CELL RESPIRATION

STATE PMT EXAMS EXERCISE

1. Photochemical reactions in the chloroplasts are directly involved in : **[Uttaranchal 2004]**
   (1) Fixation of carbondioxide
   (B) Synthesis of glucose and starch
   (3) Formation of phosphoglyceric acid
   (4) Photolysis of water and phosphorylation of ADP to ATP

2. Which of the following elements are essential for the photolysis of water : **[Uttaranchal 2004]**
   (1) Ca and Cl (2) Mn and Cl
   (3) Zn and I (4) Cu and Fe

3. Respiratory Quotient (R.Q.) is defined as **[Uttaranchal 2004]**
   (1) vol. of O_2/ vol. of CO_2
   (B)vol. of CO_2/vol. of O_2
   (3) vol. of O_2 / vol. of N_2
   (4) vol. of N_2/vol. of Co_2

4. The fastest acting enzyme, in the biological kingdom, is **[Uttaranchal 2004]**
   (1) Lipase
   (B)Amylase
   (3) Peotidase
   (4) Carbonic anhyddrase

5. Pyruvic acid is formed during : **[Uttaranchal 2005]**
   (1) Krebs cycle (B)Glycolysis
   (3) Ornithinse cycle (4) Calvin cycle

6. Urease enzyme was obtained from **[Uttaranchal 2005]**
   (1) Urine (B)Canavalia
   (3) Ficus fruit (4) Pancreas

7. Which of the following is involved in transfer of electrons in photosynthesis : **[Uttaranchal 2005]**
   (1) Phytochrome (B)Cytochrome
   (3) Photochormone (4) Desmosome

8. Apoenzyme is : **[Uttaranchal 2005]**
   (1) Protein (B) Vitamin
   (3) carbohydrate (4) Amino acid

9. The correct sequence of electron acceptor in ATP synthesis : **[Uttaranchal 2005]**
   (1) cyt a, a_3, b, c (2) cyt b, c, a, a_3
   (3) cyt b, c_3, a, a_3 (4) cyt c, b, a, a_3

10. Substrate for photorespiration is : **[Uttaranchal 2005]**
    (1) Glycolate (2)Glucose
    (3) Lipid (4) Sucrose

11. In aquaria, green platns are grown for : **[Uttaranchal 2005]**
    (1) Co_2 production (2)Starch production
    (3) O_2 production (4) Increase beauty

12. Which one of the following contins copper besides iron : **[Uttaranchal 2005]**
    (1) Cytochrome - f (2) Cytochrme oxidase
    (3) Platoquinone (4) Cytochrome-c_1

13. A strucutre known as peroxisomes is associated with **[Uttaranchal 2006]**
    (1) Photosynthesis
    (2) Respiration
    (3) Phtorespiration
    (4) Photophosphorylation

14. In the mesophyll cells of CAM plants, CO_2 fixation during day ocur through : **[Uttaranchal 2006]**
    (1) RuBO-oxygenase
    (2) PEP-carboxylase
    (3) RuBP-caboxylase
    (4) RuBP-carboxylaseBoth RuBP caboxylase and PEP caboxylase

15. Where does formation of acetyl CO-A form pyruvic acid take plce : **[Uttaranchal 2006]**
    (1) Mitochondraia (2) Chloroplast
    (3) Cytoplasm (4) Golgi body

16. The num ber of ATP molecules produced by electron transport system from kreb;s cycle intermedaites in a single turn is : **[Uttaranchal 2004]**
    (1) 11 (2) 14
    (3) 12 (4) 16

17. The first electron acceptor in photosystem-I of cyclic photophophorylation is : **[Uttaranchal 2006]**
    (1) Cytochrome (2) Plastocynain
    (3) Ferredoxin (4) Plastoquinone

18. In anaerobic respiration the number of ATP molecules produced are : **[West Bengal 2007]**
    (1) 1 (2) 2

(3) 3 (4) 8

19. In which of the following steps of Krebs cycle CO_2 is evolved : **[West Bengal 2007]**
(1) Isocitric acid $\rightarrow$ oxalosucininc acid
(2) Oxalosuccinic acid $\rightarrow$ ketoglutaric acid
(3) succinic acid $\rightarrow$ fumaric acid
(4) malic acid $\rightarrow$ oxaloacetic acid

20. Which of the following enzyme is not used in krebs' cycle : **[West Bengal 2007]**
(1) Aconitase (2) Decarboxylase
(3) Aldolase (4) Fmarase

21. Kranz anatomy is found in leaves of : **[West Bengal 2007]**
(1) C_3 plants (2) C_4 plants
(3) Both C_3 and C_4 plants (4) None of these

