : 480 : 640

2 : 3 : 4

(C)

Given

Diameter of circle = 6 cm

Required

Circumference & Area.

2.5

Solution:

Circumference = $C = \pi d$

$C = 3.14 \times 6$

$\boxed{C = 18.84}$

$3.14 \times 6 = 18.84$

Area = $\pi r^2 = \pi \left(\frac{d}{2}\right)^2 = 3.14 \times 3^2$

$A = 3.14 \times 9$

Area = $A = \boxed{28.26}$

$3.14 \times 9 = 28.26$

(D)

(i) 13, 24, 46, 90, 178, 354

Double the no. & subtract 2

$178 \times 2 = 356$

$356 - 2 = 354$

(ii) 5, 6, 9, 14, 21, 30

Odd no. is added to each, 1, 3, 5, 7, 9

'QUESTION-NO-08'

(A)

Given:

Width of room = 60% of length

length of room = $l = 15$ ft

Here width, $W = 60\%$ of 15

$W = \frac{60}{100} \times 15 = \frac{90}{10} = 9$

$W = 9$ ft

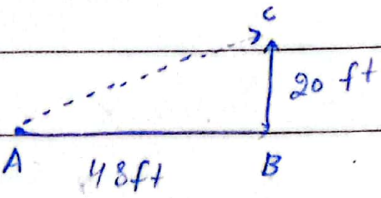
Date: _____ Day: _____

(B)

Let the starting point is A

2nd point is B

& end point C.



The straight distance covered by her from A to C for m a right angled triangle with unknow Hypotenuse.

we know.

$H^2 = B^2 + P^2$

$H^2 = 48^2 + 20^2$

$H^2 = 2304 + 400 = 2704.$

taking square root on b/s.

$\sqrt{H^2} = \sqrt{2704}$

$\boxed{H = 52}$

If she would have run straight she would run $\boxed{52}$ ft.

Date: _____ Day: _____

(C)

Data

No of Students = 40

Average Marks = 52.15

Mark increased by = 85 − 49 = 36

Let's divide the remaining mark by No of students = 36 ÷ 40

= 0.9 — ①

Add ① to Average marks -

New Average Marks = A_n = 52.15 + 0.9

A_n = 53.05

Average marks of the class.

(D)

Probability = No of people also like chicken pizza / Total No. of people

$p = 25/37+25+3$

$p = \frac{25}{65} = 0.38$

probability that a person like Chicken pizza is 0.38

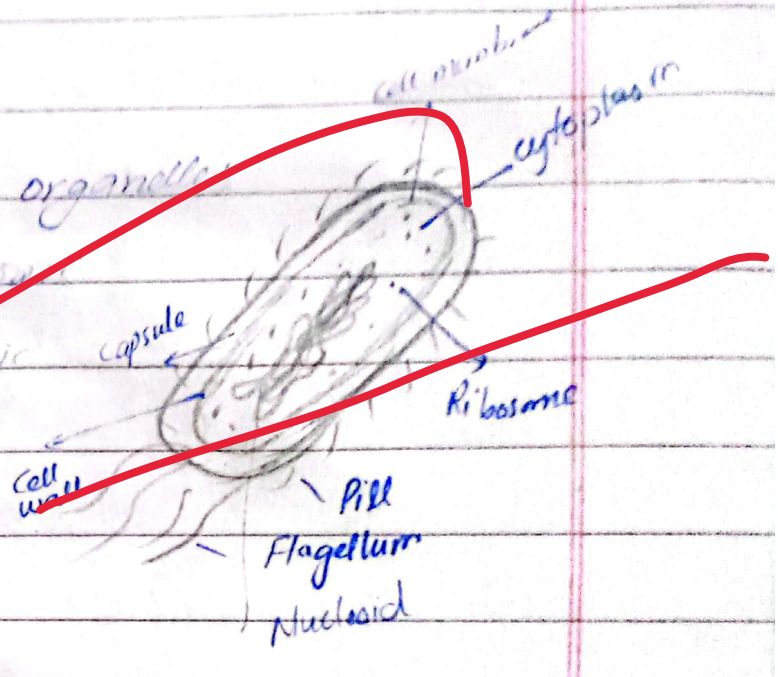
SECTION – I.

