



BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – DMLT-2022
Course Name – Clinical Biochemistry
Course Code - DMLT404
(Semester IV)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Excess fecal fat termed as _____. Choose the correct option.
- | | |
|------------------|-------------------------|
| a) Steatorrhea | b) Hypercholesterolemia |
| c) Hyperglycemia | d) Hirschsprung |
- (ii) Which of the following is NOT a common symptom of osteoarthritis?
- | | |
|------------------------|-------------------|
| a) Joint stiffness | b) Joint swelling |
| c) Joint hypermobility | d) Joint pain |
- (iii) Select Rheumatoid arthritis primarily affects which type of joint?
- | | |
|--------------------|--------------------------|
| a) Synovial joints | b) Cartilaginous joints |
| c) Fibrous joints | d) Amphiarthrotic joints |
- (iv) Which of the following is NOT a risk factor for developing cardiovascular diseases?
- | | |
|------------------------|----------------------------|
| a) High blood pressure | b) Regular exercise |
| c) Smoking | d) High cholesterol levels |
- (v) For which disease condition faecal fat test is done?
- | | |
|--|---|
| a) diagnostic test for carbohydrate malabsorption conditions | b) diagnostic test for protein malabsorption conditions |
| c) diagnostic test for fat malabsorption conditions | d) diagnostic test for nutrients malabsorption conditions |
- (vi) Which of the following is the screening test for the diagnosis of thyroid disease?
- | | |
|--------------------------------|-------------|
| a) Thyroid Stimulating hormone | b) Total T3 |
| c) Total T4 | d) Free T3 |
- (vii) TSH secreted by
- | | |
|------------------------|-----------------------|
| a) Posterior pituitary | b) Anterior pituitary |
| c) Thyroid gland | d) Hypothalamus |
- (viii) Which of the following is correct form of t3 ?
- | | |
|---------------------|---------------------|
| a) triiodothyronine | b) trithionine |
| c) tetrathionine | d) tetraidthyronine |

- (ix) Which of the following is a tool used to quantify the relationship between two variables?
- a) Scatter diagram
b) Control chart
c) Pareto chart
d) Cause-and-effect diagram
- (x) L-J chart (Levey–Jennings chart) is used for monitoring
- a) Accuracy
b) Precision
c) Sensitivity
d) Both accuracy and precision
- (xi) Analytical errors happens
- a) after the test is done
b) when tests are performed
c) before the test is performed
d) at the time of sample collection
- (xii) Normal distribution is also known as _____. Select the correct option.
- a) gaussian distribution
b) frequency distribution
c) kurtosis distribution
d) mean distribution
- (xiii) Data is simply the numerical result of any scientific _____. Identify the correct option.
- a) Measurement
b) observation
c) research
d) Analysis
- (xiv) Errors in Pipetting are considered as _____. Select the correct option.
- a) Pre Analytical error
b) Post Analytical error
c) Analytical Error
d) None of these
- (xv) In an experiment, it is found that the experimental value is very close to actual value, hence the experimental value can be called _____. Select the correct option.
- a) Accurate
b) Precise
c) Suitable
d) Mean

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Name 3 cardiac enzymes and write their functions. (3)
3. Write down the importance of AST or SGOT in cardiac disease. (3)
4. Discuss the roles of thyroxine hormone in thyroid function tests. (3)
5. Justify the importance of Lambert Beer law in autoanalyzer. (3)
6. Calculate the mean of the following bodyweight scores (kg) in a sample of humans. 66, 50, 56, 63, 68, 60, 60, 68, 72, 66, 68, 63, 60, 66, 75, 56, 72, 63. (3)

OR

Compute the mean of the following interorbital width scores (mm) of a sample of pigeons. (3)
12.8, 11.7, 12.3, 10.8, 12.5, 11.4, 12.5, 10.9, 11.6, 11.7.

Group-C

(Long Answer Type Questions)

5 x 6=30

7. What are the risk factors that influence Rheumatoid arthritis? (5)
8. Describe the procedure for faecal fat test. (5)
9. Apply your knowledge and show the correlation between TSH and T3, T4 in hypothyroidism and hyperthyroidism. (5)
10. Calculate the mean for the wing lengths (mm) of houseflies given below: 3.9, 4.3, 4.8, 4.7, 4.6, 4.4, 3.7, 4.2, 4.1, 4.8, 5.3, 4.9, 4.6, 3.8, 4.0, 5.3, 5.7, 5.5, 3.9, 4.5, 3.8, 4.5, 5.0, 4.9, 4.8, 3.5, 4.3, 5.1, 3.9, 4.7, 5.6, 4.6, 4.4, 3.4, 5.1, 4.6, 3.9, 3.8, 4.8, 4.9. (5)
11. Illustrate the importance of thyroid hormone in the body. (5)
12. Critically classify the continuous flow analyser. (5)

OR

Distinguish between continuous flow analyser and district flow analyser. (5)