22. End products of fermentation is : **[West Bengal 2007]**
(1) O_2 (2) N_2O
(3) H_2O (4) C_2H_5OH

23. Gluconeogenesis is : **[West Bengal 2007]**
(1) Formation of glucose from sou rces other than carbohydrate
(2) Foramtion o glycogen
(3) Brakdown of glucose
(4) Foramtion of ammonia from glucose

24. β-oxidation takes palce in : **[West Bengal 2007]**
(1) Matix of mitochondria
(2) Cell cytoplasm
(3) Inter mitochondrial chamber
(4) Ribosomes

25. The non-protein part of an enzyme is : **[West Bengal 2007]**
(1) Prosthetic groop (2) Coenzyme
(3) Cofactor (4) All the above

26. In bacterial photosynthesis : **[West Bengal 2007]**
(1) PS I is present
(2) PS II present
(3) Both PS I and PS II present
(4) None of these are present

27. Which chlorophyll molecule does not have a phytol tail : **[West Bengal 2007]**
(1) chl a (2) chl b
(3) chl c (4) chl d

28. Ribozmes are : **[West Bengal 2007]**
(1) RNA acting as enzymes
(2) antibody acting as enzymes
(3) ribosomes acting as enzymes
(4) None of the above

29. Calvin, used algae in his experiment, for tracing out the path of carbon, the algae used were : **[West Bengal 2007]**
(1) Chlorella and Chlamydomonas
(2) Chlorella and Scenedesmus
(3) Chlorococcum and Chorells
(4) Chlorococcum and Scenedemus

30. In TCA cycle the conversion of succinyl co-A to succinic acid requires : **[West Bengal 2007]**
(1) Acetyl Co-A + GTP + iP
(2) Acetyl Co-A + GDP + iP
(3) Co-A + GTP + iP
(4) GDP + iP

31. Yeast is sued in the foramtion of : **[CG. PMT 2004]**
(1) Ammonia (2) Alcohol
(3) Curd (4) Petrol

32. Fermentation is represented by equation : **[CG. PMT 2007]**
(1) $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + 673K$ cal
(2) $C_6H_{12}O_6 \rightarrow 2C_2H_5OH + 2CO_2$
(3) $6CO_2 + 12H_2O \rightarrow C_6H_{12}O_6 + 6H_2O + 6O_2$
(4) $6CO_2 + 6H_2O \xrightarrow[\text{chlorophyll}]{\text{light}} C_6H_{12}O_6 + 6O_2$

33. Which element is esential for photolysis of water : **[CG. PMT 2004]**
(1) Nitrogen (2) Chlorine
(3) Carbon (4) Oxygen

34. In C_4 plants, initial CO_2 fixation takes palce in the chloroplasts of : **[CG. PMT 2004]**
(1) Guards cells (2) Spongy mesophyll
(3) Palisade tissue (4) Bundle sheath

35. Which of the following is formed during respiration ? **[CG. PMT 2004]**
(1) O_2 (Oxygen)
(2) CO_2 (Carbon dioxide)
(3) NO_2 (Nitrogen dioxide)
(4) SO_2 (Shulphur dioxide)

36. The pyruvic acid formed in glycolysis is oxidised to CO_2 and H_2O in cycle called : **[CG. PMT 2007]**
(1) Calvin cycle (2) Hill reaction
(3) Kerbs cycle (4) Nitrogen cycle

37. many of the hydrolytic reactions are : **[MP PMT 2001]**
(1) Reversible (2) Irreversi ble
(3) Endothermic (4) Exothermic

38. Which of the following elemetns is required for photosynthetic oxygen evolution ? **[C.G. PMT 2007]**
(1) Copper (2) Iron
(3) Manganese (4) Zinc

39. Agranal chloroplasts o ccurs in : **[C.G. PMT 2005]**
(1) Succulent (2) C_3 plants
(3) C_4 plants (4) Hydrophytes

40. The wavelenght of light most absorbed during photosynthesis is : **[C.G. PMT 2005]**
(1) 400 nm (2) 55 nm
(3) 660 nm (4) 700 nm

41. Which are related with photorespiration : **[C.G. PMT 2005]**
(1) Spherosome (2) Lysosomes
(3) Glyoxysomes (4) Peroximomes

42.The end product of glycolysis is : **[C.G. PMT 2005]**
(1) Glucose (2) Fructose
(3) Pyruvic acid (4) Ethyl alcohol

43. R.Q. is more than one in case of : **[C.G. PMT 2005]**
(1) Fat (2) Fructose
(3) Glucose (4) Organic acid

44. Enzymes concerned with transfer of electrons are : **[C.G. PMT 2005]**
(1) Hydrolysases (2) Dehydrogenases
(3) Transaminases (4) Proteases

