

**Madhya Pradesh Medical Science University,
Jabalpur
MBBS First Professional Examination Feb-2021
Subject- Physiology
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 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. (c)
- f) MCQ has to be answered only once, any kind of repetition or cutting or erasing or whitener will be considered as malpractice, such answers will not be counted in marks and action will be taken according to UFM rules of university.

Q1. Total MCQs: 20

20 x 1 = 20

1. Milk ejection reflex is mediated by hormone
~~(a) vasopressin~~

- (b) prolactin
 - (c) oxytocin
 - (d) estrogen
2. True statement about endemic goiter
- (a) associated with hyperfunction of thyroid gland
 - (b) also called colloid goiter
 - (c) occurs if the iodine intake falls below 100-200 $\mu\text{gm}/\text{day}$
 - (d) associated with decreased TSH secretion
3. The features of tetany include all EXCEPT
- (a) carpopedal spasm
 - (b) trousseau's sign
 - (c) clotting defects
 - (d) neuromuscular hyperexcitability
4. Pheochromocytoma's predominantly secrete
- (a) norepinephrine
 - (b) epinephrine
 - (c) serotonin
 - (d) dopamine
5. In Addison's disease the following is observed
- (a) an increase in ECF volume
 - (b) hyperglycemia
 - (c) hyperkalemia
 - (d) high blood pressure
6. Bitter taste is felt at the following part of the tongue

- (a) back
 - (b) tip
 - (c) mid-dorsal
 - (d) sides
7. If a person can perceive sound but fails to understand the meaning of sound, the lesion is most likely in
- (a) VIII nerve
 - (b) auditory association areas
 - (c) primary auditory cortex
 - (d) inferior colliculus
8. Highest refractive index amongst the following is of
- (a) aqueous humor
 - (b) lens
 - (c) cornea
 - (d) vitreous humor
9. Ovulation coincides with
- (a) GnRH release
 - (b) progesterone increase
 - (c) decreased estrogen
 - (d) LH surge
10. The pregnancy test is based on detection of which hormone
- (a) estrogen
 - (b) progesterone
 - (c) HCG
 - (d) LH
11. Positive feedback is seen in all of the following

EXCEPT

- (a) coagulation cascade
- (b) stimulation of gastric secretion
gastrin
- (c) entry of calcium ions into
sarcoplasmic reticulum
- (d) LH surge

12. All of the following hormones mediate their effects without entering the target cell EXCEPT

- (a) growth hormone
- (b) insulin
- (c) mineralocorticoids
- (d) glucagon

13. All are the functions of thalamus EXCEPT

- (a) integrating center for sleep
- (b) major sensory relay
- (c) controls circadian rhythm
- (d) maintains conscious and alert
state

14. Alcohol produces diuresis by

- (a) increase in GFR
- (b) decreased water reabsorption
from loop of henle
- (c) inhibiting release of ADH from
hypothalamus
- (d) decreasing medullary interstitial
osmolarity

15. Higher intellectual functions are linked to

- (a) motor system
- (b) parietal lobe
- (c) limbic system
- (d) prefrontal cortex

16. Best method to increase muscle strength is

- (a) isotonic exercise
- (b) isometric exercise
- (c) electrical stimulation
- (d) isotonic aerobic exercise

17. Pyrogens raise body temperature by

- (a) releasing interleukins
- (b) setting the thermostat to a higher level
- (c) decrease peripheral heat liberation mechanism
- (d) causing peripheral vasoconstriction

18. A major source of heat production in infants is

- (a) increased muscular activity
- (b) increased sympathetic activity
- (c) specific dynamic action of food
- (d) brown fat

19. Which area of the hypothalamus functions as thermostat

- (a) paraventricular
 - (b) preoptic
-

(c) lateral

(d) dorsomedial

20. Rectal temperature is higher than oral temperature by

(b) 0.5-1°C

(a) 1-2°C

(c) 2-3°C

(d) 3-4°C

Q2. Short Answer Questions

10 x 5 = 50

- a. State the functions of insulin. Give basis of polyuria, polydipsia and polyphagia in diabetes mellitus
- b. Draw a labeled diagram of visual pathway with effects of lesions on it at various levels
- c. Give the functions of middle ear
- d. State the functions of growth hormone
- e. State the functions of cerebellum
- f. Describe the hormonal changes during menstrual cycle
- g. Give the functions of hypothalamus
- h. Enumerate and describe the errors of refraction
- i. Define speech. What are the areas of speech in brain
- j. Give the functions of basal ganglia

Q3. Long Answer Questions

3 x 10 = 30

- a. Give the functions of thyroid hormone
-

b. Draw labeled diagrams of somatosensory tracts.

Describe their functions

c. Draw a labeled diagram of neuromuscular junction.

Describe the steps of nerve impulse transmission at

neuromuscular

junction

www.FirstRanker.com