

**Madhya Pradesh Medical Science University, Jabalpur****MBBS First Professional Examination Dec-2022****Paper Code-22BM0000100032****Subject- Biochemistry (New Scheme)****Paper-II**

Time: 3:00 Hours

Maximum Marks :100

Instructions:

- a) All questions are compulsory
  - b) Draw diagrams wherever necessary
  - c) Answers of Questions and Sub questions must be written strictly according to the serial order of question paper.
  - d) MCQ has to be answered in theory answer book
  - e) Please write MCQ answer neatly and in serial order with black or blue pen in brackets for example:- 1. (a) 2. (b)
  - f) MCQ has to be answered only once, any kind for repetition or cutting or erasing or whitener will be consider as malpractice.
- Such answers will not be counted in the marks and action will be taken according to UFM rules of University
- g) Subjective Answer should be answered in up to 30 words per marks. For example, if a question having 2 marks answer should be answered in up to 60 words.

**Q.1 Total MCQs : 10****10 X1 = 10**

1. Tumor markers for ovarian cancer are-

- a. B-hCG
- b. AFP
- c. CA-125
- d. CEA

2. Van den Bergh reaction is direct positive in

- a. hemolytic jaundice
- b. obstructive jaundice
- c. hepatocellular jaundice

d. all the above

3. The end product of catabolism of heme is

a bile acid

b. bile salt

c. bile pigment

d. uric acid

4. The codon that terminate protein biosynthesis

a. UAA

b. UAG

c. UGA

d. all of them

5. AIDS is caused by what types of virus?

a. adenovirus

b. retrovirus

c. parvovirus

d. adeno associated virus

6. The purification of enzymes is mostly done by

a. affinity chromatography

b. ion-exchange chromatography

c. paper chromatography

d. all the above

7. Hemophilia A is due to the deficiency of clotting factor

a. X

b. V

c. VIII

d. II

8. Inulin clearance is used to assess

- a. renal threshold
- b. concentration ability of tubules
- c. GFR
- d. diluting ability of tubules

9. Marasmus is characterized by

- a. growth retardation
- b. anemia
- c. fat and muscle wasting
- d. all the above

10. A diabetic diet should contain

- a. refined carbohydrates
- b. food with high glycemic index
- c. food with low glycemic index
- d. large quantities of roots and tubers

#### Q.2 Long Answer Questions

2x10=20

a. The following are the biochemical values in a patient.

Serum bilirubin-13 mg%

Conjugated bilirubin-6mg %

Unconjugated bilirubin 7mg%

ALP 280 IU/L

Bil pigments positive

Urobilinogen positive

Urin bile salts negative.

1. What is your probable diagnosis.-2m
2. Explain different types of jaundice based on LFT-10m
3. Name bile salts and bile pigments -2m
4. Explain formation and excretion of bilirubin-6m

b. What is balanced diet? Write an essay on the role of carbohydrates, lipid and protein in human nutrition. And also write in details about BMR and their factors affecting. (4+10+6)

**Q.3 Brief Answer Questions****6X05=30**

a. A 40 yr old male presented with severe pain redness & swelling of the base of first metatarsophalangeal joint in the night after a bout of alcohol consumption, No history of previous trauma, He had mild fever, uric acid level 9.7 mg/d.

1. What is the probable diagnosis-1m
2. Enumerate different enzymes responsible for above condition -2m
3. What is role of alcohol in above condition-1m
4. State treatment given for the condition-1m

b. Explain blood buffer system and state role of lungs and kidney in regulation of acid base balance

c. Explain recombinant DNA technology with its application.

d. Define GFR Explain different clearance tests

e. Explain post transcriptional modifications.

f. A 20 year old male complaining of severe back pain was hospitalized and Sickle Cell anaemia was diagnosed.

- i) What is sickle cell anaemia -1m
- ii) What is the biochemical cause 1m
- iii) Give the factors that affect the severity of the disorder. 1m
- iv) Why does a person with sickle cell anemia show increased resistance to malaria-2m

**Q.4 Short Answer Questions****10X02=20**

- a. t-RNA
- b. Functions of nucleotides
- c. Tumor markers
- d. Medical uses of isotopes
- e. Atherosclerosis
- f. antioxidants
- g. Chemical carcinogens

- h. Detoxification.
- i. Emulsification of fats
- j. Gene therapy

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