



MACRO VISION ACADEMY, BURHANPUR

Sample Paper

Class: XI (B)

Biology Stream

Time 2:00 Hrs. M.M.: 100

Office Use

Student's Name:- _____ Father's Name:- _____

City:- _____ Mobile No:- _____ Exam Date:- _____

Studying in Class:- _____ Appearing for class:- _____ Board:- MP/CBSE/Other _____

Biology (30)	Physics (15)	Chemistry (15)	Mathematics (20)	English (20)	OBTAINED MARKS (100)

(Biology 30)		
❖	Name the respiratory organs of. (i) fish (ii) mosquito (iii) earthworm (iv) frog	2
❖	How does human foetus derive nutrition? Ans.	2
❖	Explain the importance of fossils in deciding evolutionary relationship. Ans.	2
❖	If all the wastes we generate is biodegradable, will this have no impact on the environment? Ans.	2
❖	What are phytohormones? Name them. Ans.	2
❖	An environmentalist on visit to your school suggested the use of three R's to save the environment. Explain what he meant by three R's and how you would follow his advice at home. Ans.	2

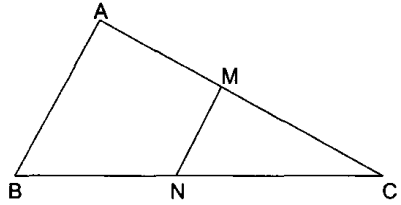
❖	Differentiate between 'self-pollination' and 'cross-pollination'. Describe double fertilisation in plants. Ans.	3
❖	➤ What is the Endoplasmic Reticulum(ER)? Name its types? Ans. ➤ What are the functions of the Endoplasmic Reticulum (ER)? Ans.	3
❖	➤ How can we prevent air borne diseases. Ans. ➤ Name the organ which are targeted by malaria diseases: Ans. ➤ What is Incubation Period? Ans.	3
(Physics 15)		
❖	Several electric bulbs designed to be used on a 220V electric supply line are tested 10W. How many lamp can be connected in parallel with each other across the two wire of 200V line if the maximum allowable current is 5A? Ans.	3

❖	<p>State rule to determine magnetic line through straight conductors. How to get strong magnetic field.</p> <p>Ans.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	3
❖	<p>How solar energy is used in new age. Explain any three conversions.</p> <p>Ans.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	3
❖	<p>Design an activity using concave mirror to prove that it's converging in nature. Also state a method to find in rough focal length.</p> <p>Ans.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	3
❖	<p>Explain formation of rainbow with diagram.</p> <p>Ans.</p> <p>.....</p> <p>.....</p> <p>.....</p>	3

	
(Chemistry 15)		
❖	<p>➤ Give reasons for the following:</p> <p>i) Keeping food in air tight container helps in preventing rancidity. Ans.</p> <p>ii) We store silver chloride in dark coloured bottle. Ans.</p> <p>➤ Identify the reducing and oxidizing agent:</p> <p>i) $Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$ Ans.</p>	3
❖	<p>➤ Complete and balance the following equation:</p> <p>i) $Ca(OH)_2 + Cl_2 \rightarrow$ Ans.</p> <p>➤ Distinguish the following:</p> <p>i) Mineral and ore Ans.</p> <p>ii) Electrolytic reduction and electrolytic refining. Ans.</p>	3
❖	<p>➤ What happens when:</p> <p>i) Acetic acid reacts to sodium bicarbonate Ans.</p>	3

	<p>ii) $ZnCO_3$ is heated in the absence of air Ans.</p> <p>➤ Carbon can reduce ZnO to Zn but not CaO to Ca, why? Ans.</p>	
❖	<p>Explain the following reactions with chemical equations:</p> <p>➤ Oxidation Ans.</p> <p>➤ Hydrogenation Ans.</p> <p>➤ Substitution Ans.</p>	3
❖	<p>Four elements A, B, C and D along with their configurations are given below: Element A – 2, 1; Element B – 2, 8, 8; Element C – 2, 8, 1; Element D – 2, 8, 8.</p> <p>➤ Which two elements belong to the same period? Ans.</p> <p>➤ Which two elements belong to the same group? Ans.</p> <p>➤ Which element out of A and C is more reactive and why? Ans.</p>	3
Mathematics (20)		
❖	<p>Find a quadratic polynomial whose zeros are 1 and -3. Ans.</p>	1
❖	<p>Which term of the AP 5, 9, 13, 17, ... is 81? Ans.</p>	1

❖ In the given figure, $MN \parallel AB$, $BC = 7.5\text{cm}$, $AM = 4\text{cm}$ and $MC = 2\text{cm}$. Find the length of BN.



Ans.

1

❖ In a $\triangle ABC$, $\angle A = x^\circ$, $\angle B = (3x - 2)^\circ$, $\angle C = y^\circ$ and $\angle C - \angle B = 9^\circ$. Find the three angles.

