

**D****r. . MEDICAL****[MBBS 0825]****AUGUST 2025****Sub. Code: 7055****M.B.B.S. DEGREE EXAMINATION****(For the candidates admitted from the Academic Year 2024-2025)****FIRST PROFESSIONAL – (CBME)****PAPER I – BIOCHEMISTRY*****Q.P. Code: 527055*****Time: 20 Minutes****Maximum : 20 Marks****Answer All Questions****Shade the correct answer with Black or Blue ink ball point pen****SET - A****IV. Multiple Choice Questions:****(20 x 1 = 20)**

1. All the following activities are taking place inside mitochondria EXCEPT
  - A) Tricarboxylic acid cycle
  - B) Electro Transport Chain
  - C) Beta Oxidation of Fatty acid
  - D) Denovo fatty acid synthesis
2. A 2 year old baby presented with delayed milestones. Which inborn error in carbohydrate metabolism is Mental retardation a feature?
  - A) EssentialPentosuria
  - B) Galactosemia
  - C) Carnitine deficiency
  - D) Glucose -6- Phosphate dehydrogenase deficiency
3. A newborn baby present with recurrent hypoglycemia. All are the reasons for hypoglycemia in Impaired Beta Oxidation EXCEPT
  - A) Low Acetyl CoA
  - B) Low NADH
  - C) High Insulin
  - D) Low ATP
4. Lipotropic factors are substances that
  - A) Prevents Fatty liver
  - B) Prevent cholesterol deposition in Liver
  - C) Prevent atherosclerosis
  - D) Induce Fatty liver
5. Sources of NADPH include all EXCEPT
  - A) Glucose -6- Phosphate dehydrogenase
  - B) 6-phosphogluconate dehydrogenase
  - C) Cytosolic Malate dehydrogenase
  - D) CytosolicIsocitrate dehydrogenase
6. In a competitive inhibition
  - A) Inhibitor has structural similarity to substrate
  - B) Km is decreased
  - C) Vmax is decreased
  - D) Reaction rate is independent of substrate concentration
7. Unsaturation of fatty acids is taking place in which of the following sub cellular fraction?
  - A) Mitochondria
  - B) Endoplasmic reticulum
  - C) Peroxisome
  - D) Lysosome
8. Which of the following dietary modifications have minimum hypocholesterolemic action?
  - A) Inclusion of fruits and vegetables
  - B) Dietary cholesterol <300mg/day
  - C) Intake of whole wheat bran
  - D) Consuming fish as the only non-veg food

... 2 ...

9. Vitamin K is inhibited by  
A) Isoniazid      B) Methotrexate      C) Dicoumarol      D) Avidin
10. Which of the following vitamin is required for oxidative decarboxylation?  
A) Thiamine pyrophosphate      B) Pyroxidal phosphate      C) Biotin      D) Riboflavin
11. Daily requirement of Vitamin C is  
A) 50 mg/day      B) 75 mg/day      C) 25 mg/day      D) 100 mg/day
12. A symptomatic 45 year old woman came for checkup in a clinic. She is found to be hypercalcemic. Which hormone testing helps to differentiate the causes of hypercalcemia?  
A) PTH      B) Glucagon      C) Vitamin B<sub>12</sub>      D) Growth hormone
13. The Enzymes of Electron Transport Chain belong to the following classes except  
A) Oxidases      B) Dehydrogenases      C) Peroxidases      D) Reductases
14. Copper dependent enzymes are all EXCEPT  
A) Homogentisate Oxidase      B) Cytochrome Oxidase  
C) Lysyl oxidase      D) Tyrosinase
15. Iron is deficient in  
A) Cereals      B) Maize      C) Milk      D) Pulses
16. Which of the following element has antioxidant role?  
A) Chromium      B) Zinc      C) Selenium      D) Nickel
17. An elderly male presented with constipation. Physician advised him to take fibre rich diet. Increased intake of dietary fibre  
A) Increase bowel motility      B) Promotes constipation  
C) Increases Cholesterol level      D) Decreases glucose tolerance
18. Body is in positive nitrogen balance in  
A) Corticosteroid therapy      B) Chronic illness  
C) Convalescence after illness      D) Acute illness
19. A baby with severe malnutrition presented with edema to the pediatric clinic. The age of onset of Kwashiorkor is  
A) Below 1 year      B) 1 to 5 years      C) More than 5 years      D) 6 months
20. For which of the following test fasting sample is preferred?  
A) Bilirubin      B) Triglycerides      C) Lipase      D) Uric acid

