
 <p><b>Universiti Malaysia PAHANG</b> Engineering • Technology • Creativity FACULTY OF INDUSTRIAL SCIENCES &amp; TECHNOLOGY</p>	<b>SUBJECT: Biochemistry</b>		<b>MARKS:</b>  <b>/10</b>	
	<b>CODE: BSB1113</b>	<b>TOPIC: Lipid, Nucleic Acid &amp; Amino Acid Metabolisms</b>		
	<b>ASSESSMENT:</b> Quiz 4	<b>NO:</b> 4		<b>DUE/DURATION:</b> 30 min
<b>NAME:</b>			<b>STUDENT ID:</b>	<b>SECTION:</b>

This is an extended matching type of question on various biochemical pathways or processes (Table 1). Select the most appropriate answer from those listed in the table and fill the corresponding **LETTER** in the blank space given. Each choice can be used more than once.

**Table 1: Various Biochemical Pathways**

A	<i>de novo</i> pyrimidine synthesis	B	Electron transport chain
C	<i>de novo</i> purine synthesis	D	Gluconeogenesis
E	Salvage pathway	F	Catabolism of pyrimidine
G	Catabolism of purine	H	Fatty acid synthesis
I	$\beta$ oxidation	J	Ketogenesis
K	Glycogenolysis	L	$\alpha$ - Oxidation
M	Anabolism of Amino Acid	N	Pentose phosphate pathway
O	Catabolism of Amino Acid	P	Urea cycle

- \_\_\_\_\_ is a pathway that removes excess of ammonia from the body.
- The  $\alpha$ -ketoglutarate, oxaloacetate, and pyruvate type of ketoacids can be useful in \_\_\_\_\_ through the addition of an amino group to them by transamination reaction.
- In \_\_\_\_\_ the amino acid firstly will lose its  $\alpha$ -amino group by transamination to an  $\alpha$ -keto acid.
- In \_\_\_\_\_, 5-phosphoribosyl-1-pyrophosphate (PRPP) is important to be attached from the beginning in the steps to form an ATP.

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5. \_\_\_\_\_ leads ultimately to  $\beta$ -alanine or  $\beta$ -aminoisobutyrate and  $\text{NH}_3$  and  $\text{CO}_2$ .
6. Unlike the *de novo* (from scratch) pathway, in \_\_\_\_\_, a recycled base is attached to a ribose, activated in the form of 5-phosphoribosyl-1-pyrophosphate (PRPP).
7. The committed step in \_\_\_\_\_ is that involving Acetyl-CoA Carboxylase.
8. In \_\_\_\_\_, two carbons at a time are cleaved from acyl-CoA molecules, starting at the carboxyl end.
9. In \_\_\_\_\_ pathway of mammals, it was found cannot incorporate a double bond beyond  $\Delta^9$  however plants can do so.
10. An odd chain fatty acid oxidation can lead to propionate at the end which in turn enters \_\_\_\_\_ to produce glucose.