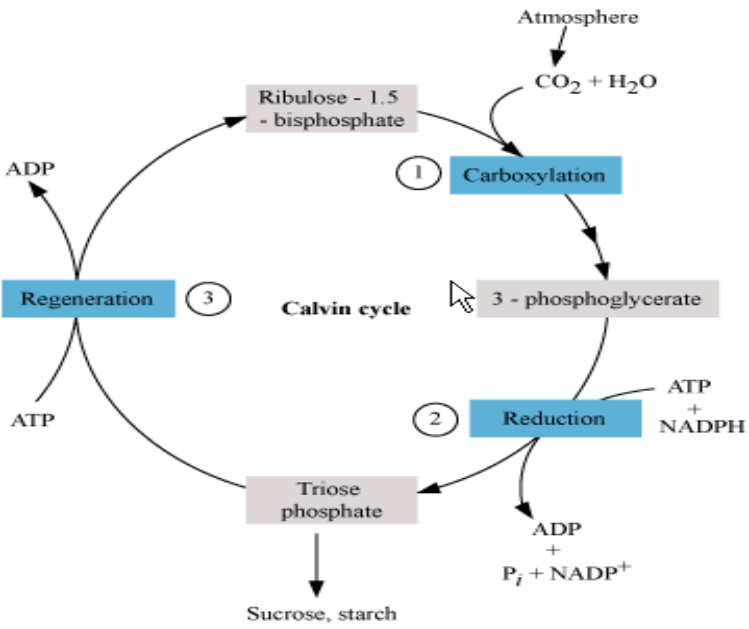
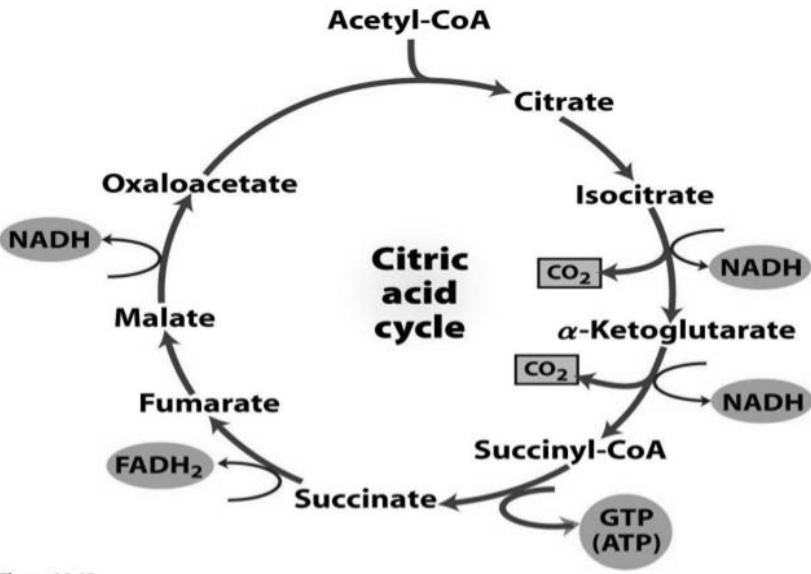


CLASS:X I	<b>INDIAN SCHOOL MUSCAT</b> <b>SECOND PERIODIC TEST</b>	SUBJECT: BIOLOGY
	<b>SET - A</b>	
QP.NO.	VALUE POINTS	SPLIT UP MARKS
1.	One NADH gives 3 molecules of ATP and One FADH <sub>2</sub> gives 2 ATP	1
2.	Incomplete oxidation of yeast gives CO <sub>2</sub> and Ethanol and anaerobic bacteria produce lactic acid	1
3.	H <sub>2</sub> S	1
4.	Accessory pigments protect chlorophyll 'a' from photo oxidation	1
5.	R.Q is the ratio of volume of CO <sub>2</sub> released to the volume of O <sub>2</sub> taken up in respiration. Value of R.Q indicates the nature of the substrate.	1+1
6.	Glyceraldehyde3 Phosphate(3C)  2(1.3.Phosphoglyceric acid) 2x(3 phosphoglyceric acid) 2x (2 Phosphoglycerate) 2 x Phosphoenol Pyruvate  2xPyruvic acid	  1/2 1/2 1/2 1/2
7.	In C <sub>3</sub> plants the site of C <sub>3</sub> cycle is the mesophyll cells but In C <sub>4</sub> plants the C <sub>3</sub> cycle, is in the bundle sheath cells.  In C <sub>3</sub> plants it's the enzyme RuBisCo, In C <sub>4</sub> plants it is PEPcase & RuBisCO	1+1
8.	1.Cyclic is related to PS I , In Noncyclic PS II & then PS I 2.Cyclic produces one ATP ,Non cyclic produces NADH <sub>2</sub> , ATP & O <sub>2</sub> 3.Cyclic does not have Photolysis of water but Non cyclic water splitting 4.Cyclic the electron is circulated in the system in non cyclic electron is removed and new are replaced from splitting of water .( <b>any 2</b> )	1+1
9.	If a chemical process is affected by more than one factor, then its rate will be determined by the factor which is nearest to its minimal value.( It is the factor which directly affects the process if its quantity is changed).  Light,CO <sub>2</sub> ,Te.mperature , Water	1+1

10.	 <p>Diagram illustrating the Calvin cycle (C3 pathway). The cycle starts with Ribulose - 1.5 - bisphosphate reacting with <math>\text{CO}_2 + \text{H}_2\text{O}</math> from the Atmosphere. The cycle proceeds through three main stages: 1. Carboxylation, 2. Reduction, and 3. Regeneration. Stage 1 (Carboxylation) produces 3 - phosphoglycerate. Stage 2 (Reduction) uses ATP and NADPH to produce Triose phosphate, which can be used for Sucrose, starch. Stage 3 (Regeneration) uses ATP to regenerate Ribulose - 1.5 - bisphosphate.</p>	1+1+1
11.	<p>TCA cycle or Citric acid cycle begins with condensation of Acetyl CoA and Oxalo Acetic acid catalysed by citrate synthase forming Citric Acid. Citrate is the isomerised to Isocitrate.</p> <p>Then decarboxylation leads to formation of <math>\alpha</math> ketoglutaric acid releasing one <math>\text{NADH}_2</math> and <math>\text{CO}_2</math> and then Succinyl Co A. is formed again releasing <math>\text{NADH}_2</math> and <math>\text{CO}_2</math></p> <p>This is then converts to Succinic acid and a molecule of GTP is formed.</p> <p>The succinic acid is then converted to Malic acid releasing <math>\text{FADH}_2</math> and finally back to Oxaloacetic acid .</p>  <p>Diagram illustrating the Citric acid cycle (TCA cycle). The cycle starts with Acetyl-CoA entering the cycle, combining with Oxaloacetate to form Citrate. Citrate is isomerised to Isocitrate. Isocitrate is decarboxylated to <math>\alpha</math>-Ketoglutarate, releasing <math>\text{CO}_2</math> and producing NADH. <math>\alpha</math>-Ketoglutarate is decarboxylated to Succinyl-CoA, releasing <math>\text{CO}_2</math> and producing NADH. Succinyl-CoA is converted to Succinate, producing GTP (ATP). Succinate is converted to Fumarate, producing <math>\text{FADH}_2</math>. Fumarate is converted to Malate, producing <math>\text{NADH}</math>. Malate is converted back to Oxaloacetate, completing the cycle.</p>	1  1  1