\*\*\*\*\*

[MBBS 0825]

**D****r. . MEDICAL****[MBBS 0825]****AUGUST 2025****Sub. Code: 7055****M.B.B.S. DEGREE EXAMINATION****(For the candidates admitted from the Academic Year 2024-2025)****FIRST PROFESSIONAL – (CBME)****PAPER I – BIOCHEMISTRY*****Q.P. Code: 527055*****Time: 20 Minutes****Maximum : 20 Marks****Answer All Questions****Shade the correct answer with Black or Blue ink ball point pen****SET - B****IV. Multiple Choice Questions:****(20 x 1 = 20)**

1. Sources of NADPH include all EXCEPT  
A) Glucose -6- Phosphate dehydrogenase    B) 6-phosphogluconate dehydrogenase  
C) Cytosolic Malate dehydrogenase            D) Cytosolic Isocitrate dehydrogenase
2. In a competitive inhibition  
A) Inhibitor has structural similarity to substrate  
B)  $K_m$  is decreased  
C)  $V_{max}$  is decreased  
D) Reaction rate is independent of substrate concentration
3. Unsaturation of fatty acids is taking place in which of the following sub cellular fraction?  
A) Mitochondria            B) Endoplasmic reticulum    C) Peroxisome    D) Lysosome
4. Which of the following dietary modifications have minimum hypocholesterolemic action?  
A) Inclusion of fruits and vegetables    B) Dietary cholesterol <300mg/day  
C) Intake of whole wheat bran            D) Consuming fish as the only non-veg food
5. Vitamin K is inhibited by  
A) Isoniazid            B) Methotrexate            C) Dicoumarol            D) Avidin
6. Which of the following vitamin is required for oxidative decarboxylation?  
A) Thiamine pyrophosphate    B) Pyroxidal phosphate    C) Biotin            D) Riboflavin
7. Daily requirement of Vitamin C is  
A) 50 mg/day            B) 75 mg/day            C) 25 mg/day            D) 100 mg/day
8. A symptomatic 45 year old woman came for checkup in a clinic. She is found to be hypercalcemic. Which hormone testing helps to differentiate the causes of hypercalcemia?  
A) PTH            B) Glucagon            C) Vitamin B<sub>12</sub>            D) Growth hormone
9. The Enzymes of Electron Transport Chain belong to the following classes except  
A) Oxidases            B) Dehydrogenases            C) Peroxidases            D) Reductases

... 2 ...

10. Copper dependent enzymes are all EXCEPT  
A) Homogentisate Oxidase      B) Cytochrome Oxidase  
C) Lysyl oxidase      D) Tyrosinase
11. Iron is deficient in  
A) Cereals      B) Maize      C) Milk      D) Pulses
12. Which of the following element has antioxidant role?  
A) Chromium      B) Zinc      C) Selenium      D) Nickel
13. An elderly male presented with constipation. Physician advised him to take fibre rich diet. Increased intake of dietary fibre  
A) Increase bowel motility      B) Promotes constipation  
C) Increases Cholesterol level      D) Decreases glucose tolerance
14. Body is in positive nitrogen balance in  
A) Corticosteroid therapy      B) Chronic illness  
C) Convalescence after illness      D) Acute illness
15. A baby with severe malnutrition presented with edema to the pediatric clinic. The age of onset of Kwashiorkor is  
A) Below 1 year      B) 1 to 5 years      C) More than 5 years      D) 6 months
16. For which of the following test fasting sample is preferred?  
A) Bilirubin      B) Triglycerides      C) Lipase      D) Uric acid
17. All the following activities are taking place inside mitochondria EXCEPT  
A) Tricarboxylic acid cycle      B) Electro Transport Chain  
C) Beta Oxidation of Fatty acid      D) De novo fatty acid synthesis
18. A 2 year old baby presented with delayed milestones. Which inborn error in carbohydrate metabolism is Mental retardation a feature?  
A) Essential Pentosuria      B) Galactosemia  
C) Carnitine deficiency      D) Glucose -6- Phosphate dehydrogenase deficiency
19. A newborn baby present with recurrent hypoglycemia. All are the reasons for hypoglycemia in Impaired Beta Oxidation EXCEPT  
A) Low Acetyl CoA      B) Low NADH      C) High Insulin      D) Low ATP
20. Lipotropic factors are substances that  
A) Prevents Fatty liver      B) Prevent cholesterol deposition in Liver  
C) Prevent atherosclerosis      D) Induce Fatty liver

\*\*\*\*\*

[MBBS 0825]