45. Enzymes are basically : **[C.G. PMT 2006]**
(1) Fat (2) Protein
(3) Nuclic acid (4) All the above

46. Which of the following is a C_4 plant : **[C.G. PMT 2006]**
(1) Sugaranse (2) Mango
(3) Apple (4) Tomato

47. The first stable compound formed in photosynthesis of C_3 plants is : **[C.G. PMT 2006]**
(1) Phosphoglyceric acid
(2) Starch
(3) Pyruvic acid
(4) Ribulose diphosphate

48. Ferridozine is componant of : **[C.G. PMT 2006]**
(1) PS-I (2) PS-II
(3) Hill reaction (4) P_{680}

49. Correct percentage of CO_2 in atmosphere is : **[C.G. PMT 2006]**
(1) 0.03% (2) 0.3%
(3) 1 % (4) 1.1%

50. Isotopes used in photosynthesis were : **[C.G. PMT 2006]**
(1) C^{11} and P^{32} (2) C^{15} and P^{32}
(3) C^{16} and P^{15} (4) C^{14} and O^{18}

51. P_{680} is related with : **[C.G. PMT 2006]**
(1) PS-I (2) Ps-II
(3) Hill reaction (4) None

52. NADP reduces to $NADPH_2$ in : **[C.G. PMT 2002]**
(1) PS-I
(2) PS-II
(3) Calvin cycle
(4) Non cyclic photophosphorylation

53. Hills reaction compeltes in : **[C.G. PMT 2006]**
(1) Light (2) Dark
(3) Both (4) None

54. Total yield in one Kerb cycle : **[C.G. PMT 2006]**
(1) 3 $FADH_2$, 2 $NADH_2$, 1 ATP
(2) 2 $FADH_2$, 2$NADH_2$, 2 ATP
(3) 2 $NADH_2$, 1 $FADH_2$, 2 ATP
(4) 3 $NADH_2$, 1 $FADH_2$, 1 ATP

55. How many ATP will be produced during the production of 1 molecule of Accetyl Co-A form 1 moleule of pyryvic acid ? **[C.G. PMT 2007]**
(1) 3 ATP (2) 5 ATP
(3) 8 ATP (4) 38 ATP

56. Enzymes are sensitive to : **[C.G. PMT 2006]**
(1) Cold (2) Cell wall

(3) Heat (4) Pressure

57. Sequence of cytochromes is : **[Jharkhand 2006]**
(1) cyt. a,b,c,a_3 (2) cyt. b,c,a,a_3
(3) cyt. b,a,a_3, c (4) cyt. b,c,a_3, a

58. Cytochorme is a : **[Jharkhand 2006]**
(1) Mg pyrole ring
(2) Fe prophyrin ring
(3) Nucleotide
(4) Alloy of nichrome

59. Who described C4 pathway for first time ? **[Jharkhand 2006]**
(1) Hatch and Slack (2) Robert Hill
(3) Hand Kerbs (4) Melvin Kelvin

60. Kerbs cycle takes place in : **[Jharkhand 2006]**
(1) mitochondrial matrix (2) Cytoplasm
(3) Lysosome (4) Nucleus

61. In photosynthesis, for synthesis of one mole of glucose number of ATP and $NADPH_2$ required is : **[Jharkhand 2006]**
(1) 12 and 18 (2) 18 and 12
(3) 6 and 12 (4) 18 and 18

62. The first acceptor of CO_2 in C_4 plant is : **[Jharkhand 2005]**
(1) Pyruvic acid
(2) Phosphoenol pyruvic and
(3) Acetic acid
(4) Oxaloacetic acid

63. Cellular respiragation occures in : **[Jharkhand 2005]**
(1) Chloroplast (2) Golgibodies
(3) Mitochondria (4) Nucleus

64. Enzymes are functional at : **[Jharkhand 2005]**
(1) 10-15^{0}C (2) 15-25^{0}C
(3) 25-40^{0}C (4) 30-60^{0}C

65. Insectiverous plants usually survive in : **[Jharkhand 2005]**
(1) water rich soil
(2) N_2 deficient soil
(3) N_2 rich soil
(4) Sugar deficient medium

66. In the process of photosynthesis of water molecule breaks in : **[Jharkhand 2005]**
(1) Red drop
(2) Photolysis
(3) Phoshorylation
(4) Carbon assimilation

67. Maximum amount of energy / ATP is liberated on oxidation of : **[Jharkhand 2004]**
(1) Fats (2) Proteins
(3) Starch (4) Vitamins

68. Who proved that oxygen evolved in photosynthesis comes from water : **[Jharkhand 2004]**
(1) Calvin
(2) Mayer
(3) Blackman
(4) Ruben, Hassid and Kamen

69. The proces in which water in split during photosynthesis is : **[Jharkhand 2004]**
(1) Plasmolysis (2) photolsis
(3) hydrolysis (4) haemolysis

