



BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – M.Sc.(MLT)-2023/M.Sc.(MLT)-2024

Course Name – Human Anatomy & Applied Physiology

Course Code - MMTC01003

(Semester I)

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) Select the basic structural and functional unit of all living organisms.

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|------------|------------------|
| a) Tissues | b) Organs |
| c) Cells | d) Organ systems |

(ii) Predict the type of tissue that provides support and structure to the body.

- | | |
|----------------------|----------------------|
| a) Epithelial tissue | b) Connective tissue |
| c) Muscle tissue | d) Nervous tissue |

(iii) Select the name of the cells in the epidermis that are responsible for producing melanin, the pigment that gives skin its color.

- | | |
|------------------|---------------------|
| a) Keratinocytes | b) Melanocytes |
| c) fibroblasts | d) Langerhans cells |

(iv) Select the layer of the skin that contains blood vessels, nerve endings, and hair follicles.

- | | |
|---------------|-------------|
| a) epidermis | b) dermis |
| c) hypodermis | d) subcutis |

(v) Predict the condition of the skin characterized by red, itchy, and inflamed patches of skin.

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|-----------|--------------|
| a) Eczema | b) psoriasis |
| c) Acne | d) Rosacea |

(vi) find the odd one out of the following regarding function of the thyroid gland.

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|---------------------------------------|------------------------------------|
| a) Regulation of metabolism | b) Production of thyroid hormones |
| c) Regulation of blood calcium levels | d) Maintenance of body temperature |

(vii) Predict the conditions characterized by the inflammation of the bladder, usually caused by a bacterial infection.

- | | |
|-------------------|-----------------------|
| a) Cystitis | b) Glomerulonephritis |
| c) Pyelonephritis | d) Nephrolithiasis |

(viii) Identify the Most Common Type of Leukemia:

- a) Hodgkin's lymphoma
c) Acute lymphoblastic leukemia
- b) Multiple myeloma
d) Melanoma
- (ix) Identify the Function of Platelets in Blood Clotting:
a) Carrying oxygen
c) carrying nutrients
b) fighting infection
d) forming clots
- (x) Propose the correct contraceptive method that prevents pregnancy by creating a physical barrier between sperm and the egg.
a) Intrauterine device
c) Birth pills
b) copper T
d) Condom
- (xi) Predict the term for a hereditary disorder characterized by the inability of blood to clot properly.
a) Hemophilia
c) Polycythemia
b) Sickle cell anemia
d) Leukemia
- (xii) The elbow joint is an example of Type of joint. Predict the correct option
a) Hinge joint
c) Pivot joint
b) Ball-and-socket joint
d) Gliding joint
- (xiii) The sensory receptors for vision are located inpart of the eye. Select the right option
a) Retina
c) Lens
b) Cornea
d) Sclera
- (xiv) Identify the primary goal of IVF treatment.
a) To prevent pregnancy
c) To help couples have a child when other methods have failed
b) To enhance natural conception
d) To induce menopause
- (xv) The midsagittal plane specifically divides the body into..... Identify the right option
a) Equal right and left halves
c) Equal Front and back halves
b) Top and bottom halves
d) Anterior and posterior halves

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain about Iodide pump. (3)
3. Explain the concept of "fight or flight" and the role of the sympathetic nervous system. (3)
4. Draw a diagram of reflex arc, with it's important in the nervous system. (3)
5. State the function of cartilage in the skeleton. (3)
6. Propose the procedure to do IVF . (3)

OR

Speculate any risks associated with IVF. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Summarize different types of joints with their function. (5)
8. Discuss the role of the enteric nervous system (ENS) in the digestive system. (5)
9. Summarize the parameters tested in spirometry. (5)
10. Propose the mechanism of role of Insulin and glucagon in glucose homeostasis. (5)
11. Describe the structure of the Nephron. (5)
12. Distinguish between fresh and frozen embryo transfers in IVF. (5)

OR

Evaluate the success rates of IVF, and what factors influence those rates. (5)