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TARGET : NEET (UG) 2024

Course : SARANSH (Youtube Live CRASH COURSE)

BIOLOGY
DPP
DAILY PRACTICE PROBLEMS
DPP NO. 1

BOTANY : RESPIRATION IN PLANTS

DPP No. : 1

1. Fatty acids are connected with the respiratory pathway through:
   (1) Acetyl CoA
   (2) a-Ketoglutaric acid
   (3) Dihydroxy acetone phosphate
   (4) Pyruvic acid

2. How many times decarboxylation occurs during each TCA cycle?
   (1) Thrice
   (2) Many
   (3) Once
   (4) Twice

3. Match List I with List II:

List I	List II
A. Oxidative decarboxylation	I. Citrate synthase
B. Glycolysis	II. Pyruvate dehydrogenase
C. Oxidative phosphorylation	III. Electron transport system
D. Tricarboxylic acid cycle	IV. EMP pathway

   Choose the correct answer from the options given below:
   (1) A-II, B-IV, C-I, D-III
   (2) A-III, B-I, C-II, D-IV
   (3) A-II, B-IV, C-III, D-I
   (4) A-III, B-IV, C-II, D-I

4. Given below are two statements. One is labelled as Assertion A and the other is labelled as Reason R
   Assertion A : ATP is used at two steps in glycolysis.
   Reason R : First ATP is used in converting glucose into glucose-6-phosphate and second ATP is used in conversion of fructose-6- phosphate into fructose -1-6-diphosphate.
   In the light of the above statement, choose the correct answer from the statements, choose the correct answer from the options give below:
   (1) Both A and R are true but R is NOT the correct explanation of A.
   (2) A is true but R is false
   (3) A is false but R is true
   (4) Both A and R are true and R is the correct explanation of A.

5. Match List - I wish List –II.

List - I		List - II	
(a)	ETS complex-I	(i)	Cyt bc_1
(b)	ETS complex-II	(ii)	Cyt a, a_3 and 2 copper centres
(c)	ETS complex-III	(iii)	NADH dehydrogenase
(d)	ETS complex-IV	(iv)	Ubiquinone and FADH dehydrogenase

Choose the correct answer from the options given below:

(1) (a)-(iv),(b)-(iii), (c)-(ii),(d)-(i)

(2) (al-(iii), (b)-(ii), (c)-(i), (d)-(iv)

(3) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)

(4) (a)-(ii),(b)-(i), (c)-(iv), (d)-(iii)

6. Identify the cytochrome which acts as a mobile carrier for the transfer of electrons between complex III and IV?

(1) Cytochrome a_3 (2) Cytochrome b C_1

(3) Cytochrome c (4) Cytochrome a

7. In glycolysis, ATP is synthesised during the conversion of

(1) Glucose to glucose 6-phosphate

(2) Fructose 6-phosphate to fructose 1, 6-bisphosphate

(3) 1, 3-bisphosphoglyceric acid to 3-phosphoglyceric acid

(4) Both (2) and (3)

8. Which of the following statements is incorrect?

(1*) In ETC (Electron Transport Chain), one molecule of NADH + H^+ gives rise to 2ATP molecules, and one $FADH_2$ gives rise to 3ATP molecules.

(2) ATP is synthesized through complex V.

(3) Oxidation-reduction reactions produce proton gradient in respiration. .

(4) During aerobic respiration, role of oxygen is limited to the terminal stage.

9. Respiratory Quotient (RQ) value of tripalmitin is:

(1) 0.09 (2) 0.9 (3) 0.7 (4) 0.07

10. Which of the following statements is incorrect?

(1*) In ETC (Electron Transport Chain), one molecule of NADH + H^+ gives rise to 2ATP molecules, and one $FADH_2$ gives rise to 3ATP molecules.

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(3) Oxidation-reduction reactions produce proton gradient in respiration. .

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