70. More CO_2 is evolved that the volume of oxygen consumed when the respiratory substrate is :' **[Jharkhand 2004]**
(1) Fat (2) Sucrose
(3) Glucose (4) Organic acid

71. Kerbs cycle beings with the reaction : **[Jharkhand 2004]**
(1) Citric acid + Acetyl CO-A
(2) Oxlacetic acid + Pyruvic acid
(3) Oxalacetic acid + Citric acid
(4) Oxaloacetate + Acetyl CO-A

72. Hydrolysis of lipid yields : **[Jharkhand 2004]**
(1) Fats
(2) Fatty acids and glycerol
(3) Mannose and glycerol
(4) Maltose and fatty acid

73. Which of the following is used during discovery of Calvin cycle ? **[Jharkhand 2004]**
(1) Spirogyra (2) Volvox
(3) Chlamydomonas (4) Chlorella

74. Respiratory quotient of which diet is less than unity ? **[Jharkhand 2004]**
(1) Carbohydrate (2) Fats
(3) Organic acid (4) Sugar

75. Which of the following inactivates the enzyme by hanging its shape ? **[Jharkhand 2002]**
(1) Competitive inhibitor (2) Allosteric inhibitor

(3) Coenzyme (4) All of the above

76. Enzymes that catalyse endergonic synthesis, coupled with exergonic hydrolysis of ATP are : **[Jharkhand 2004]**
(1) ligases (2) isomerases
(3) lysases (4) transferases

77. Which of the following is maximum in chloroplast ? **[Bihar 2005]**
(1) RuBP caroxylase (2) Hexokinase
(3) Phosphate (4) Nuclease

78. Richest energy compound is **[Bihar 2005]**
(1) Creatinine phosphate
(2) Protein
(3) crbohydrate
(4) Fate

79. The stage upto which glycolysis and fermentation is common **[Bihar 2005]**
(1) dihydroxy acetone
(2) dihydroxy acetone
(3) 3-phosphoglyceraldehye
(4) pyruvateglucose-6-phosphate

80. Respiratory quoteint of carbohydrate is : **[Bihar 2005]**
(1) unitiy (2) greater than unity
(3) less than units (4) equal to five

81. O_2 released in the process of photosynthesis, comes from : **[Bihar 2004]**
(1) CO_2 (2) water
(3) suger (4) pyruvic acid

82. During conversion of pyruvic acid into acetyl CO-A pyruvic acid is : **[Bihar 2003]**
(1) oxidized (2) reduced
(3) isomerised (4) condensed

83. In Kerb's cycle : **[Bihar 2003]**
(1) ADP is converted into CO_2
(2) Pyuvic acid in converted into CO_2 and H_2O
(3) Glucose is converted into CO_2
(4) Pyruvic acid is converted into ATP

84. The first carbon-dioxide acceptor in C_4 platns is : **[Bihar 2003]**
(1) Phosphenon pyruvate
(2) Oxalo acetic acid
(3) Phosphoglyceric acid
(4) Ribulose - 1, 5-diphosphate

85. The C_4 plants are different from the C_3 plants with reference to the : **[Bihar 2003]**
(1) tupes of pigments involved in photosynthesis
(2) the number of NADPH that are consumed.
(3) end product
(4) the substance that accepts CO_2 in carbon assimilation and first atable product

86. Proteinaceous nature of enzyme was suggested by : **[Bihar 2003]**
(1) Summer (2) Kuhne
(3) E.Buchner (4) Northrop

87. Incomplete breakdown of sugar in anaerobic respiration forms : **[Bihar 2003]**
(1) glucose and CO_2 (2) alcohol and CO_2
(3) water and CO32 (4) fructose and water

88. Calvin cycle occurs in : **[Bihar 2003]**
(1) Cytoplasm (2) Chloroplasts
(3) Mitochondria (4) Glyoxysomes

89. Oxygen which is liberated during photosynthesis comes from : **[Bihar 2002]**
(1) CO_2 (2) H_2O
(3) Phosphoglyceric acid (4) Chlorophyll

90. Significance of Kerb's cycle : **[Bihar 2002]**
(1) Synthesis of ATP
(2) Synthesis of amino acid
(3) Synthesis of chlorophyll
(4) All

91. In plants, respiration takes place : **[Bihar 2002]**
(1) During day only (2) During night only
(3) All the 24 hours (4) At dusk

92. Which one is produced during cyclic photo phosphorylation ? **[Bihar 2001]**
(1) ATP and $NADPH_2$
(2) ATP only
(3) ATP and O_2
(4) $NADPH_2$