QUESTION – NO. 05

(A)

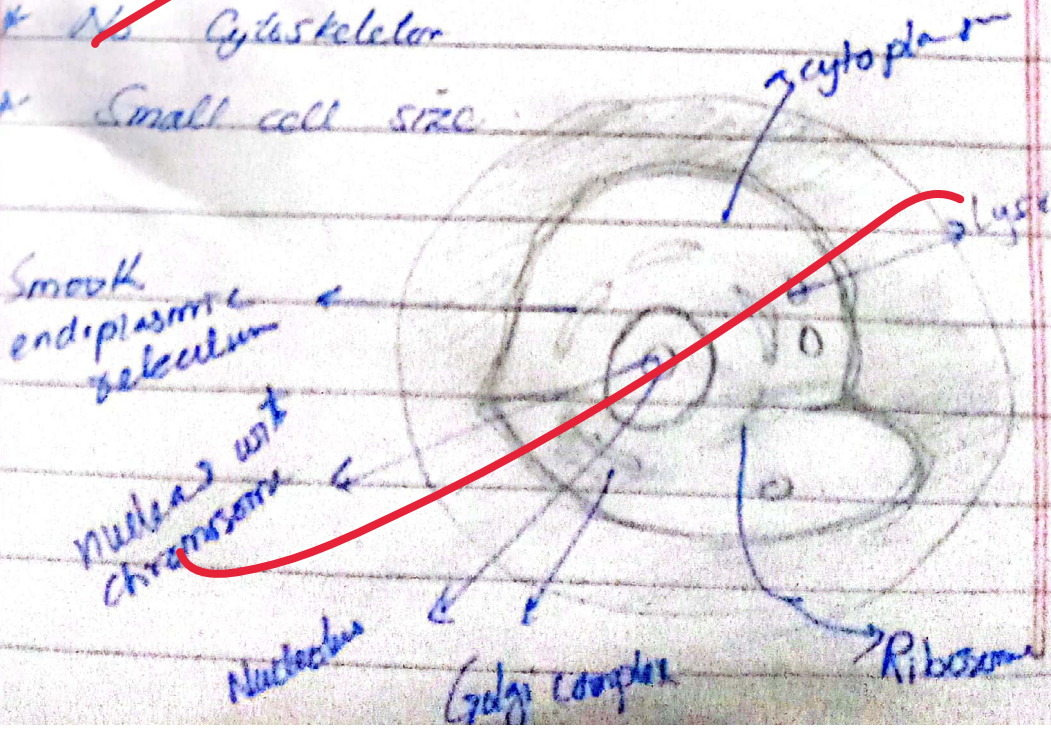
Eukaryotic Cells

* True nucleus
* Membrane bound organelles
* Linear chromosomes
* Mitosis & Meiosis
* Cytoskeleton
* Large cell size



Prokaryotic Cell:

* No true nucleus
* No membrane bound organelles.
* Circular chromosome
* Binary fission
* No Cytoskeleton
* Small cell size



Date: 7 Day:

(B)

Global Warming :-

Global Warming refers to the long rise in global surface temperature of the earth due to the increasing levels of green house gases in the atmosphere. The gases such as carbon dioxide (CO_2) methane (CH_4) and water vapour (H_2O) trap heat from the sun, leading to a warming effect on the planet. Global warming is a major aspect of climate change which also included changes in precipitation patterns, sea level rise and shift in weather extremes.

Kyoto Protocol :-

The Kyoto protocol is an international treaty that aims to reduce green house gas emissions and mitigate global warming.

Adopted in 1997 in Kyoto Japan
the protocal sets binding emission targets for developed countries which are required to reduce their emission by an average of 5% below 1990 levels during the 2008-2012 commitment period.

Key Aspects:

1. Emmission Reduction Targets.
2. Flexibility Mechanisms.
3. Compliance and reporting.

Limitations:

1. Lack of participation from developing countries eg China, India etc.

(c)

GIS [Geographic information system]

A computer based tool that allows user to capture, store, analyze and display geographically referenced data.

GIS integrates spatial data (maps) with descriptive data (database

to provide a powerful tool for decision making and problem solving

Components:

① Hardware ② Software ③ Data
④ people ⑤ Methods

Types: of GIS Data:

① Spatial data ② Attributive Data
③ Raster Data ④ Vector Data.

GIS Applications.

① Urban planning.
② Environmental Management
③ Emergency Response
④ Transportation planning.
⑤ Business & Marketing.

Advantages:

① Improved decision Making.
② Increased efficiency.
③ Enhanced visualization.
④ Better resource Allocation

Date: Day:

(10)

(D)

Antioxidants:

Substances that help protect cells from damage caused by free radicals, which are unstable molecules that can damage cells and contribute to aging and diseases.

Antioxidants work by neutralizing or mopping up free radicals thereby preventing them from causing harm.

examples

1. Vitamin E & C
2. Beta - carotene
3. Selenium
4. Polyphenols
5. Flavonoids.

Health Benifits:

1. Reducing Risk of chronic diseases
2. Protecting against cell damage
3. Improving cognitive function
4. Supporting immune system.

Include diagrams and flowcharts to illustrate processes.
Discuss practical applications of scientific concepts.
Show all steps and working for calculations.
Use diagrams and graphs to illustrate concepts.
Follow step by step method of solution