**D****r. . MEDICAL****[MBBS 0825]****AUGUST 2025****Sub. Code: 7055****M.B.B.S. DEGREE EXAMINATION****(For the candidates admitted from the Academic Year 2024-2025)****FIRST PROFESSIONAL – (CBME)****PAPER I – BIOCHEMISTRY*****Q.P. Code: 527055*****Time: 20 Minutes****Maximum : 20 Marks****Answer All Questions****Shade the correct answer with Black or Blue ink ball point pen****SET - C****IV. Multiple Choice Questions:****(20 x 1 = 20)**

1. Which of the following vitamin is required for oxidative decarboxylation?  
A) Thiamine pyrophosphate    B) Pyroxidal phosphate    C) Biotin    D) Riboflavin
2. Daily requirement of Vitamin C is  
A) 50 mg/day    B) 75 mg/day    C) 25 mg/day    D) 100 mg/day
3. A symptomatic 45 year old woman came for checkup in a clinic. She is found to be hypercalcemic. Which hormone testing helps to differentiate the causes of hypercalcemia?  
A) PTH    B) Glucagon    C) Vitamin B<sub>12</sub>    D) Growth hormone
4. The Enzymes of Electron Transport Chain belong to the following classes except  
A) Oxidases    B) Dehydrogenases    C) Peroxidases    D) Reductases
5. Copper dependent enzymes are all EXCEPT  
A) Homogentisate Oxidase    B) Cytochrome Oxidase  
C) Lysyl oxidase    D) Tyrosinase
6. Iron is deficient in  
A) Cereals    B) Maize    C) Milk    D) Pulses
7. Which of the following element has antioxidant role?  
A) Chromium    B) Zinc    C) Selenium    D) Nickel
8. An elderly male presented with constipation. Physician advised him to take fibre rich diet. Increased intake of dietary fibre  
A) Increase bowel motility    B) Promotes constipation  
C) Increases Cholesterol level    D) Decreases glucose tolerance
9. Body is in positive nitrogen balance in  
A) Corticosteroid therapy    B) Chronic illness  
C) Convalescence after illness    D) Acute illness

... 2 ...

10. A baby with severe malnutrition presented with edema to the pediatric clinic. The age of onset of Kwashiorkor is  
A) Below 1 year      B) 1 to 5 years      C) More than 5 years      D) 6 months
11. For which of the following test fasting sample is preferred?  
A) Bilirubin      B) Triglycerides      C) Lipase      D) Uric acid
12. All the following activities are taking place inside mitochondria EXCEPT  
A) Tricarboxylic acid cycle      B) Electro Transport Chain  
C) Beta Oxidation of Fatty acid      D) Denovo fatty acid synthesis
13. A 2 year old baby presented with delayed milestones. Which inborn error in carbohydrate metabolism is Mental retardation a feature?  
A) EssentialPentosuria      B) Galactosemia  
C) Carnitine deficiency      D) Glucose -6- Phosphate dehydrogenase deficiency
14. A newborn baby present with recurrent hypoglycemia. All are the reasons for hypoglycemia in Impaired Beta Oxidation EXCEPT  
A) Low Acetyl CoA      B) Low NADH      C) High Insulin      D) Low ATP
15. Lipotropic factors are substances that  
A) Prevents Fatty liver      B) Prevent cholesterol deposition in Liver  
C) Prevent atherosclerosis      D) Induce Fatty liver
16. Sources of NADPH include all EXCEPT  
A) Glucose -6- Phosphate dehydrogenase      B) 6-phosphogluconate dehydrogenase  
C) Cytosolic Malate dehydrogenase      D) Cytosolic Isocitrate dehydrogenase
17. In a competitive inhibition  
A) Inhibitor has structural similarity to substrate  
B)  $K_m$  is decreased  
C)  $V_{max}$  is decreased  
D) Reaction rate is independent of substrate concentration
18. Unsaturation of fatty acids is taking place in which of the following sub cellular fraction?  
A) Mitochondria      B) Endoplasmic reticulum      C) Peroxisome      D) Lysosome
19. Which of the following dietary modifications have minimum hypocholesterolemic action?  
A) Inclusion of fruits and vegetables      B) Dietary cholesterol <300mg/day  
C) Intake of whole wheat bran      D) Consuming fish as the only non-veg food
20. Vitamin K is inhibited by  
A) Isoniazid      B) Methotrexate      C) Dicoumarol      D) Avidin