93. Glycolysis takes place in : **[Bihar 2001]**
(1) Cytoplasm (2) Nucleus
(3) Plastid (4) Mitochondria

94. A student sets up an experiment on photosynthesis as follows :

He takes soda water in a glass tumler and add a chlorophyll into the contests and keeps the tumbler exposed to sunlight hoping that he had provided necessary ingredients for photosynthesis to proceed (viz. CO_2, H_2O chlorophyll and light). What do you think what will happen after, say, a few hours of exposure of light ? **[Bihar 2006]**

(1) Photosynthesis will take place and glucose will be produced
(2) Photosynthesis will take place and starch will be produced which will turn the mixtrue turbid
(3) Photosynthesis will not take place because CO_2 dissolved in soda waeter escapes into the atmosphare
(4) Photosynthesis will not take place because intct chloroplasts are needed for the process

95. In respiraation, largest amount of energy is produced in : **[Bihar 2006]**
(1) anaerobic respiration (2) kerbs cycle
(3) glycolysis (4) none of the above

96. Which of the following is not an intermediate in Kerbs cycle ? **[Bihar 2006]**
(1) Acetic acid
(2) Succinyl coenzyme-A
(3) Malic acid
(4) Citric acid

97. The pyruvic acid acid is formed during : **[UP CPMT 2001]**
(1) Kerbs cycle
(2) glycolysis
(3) orithine cycle
(4) photophosphorylation

98. The number of ATP molecules gained during aerobic respiration of 1 mole of blucose is : **[UP CPMT 2001]**
(1) 12 (2) 18
(3) 30 (4) 38

99. Alcoholic fermentation takes place in the presence of : **[UP CPMT 2001]**
(1) maltase (2) zymase
(3) amylase (4) invertase

100. The site of EMP pathway is cell is : **[UP CPMT 2001]**
(1) peroxisome
(2) cytoplasm
(3) matrix of mitochondria
(4) inner membrane of mitochondria

101. The first reaction in photorespiration is : **[UP CPMT 2001]**
(1) caroxylation (2) decarboxylation
(3) oxygenation (4) phosphorylation

102. The law of limiting factor, in photosynthesis, was given by : **[UP CPMT 2001]**
(1) R.Hill (2) Calvin
(3) Blackman (4) Arnon

103. Carbon dioxide acceptor in C_3-plants is : **[UP CPMT 2001]**
(1) PEP (2) RuDP
(3) PGA (4) NADP

104. Most of the hydrolytic enzymes of lysosomes function at : **[UP CPMT 2001]**
(1) Acidic pH (2) Basic pH
(3) Neutral pH (4) None of the above

105. insectivorous plants grow in soils which are deficient in : **[UP CPMT 2001]**
(1) Nitrogen (2) Calcium
(3) Magnesium (4) Carbohydrate

106. Step of respiration are controlled by : **[UP CPMT 2002]**
(1) Substrates (2) Enzymes
(3) Hormone (4) Bile juice

107. Quantsomes are found in : **[UP CPMT 2002]**
(1) Mitochondria
(2) Chloroplast
(3) Lysosome
(4) Endoplasmic reticulum

108. During photosynthesis : **[UP CPMT 2002]**
(1) O_2 evolved come form CO_2
(2) ATP is formed
(3) ATP is not formed
(4) Water is required as medium but is does not take part in photosynthesis

109. Cu is present in : **[UP CPMT 2003]**
(1) Plasmalemma (2) Plastoquinone
(3) Palstocyanin (4) Ferridoxin

110. In which of the following oxygen does not evolve during photosynthesis ? **[UP CPMT 2003]**
(1) Photosynthetic red algae
(2) Phtosynthetic green alge
(3) Photosynthetic blue-green algae

(4) Photosynthetic bacateria

111. Enzymes of electron transport system is present in : **[UP CPMT 2003]**
(1) Inner mitochondrial membrane
(2) Matrix
(3) Intermembranous space
(4) Endoplasmic reticulum

112. In the process of photosynthesis :**[UP CPMT 2003]**
(1) O_2 is taken and CO_2 is evolved
(2) O_2 is taken and CO_2 is not evolved
(3) CO_2 is taken and O_2 is evolved
(4) CO_2 is taken and NO_2 is evolved

113. Cuscuta is a: **[UP CPMT 2003]**
(1) Parasitic plant (2) Symbiotic plant
(3) Predator (4) Decomposer

114.Which of the following connects glycolysis of Kerb's cycle ? **[MP PMT 2001, UP CPMT 2003]**
(1) Acetyl CO-a
(2) Ribozyme
(3) Cytochrome oxidase
(4) N-acetyl glucosamine

115. Pyruvic acid is the end product of **[UP CPMT 2003]**
(1) Kerb's cycle
(2) Electron transport system
(3) Photosynthesis
(4) Glycolysis

116. Which of the following accepts terminal electron during aerobic respiration ? **[UP CPMT 2003]**
(1) Molecular O_2 (2) Molecular H32
(3) Molecular CO_2 (4) Oxidation of NO_2