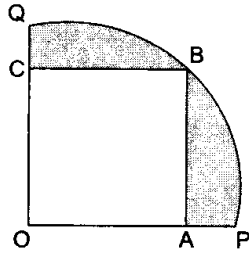
Ans.

2

❖	<p>Taking $\theta = 30^\circ$, verify each of the following:</p> <p>a) $\sin 2\theta = 2\sin \theta \cos \theta$ b) $\tan 2\theta = \frac{2 \tan \theta}{1 - \tan^2 \theta}$</p> <p>Ans.</p>	2
❖	<p>If the sum of two natural numbers is 27 and their product is 182, find the numbers.</p> <p>Ans.</p>	2

❖	<p>A tree breaks due to storm and the broken part bends so that the top of the tree touches the ground making an angle 30° with it. The distance between the foot of the tree to the point where the top touches the ground is 9 m. Find the height of the tree.</p> <p>Ans.</p>	2
❖	<p>If $R(x, y)$ is a point on the line segment joining the points $P(a, b)$ and $Q(b, a)$ then prove that $x + y = a + b$.</p> <p>Ans.</p>	3

- ❖ In the given figure, a square OABC is inscribed in a quadrant OPBQ of a circle. If $OA = 20$ cm, find the area of the shaded region. [Use $\pi = 3.14$.] **3**



Ans.

❖	<p>A bucket open at the top, and made up of a metal sheet is in the form of the frustum of a cone. The depth of the bucket is 24cm. and the diameters of its upper and lower circular ends are 30cm and 10cm respectively. Find the cost of metal sheet used in it at the rate of Rs.10 per $100m^2$.</p> <p>[Use $\pi = 3.14$.]</p> <p>Ans.</p>	3
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English (20)

❖	<p>Read the passage given below and answer the questions that follows:</p> <p>Alaskan polar bears have mastered the art of living in ice. Even during the frigid days of winter, these furry white creatures don't hibernate in cozy dens, like other bears do. Instead, they go north, hunting for seals living in the ice-covered water.</p> <p>In recent years, however, Earth's climate has been getting warmer, and ice near the Poles has been melting. Now, a new study shows that disappearing ice is changing polar bear behavior. For instance, more than half of pregnant polar bears used to give birth in dens on solid blocks of ice that were floating out at sea. Today, they're digging their dens on or near land.</p> <p>The reason? Most of the ice has disappeared. Studies have shown that 27 percent of sea ice in the Arctic that stays frozen from year to year has disappeared during the past 30 years. So there's now much less space for dens. Moreover, as the warming continues, the remaining ice becomes less</p>	5
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	<p>stable. These conditions are unappealing to mother polar bears, who want a safe place to give birth. A mother polar bear often has two cubs at a time. Baby cubs stay with their mothers for more than 2 years.</p> <p>For now, Alaska’s polar bears seem to prefer returning to land rather than taking the risk of giving birth on shaky ice. That solution might not work forever, however, especially if the ice keeps melting. The bottom line? Polar bears are in trouble.</p> <p>Answer the following questions.</p> <p>➤ Where do seals live? Ans.</p> <p>➤ Describe one trait that makes Alaskan polar bears different from other bears. Ans.</p> <p>➤ Polar ice is melting. Why? Ans.</p> <p>➤ What has forced polar bears to return to land? Ans.</p> <p>➤ Give synonym of disappear Ans.</p>																						
❖	<p>In the following passage has not been edited. There is an error in each line. Write the incorrect word and the correction against the correct blank number. Do any four. (any 4)</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%; text-align: center;">Correct</th> <th style="width: 30%; text-align: center;">Incorrect</th> </tr> </thead> <tbody> <tr> <td>The passengers were waited at the station when five policemen rushing into difference compartments of a train. Before sometime one of them comes out with two young men and soon other police officers join them.</td> <td style="text-align: center;">e.g. waiting</td> <td style="text-align: center;">waited</td> </tr> <tr> <td></td> <td style="text-align: center;">a)</td> <td style="text-align: center;">.....</td> </tr> <tr> <td></td> <td style="text-align: center;">b)</td> <td style="text-align: center;">.....</td> </tr> <tr> <td></td> <td style="text-align: center;">c)</td> <td style="text-align: center;">.....</td> </tr> <tr> <td></td> <td style="text-align: center;">d)</td> <td style="text-align: center;">.....</td> </tr> <tr> <td></td> <td style="text-align: center;">e)</td> <td style="text-align: center;">.....</td> </tr> </tbody> </table>		Correct	Incorrect	The passengers were waited at the station when five policemen rushing into difference compartments of a train. Before sometime one of them comes out with two young men and soon other police officers join them.	e.g. waiting	waited		a)		b)		c)		d)		e)	4
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❖	<p>Rearrange any four of the following word clusters to make meaningful sentences.</p> <p>➤ communication/not matter/was slow/it did/between/different/when the/world/the parts/of Ans.</p> <p>➤ for a/our times/feel/the need/the people/in/language/but/common Ans.</p> <p>➤ languages/experiments/which emerge/are language/artificial/in/humans/with Ans.</p>	3																					