\*\*\*\*\*

**[MBBS 0825]**

**D****r. . MEDICAL****[MBBS 0825]****AUGUST 2025****Sub. Code: 7055****M.B.B.S. DEGREE EXAMINATION****(For the candidates admitted from the Academic Year 2024-2025)****FIRST PROFESSIONAL – (CBME)****PAPER I – BIOCHEMISTRY*****Q.P. Code: 527055*****Time: 20 Minutes****Maximum : 20 Marks****Answer All Questions****Shade the correct answer with Black or Blue ink ball point pen****SET - D****IV. Multiple Choice Questions:****(20 x 1 = 20)**

1. Iron is deficient in  
A) Cereals                      B) Maize                      C) Milk                      D) Pulses
2. Which of the following element has antioxidant role?  
A) Chromium                  B) Zinc                      C) Selenium                  D) Nickel
3. An elderly male presented with constipation. Physician advised him to take fibre rich diet. Increased intake of dietary fibre  
A) Increase bowel motility                      B) Promotes constipation  
C) Increases Cholesterol level                      D) Decreases glucose tolerance
4. Body is in positive nitrogen balance in  
A) Corticosteroid therapy                      B) Chronic illness  
C) Convalescence after illness                      D) Acute illness
5. A baby with severe malnutrition presented with edema to the pediatric clinic. The age of onset of Kwashiorkor is  
A) Below 1 year                  B) 1 to 5 years                  C) More than 5 years                  D) 6 months
6. For which of the following test fasting sample is preferred?  
A) Bilirubin                      B) Triglycerides                      C) Lipase                      D) Uric acid
7. All the following activities are taking place inside mitochondria EXCEPT  
A) Tricarboxylic acid cycle                      B) Electro Transport Chain  
C) Beta Oxidation of Fatty acid                      D) De novo fatty acid synthesis
8. A 2 year old baby presented with delayed milestones. Which inborn error in carbohydrate metabolism is Mental retardation a feature?  
A) Essential Pentosuria                      B) Galactosemia  
C) Carnitine deficiency                      D) Glucose -6- Phosphate dehydrogenase deficiency
9. A newborn baby present with recurrent hypoglycemia. All are the reasons for hypoglycemia in Impaired Beta Oxidation EXCEPT  
A) Low Acetyl CoA                  B) Low NADH                  C) High Insulin                  D) Low ATP



10. Lipotropic factors are substances that  
A) Prevents Fatty liver                      B) Prevent cholesterol deposition in Liver  
C) Prevent atherosclerosis                D) Induce Fatty liver
11. Sources of NADPH include all EXCEPT  
A) Glucose -6- Phosphate dehydrogenase    B) 6-phosphogluconate dehydrogenase  
C) Cytosolic Malate dehydrogenase        D) Cytosolic Isocitrate dehydrogenase
12. In a competitive inhibition  
A) Inhibitor has structural similarity to substrate  
B)  $K_m$  is decreased  
C)  $V_{max}$  is decreased  
D) Reaction rate is independent of substrate concentration
13. Unsaturation of fatty acids is taking place in which of the following sub cellular fraction?  
A) Mitochondria      B) Endoplasmic reticulum    C) Peroxisome    D) Lysosome
14. Which of the following dietary modifications have minimum hypocholesterolemic action?  
A) Inclusion of fruits and vegetables      B) Dietary cholesterol <300mg/day  
C) Intake of whole wheat bran              D) Consuming fish as the only non-veg food
15. Vitamin K is inhibited by  
A) Isoniazid      B) Methotrexate      C) Dicoumarol      D) Avidin
16. Which of the following vitamin is required for oxidative decarboxylation?  
A) Thiamine pyrophosphate    B) Pyroxidal phosphate    C) Biotin      D) Riboflavin
17. Daily requirement of Vitamin C is  
A) 50 mg/day      B) 75 mg/day      C) 25 mg/day      D) 100 mg/day
18. A symptomatic 45 year old woman came for checkup in a clinic. She is found to be hypercalcemic. Which hormone testing helps to differentiate the causes of hypercalcemia?  
A) PTH              B) Glucagon              C) Vitamin B<sub>12</sub>      D) Growth hormone
19. The Enzymes of Electron Transport Chain belong to the following classes except  
A) Oxidases      B) Dehydrogenases      C) Peroxidases      D) Reductases
20. Copper dependent enzymes are all EXCEPT  
A) Homogentisate Oxidase                  B) Cytochrome Oxidase  
C) Lysyl oxidase                                D) Tyrosinase

\*\*\*\*\*

[MBBS 0825]