117. In photosynthesis there is **[UP CPMT 2003]**
(1) Reduction of H_2O (2) Oxodation of H_2O
(3) Oxidation of CO_2 (4) Oxidation of NO32

118. Kuhne : **[UP CPMT 2004]**
(1) Discovered parathyroid
(2) Coined the term enxyme
(3) Coined the term gene
(4) Discovered enzyme

119. Glycolysis occurs in : **[UP CPMT 2004]**
(1) Cytoplasm (2) Nucleus
(3) Mitochondria (4) Both 'a' and 'c'

120. Which of the following is not a co-enzyme **[UP CPMT 2004]**
(1) NAD (2) NADP
(3) FAD (4) ATP

121. In case of C_4 plant the acceptor of CO_2 is : **[UP CPMT 2004]**
(1) Phosphoglyceradehyde
(2) Ribulose monophosphate
(3) Phosphoenol pyruvate
(4) Ribulose diphosphate

122. The first step in light reaction of photosynthesis **[UP CPMT 2004]**
(1) Formation of ATP
(2) Ionization of water
(3) Attachment of CO32 to a pentose sugar
(4) Excitment of electron of chlorophyll by a photon of light

123. Sugarcane show high efficienty of CO_2 fixation because of : **[UP CPMT 2004]**
(1) Calvin cycle
(2) Hatch and Slack cycle
(3) TCA cycle
(4) Greater sunlight

124. Which one of the following is the first step of glycolysis ? **[UP CPMT 2004]**
(1) Breakdown of glucose
(2) Phosphorylation of glucose
(3) Conversion of glucose into fructose
(4) Dehydrogenation of glucose

125. Source of CO_2 for photosyntehsis during day in CAM plants is **[UP CPMT 2005]**
(1) 3-PGA (2) Malic acid
(3) Oxalo-acetic acid (4) Pyruvate

126. Chlorophyll has..... in its centre **[UP CPMT 2005]**
(1) Iron (2) Magnesium
(3) Copper (4) Sulpher

127. Calving cycle of C_4 plants operates in : **[UP CPMT 2005]**
(1) Grana of mesophyll chloroplasts
(2) Stroma of chloroplass in mesophyll cells
(3) Bundle sheath cells chloroplasts
(4) The statements is worng

128. Photorespiration takes palce in **[UP CPMT 2005]**
(1) Chloroplast, mitochondria

(2) Mitochondria, peroxisome
(3) Bundle sheath chloroplasts
(4) Chloroplast, peroxisome, mitochondria

129. How many ATP molecules released when 1 molecules of glucose is oxidised in our liver cells ? **[UP CPMT 2005]**
(1) 36 (2) 38
(3) 2 (4) 8

130. Which one is false about kranz anatomy ? **[UP CPMT 2005]**
(1) Bndle sheath cells have large chloroplast and less developed grana
(2) Mesophyll cells have large chloroplast and more developed grana
(3) It is found in Atriplex, sugarcane, maize
(4) Plant having it have better photosynthesizing power than C_3 plants

131. Sequence of food materials consumed during starvation is : ' **[UP CPMT 2005]**
(1) Firstly $\rightarrow$ carbohydrate $\rightarrow$ fats $\rightarrow$ proteins
(2) Carbohydrate $\rightarrow$ proteins $\rightarrow$ fats
(3) Proteins $\rightarrow$ fats $\rightarrow$ cabohydrate
(4) Fats $\rightarrow$ proteins $\rightarrow$ carbohydrate

132. How mnay ATPs are produced during glycolysis of one molecule of glucose ? **[UP CPMT 2006]**
(1) 4 (2) 2
(3) 36 (4) 38

133. Who discovered that CO_2 is taken in and O_2 is released by green plants ? **[UP CPMT 2006]**
(1) Meyer (2) Jugen Housz
(3) Senebier (4) Priestly

134. Primitive photosynthetic plants utilize solar energy by : **[UP CPMT 2006]**
(1) Cyclic photophosphorylation
(2) Z - scheme
(3) Bath (a) and (b)
(4) Calvin cycle

135. Which one of the following is a wasteful process ? **[UP CPMT 2006]**
(1) Photrespiration (2) Respiration
(3) Photosynthesis (4) ETS

136. Final electron acceptor in ETS is : **[UP CPMT 2006]**
(1) NAD (2) FAD
(3) Oxygen (4) Hydrogen

137. Respiratory cycle where $NADH_2$ are produced is **[UP CPMT 2006]**
(1) Calvin cycle (2) Kreb's cycle
(3) EMP pathway (4) HMP shunt

138. DCMU **[MP PMT 2007]**
(1) Inhibits PS-1
(2) Inhibits PS-II
(3) Destroy chloroplast
(4) Inhi bits oxidative phosphorylation

