



Date of issue :

Centre :

Sup. Sign. :

Seat No. :

ND-2006000101030001-O Seat No. \_\_\_\_\_

**First Year M. B. B. S. Examination****December - 2021****Biochemistry : Paper - 1****(New CBME Pattern)**

Time : Hours]

[Total Marks : 20

**Instruction :**

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.		Seat No. :
Name of the Examination :		<input type="text"/>
Name of the Subject :		<input type="text"/>
Subject Code No. :	Section No. (1, 2,.....) :	<input type="text"/>
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Student's Signature		

**Section A: MCQ****(20 marks)***Instructions:*

1. All questions are compulsory
2. Each MCQ has only one correct answer
3. One mark for correct answer. No negative marking

1 Which of the following correctly describes the composition of the CSF

- a. It has the same osmolarity as blood
- b. It has the same pH as blood
- c. It is more alkaline than blood
- d. It contains higher glucose concentration than blood

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[Contd...

- 2 All of the following are functions of kidney, *Except*:
  - a. Detoxification of Alcohol
  - b. Formation of 1, 25 DHCC
  - c. Excretion of hydrogen ions
  - d. Stimulation of Erythropoiesis
- 3 Parathyroid Hormone (PTH) is involved in:
  - a. Activation of Vitamin D
  - b. Increases the intestinal absorption of calcium
  - c. Decreases the intestinal absorption of calcium
  - d. Increases the synthesis of thyroid hormones
- 4 People with diabetes mellitus are prone to develop cataracts because their elevated blood glucose concentration:
  - a. Inhibit gluconeogenesis
  - b. Increase glycosylate hemoglobin
  - c. Increase glycogen synthesis within the lens
  - d. Allow aldose reductase to reduce glucose to sorbitol
- 5 Facilitated diffusion transport molecules:
  - a. Against concentration gradient
  - b. With the concentration gradient
  - c. Always use energy
  - d. Does not require carrier protein
- 6 Lactic acidosis is seen in the following cases, EXCEPT:
  - a. Oxidative phosphorylation disorders (Mitochondrial)
  - b. Defective metabolism of pyruvate
  - c. Excessive ingestion of alcohol
  - d. Deficiency of glucose-6-phosphate dehydrogenase
- 7 In human, vitamin C is not synthesized, because:
  - a. Absence of Xylitol reductase
  - b. Absence of L-gulonolactone oxidase
  - c. Absence of Glucose 6-phosphate dehydrogenase
  - d. Absence of Xylulose dehydrogenase

- 8 Fatty acid synthesis differs from beta oxidation in all, EXCEPT:
- Uses NADPH as reducing power
  - Requires coenzyme A
  - Catalyzed by multienzyme complex
  - Activated by insulin
- 9 The plasma sample of 35 years old man after overnight refrigeration showed a creamy layer on top and opalescence below. The condition which is excluded is:
- Diabetes mellitus
  - Alcoholism
  - Hypothyroidism
  - Familial hypercholesterolemia
- 10 All of the following fatty acid synthesized by humans EXCEPT
- Palmitoleate
  - Oleate
  - Arachidonate
  - Linoleate
- 11 Which of the following is rate limiting enzyme in HMP shunt?
- Transketolase
  - Phosphogluconate dehydrogenase
  - Ribulose 5 phosphate
  - Glucose 6 phosphate dehydrogenase
- 12 Which of the following stops respiratory chain?
- Unavailability of  $O_2$
  - Unavailability of ADP
  - Unavailability of NADH
  - All of the above
- 13 Elevated levels of one of the following lipid parameter is associated with pancreatitis:
- Total cholesterol
  - LDL-cholesterol
  - HDL-cholesterol
  - Triacylglycerol

- 14 All the following statements regarding hexokinase and glucokinase are true, EXCEPT
- Hexokinase is Less specific than glucokinase
  - Glucokinase is induced by glucagon
  - Glucokinase is more in the liver
  - They differ in their  $K_m$  for the substrate
- 15 Liver can not utilized ketone bodies due to the lack of enzyme
- Thiolase
  - Thiophorase
  - HMG CoA lyase
  - Beta hydroxy butyrate dehydrogenase
- 16 Wilson disease occurs due to defect in which transport protein?
- ATP-7A
  - ATP-7B
  - ABC-A1
  - ABC-C2
- 17 Earliest indicator of iron deficiency anemia is
- S. Ferritin
  - S. TIBC
  - S. Iron
  - S. Transferrin
- 18 Which glucose transporter is under control of insulin?
- |          |          |
|----------|----------|
| a. GLUT2 | b. GLUT3 |
| c. GLUT4 | d. GLUT5 |
- 19 LDL receptor defect results in the following type of hyperlipidemia
- |             |             |
|-------------|-------------|
| a. Type I   | b. Type IIA |
| c. Type IIB | d. Type IV  |
- 20 Cancer cell derive nutrition from:
- |                   |                              |
|-------------------|------------------------------|
| a. Glycolysis     | b. Oxidative phosphorylation |
| c. Glycogenolysis | d. From a fast food          |