139. NH_3 release from **[MP PMT 2007]**
(1) Photorespiration (2) Dark respiration
(3) CAM (4) All of these

140. Cytochrome oxidase is a/an **[MP PMT 2007]**
(1) Exoenzyme (2) Endoezyme
(3) Proenzyme (4) Coenzyme

141. Photosystem I and Photosystem II are found in : **[MP PMT 2001]**
(1) Stroma of chloroplast
(2) Grana of chloroplast
(3) Matrix of mitochondria
(4) Inner membrane of mitochondria

142. A cell organelle essential for photorespiration is : **[MP PMT 2001]**
(1) Ribosome (2) Dictyosome
(3) Peroxysome (4) Glyoxisome

143. Most of the enzymes which participate in Kreb's cycle are found in : **[MP PMT 2001]**
(1) Matrix of mitochondria
(2) Inner membrane of mitochondria
(3) Outer membrane of mitochondria
(4) Stroma of chloroplast

144. In which of the following the rate of transpiration is high ? **[MP PMT 2001]**
(1) CAM Plant (2) C_3 plants
(3) C_3 and C_4 (4) C_4 plants

145. Te connecting link between glycolysis and Krebs cycle is : **[MP PMT 2001]**
(1) Acetyl CO A (2) CO Q
(3) Coenzyme (4) COA

146. Of which cell organella is grane is a part **[MP PMT 2002]**
(1) Mitochondria (2) Chloroplast
(3) Aleurone grain (4) Starch grain

147. At which pH enzymes of Lysosomes are usually active ? **[MP PMT 2002]**
(1) pH 5 (2) pH 7
(3) pH 8 (4) In any pH

148. The substrate of photorespiration is : **[MP PMT 2002]**
(1) Glycolate (2) Glucose
(3) Pyruvic acid (4) Acetyl COA

149. The proces of oxidative phosphorylation takes place in : **[MP PMT 2002]**
(1) Mitochondria (2) Chloroplasts
(3) ribosomes (4) Cytoplasm

150. Glycolysis is the conversion of : **[MP PMT 2002, 03]**
(1) Glucose to glycogen
(2) Glygogen to glucose
(3) Glucose to pyruvic acid
(4) Glucose to citric acid

151. Enzyme concerned with transfer of electrons are : **[MP PMT 2002]**
(1) Hydrolysases (2) Dehydrogenases
(3) Transaminases (4) Proteases

152. The maximum light absorbed by the chlorophyll 'a' is at the wave lenght of : **[MP PMT 2002]**
(1) 460 nm (2) 500 nm
(3) 600 nm (4) 660 nm

153. Anaerobic respiration takes palce in : **[MP PMT 2002]**
(1) Ribosome (2) Nucleus
(3) Cytoplasm (4) Vacuole

154. During photosynthesis, Oxygen is evolved from : **[MP PMT 2002]**
(1) H_2S (2) H_2O
(3) CO_2 (4) HCO_3

155. Which of the following is the product of glucose fermentation by yeast ? **[MP PMT 2003]**
(1) $C_6H_{12}O_6$ (2) C_2H_5OH
(3) $(C_6H_{10}O_5)$ (4) CH_2OH

156. Which of the following acts as electron carried in both photoshynthesis and respiration ? **[MP PMT 2003]**
(1) Ferredoxin (2) Phytochrome
(3) Cytochrome (4) Cryptochrome

157. Photosynthetic unit is : **[MP PMT 2003]**
(1) Glyoxysome (2) Spherosome
(3) Microsome (4) Quantasome

158. Yeast enzyme which converts glucose into ethyl alcohol is called : **[MP PMT 2003]**
(1) Diastase (2) Invertase
(3) Zymase (4) Maltase

159. Warburg effect is related with : **[MP PMT 2003]**
(1) cons. of O_2 (2) conc. of N_2
(3) conc. of H_2 (4) cons. of Cl

160. Fermentation is an : **[MP PMT 2003]**
(1) Anaerobic respiration
(2) Incomplete oxidation
(3) Excretory process
(4) None of the above

161. Organelles which are regarded as "Power huse of the cell and in which the oxidative reactions of the respiratory process takes place are known as : **[MP PMT 2004]**
(1) Chloroplast
(2) Ribosomes
(3) Mitochondria
(4) Endoplasmic reticulum

162. **Stroma** is the ground susbtance of ..... **[MP PMT 2004]**
(1) Endoplasmic reticulum
(2) Mitochondria
(3) Nucleous
(4) Chloroplast

163. From which of the following peroxisomes in plants are associated : **[MP PMT 2004]**
(1) Photorepiration (2) Photosynthesis
(3) Photoperiodism (4) Phototropoism

164. In which of the following, respiration in absence of oxygen also takes place : **[MP PMT 2004]**
(1) Man (2) Potato
(3) Yeast (4) Spirogyra

165. In C_3 plants the first stable product of photosynthesis is : **[MP PMT 2004, 05, 06]**
(1) Malic acid
(2) Oxaloacetic acid
(3) Phosphoglyceric acid (PGA)
(4) Phosphoglyceraldehyde (PGAL)

166. The process of taking CO_2 by plants and releasing O_2 is known as : **[MP PMT 2004]**
(1) Photosynthesis (2) Endosmosis
(3) Transpiration (4) Respiration

167. CO_2 is liberated during : **[MP PMT 2004]**
(1) Ascent of sap (2) Respiration
(3) Poto synthesis (4) Transpiration

168. ATP stands for which of the following **[MP PMT 2004]**
(1) Adenosine tetraphosphate
(2) Ademine triposphate
(3) Adenosine diphosphate
(4) Adenosine triphosphate

169. Basically the Enzymes are : **[MP PMT 2004]**
(1) Vitamins (2) fats
(3) protriens (4) Carbon

170. Which of the celll organelle contains chlorophyll ? **[MP PMT 2005]**
(1) Cell wall (2) Cytoplasm
(3) Chloroplast (4) Vacuoles

171. Which of the colour of light is mostly absorbed by chlorophyll 'a' ? **[MP PMT 2005]**
(1) Green (2) Red
(3) Blue (4) Infra red

172. In photosyntehsis, ATP is synthesized during : **[MP PMT 2005]**
(1) Cyclic photophosphorylation
(2) Acyclic photophosphorylation
(3) Both (1) and (b)
(4) In the photolysis of water

173. Which of the following element is essential for photolysis of water ? **[MP PMT 2005]**
(1) Fe (2) Mg
(3) Mn (4) Cu

174. Glycolysis occur in : **[MP PMT 2005]**
(1) Vecuoles (2) Nucleolus
(3) Mitochondria (4) Cytoplasm

175. Peroxisomes are concerned with : **[MP PMT 2005]**
(1) Respiration (2) Photorespiration
(3) Photosynthesis (4) Flowering

176. Reduction process of CO_2 and ATP formation in plants has relationship. In this rection ATP is : **[MP PMT 2005]**
(1) Formed (2) Utilised
(3) Not utilized (4) None of these

177. The number oa ATP produced during the production of 1 molecule of acetyl CoA from 1 molecule of Pyruvic acid is : **[MP PMT 2006]**
(1) 3 ATP (2) 8 ATP
(3) 36 ATP (4) 38 ATP

178. ATP synthesis during photosynthesis is termed as : **[MP PMT 2006]**
(1) Phosphorylation
(2) Oxidative phosphorylation
(3) Photophosphorylation
(4) Phtotorespiration

179. The energy produced by one ATP molecule is : **[MP PMT 2005]**
(1) 8 kcal (2) 12 kcal
(3) 20 kcal (4) 100 kcal

180. Which of the following show anaerobic respiration : **[MP PMT 2006]**
(1) Earthwarm (2) Rabbit
(3) Echinoderms (4) Tapeworms

181. It is belived that the organisms firt inhibited earth's surface were : **[MP PMT 2001]**
(1) Autotrophs (2) Mixotrophs
(3) Chromototrophs (4) Heterotrophs

182. Pyruvic acid before combining with oxaloaceitc acid of Kerbs cycle, becomes : **[MP PMT 2002]**
(1) Ctric acid (2) Acetoacetric acid
(3) Cis-aconitic acid (4) Acetyl CoA

STATE PMT EXAMS EXERCISE **ANSWERKEY**

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	4	2	2	4	2	2	2	1	2	1	3	2	3	3	1
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	1	3	2	2	3	2	4	1	3	4	1	3	1	2	4
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	2	2	2	2	2	3	4	3	3	1	4	3	4	2	2
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	1	1	1	1	4	2	4	1	4	1	3	2	2	1	1
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	2	2	3	3	2	2	1	4	2	4	4	2	4	2	2
Que.	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Ans.	1	1	4	3	1	1	1	2	1	4	4	2	2	2	4
Que.	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
Ans.	3	2	1	4	2	1	2	4	2	2	3	3	2	1	1
Que.	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Ans.	2	2	2	3	4	1	3	1	1	4	1	2	2	1	4
Que.	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
Ans.	3	4	2	2	2	2	3	4	2	2	1	2	4	1	1
Que.	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
Ans.	3	2	2	1	2	2	3	1	2	1	2	1	1	1	3
Que.	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
Ans.	2	1	3	2	2	3	4	3	1	2	3	4	1	3	3
Que.	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
Ans.	1	2	4	3	3	3	3	3	4	2	2	1	3	1	4
Que.	181	182													
Ans.	4														