

KATHMANDU UNIVERSITY  
End Semester Examination [C]  
January, 2019

Marks Scored:

Level : B.Pharm.  
Year : II

Course : PHAR 212  
Semester: II

Roll No.:

Time: 30 mins.

F.M. : 20

Registration No.:

Date : JAN 04 2019

SECTION "A"  
[20 Q. × 1=20 marks]

Tick [✓] the correct answer.

1. It is an example of behavioral control of body temperature
  - a. Shivering
  - b. Piloerection
  - c. Wearing warm clothes
  - d. Sweatings
2. Hypothalamic releasing and inhibitory hormones are secreted into the
  - a. Anterior pituitary
  - b. Posterior pituitary
  - c. Pars intermedia
  - d. Median eminence
3. Binding of iodine with thyroglobulin molecule is called
  - a. Oxidation
  - b. Organification
  - c. Coupling
  - d. Iodination
4. All of the followings about cortisol is true except
  - a. It increases liver and plasma protein
  - b. It reduces protein source in the cells
  - c. It inhibits gluconeogenesis
  - d. It decreases glucose utilization by cells
5. Pancreatic beta cells receives glucose through
  - a. GLUT 1
  - b. GLUT 2
  - c. GLUT 3
  - d. GLUT 4
6. Parathyroid hormone is secreted from
  - a. Chief cells
  - b. Oxyphil cells
  - c. Oxyntic cells
  - d. Follicular cells
7. Leydig cells secretes
  - a. Estrogen
  - b. Progesterone
  - c. Androgen
  - d. Testosterone
8. Accumulation of follicular fluids within the mass of granulosa cells forms
  - a. Corpus luteum
  - b. Antrum
  - c. Zona pellucida
  - d. Corona radiata
9. Corpus luteum involutes usually after ..... weeks of gestation
  - a. 13-17
  - b. 7-12
  - c. 17-20
  - d. 10-13
10. It is the mechanoreceptor located in the arteries
  - a. Carotid sinus
  - b. Carotid bodies
  - c. Merkel's disc
  - d. Rods

11. Postcentral gyrus is also known as
- a. Motor cortex
  - b. Somatosensory cortex
  - c. Auditory cortex
  - d. Visual cortex
12. These are the pain suppressing chemicals in the CNS except
- a. Bradykinin
  - b. Serotonin
  - c. Endorphin
  - d. Enkephalin
13. A cloudy opaque area in the lens is called
- a. Glaucoma
  - b. Keratoconus
  - c. Cataract
  - d. Astigmatism
14. The impedance matching between sound wave in air and sound vibration in cochlear fluid is done by
- a. Auditory canal
  - b. Tympanic membrane
  - c. Ossicular system
  - d. Oval window
15. Taste buds are located in all of the following parts of oral cavity except
- a. Tonsillar pillar
  - b. Proximal esophagus
  - c. Soft palate
  - d. Tongue
16. It is an inhibitory cells located in the molecular layer of cerebellum
- a. Basket cells
  - b. Purkinje cells
  - c. Granular cells
  - d. Deep nuclei
17. Lateral and ventromedial nuclei of the hypothalamus contains center for
- a. Satiety
  - b. Rage
  - c. Reward
  - d. Hunger
18. Cranial division of parasympathetic nervous system originates from all of the following except
- a. Vagus
  - b. Glossopharyngeal
  - c. Oculomotor
  - d. Trigeminal
19. In adult human, transport maximum for glucose averages
- a. 100 mg/min
  - b. 125 mg/min
  - c. 300 mg/min
  - d. 375 mg/min
20. GFR can be decreased by all of the following except
- a. Norepinephrine
  - b. Endothelin
  - c. Angiotensin II
  - d. Nitric oxide

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Time : 2 hrs. 30 mins.

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Semester: II  
F.M. : 55

SECTION "B"  
[5 Q. × 3 = 15 marks]

*Explain with graphs and figures where ever required*

Answer **ANY FIVE** questions.

1. List out the functions of estrogen and testosterone.
2. List out the hormones released from pituitary and hypothalamus.
3. What are the different mechanisms of heat loss from the body?
4. Give an account on Alzheimer's disease and consolidation of memory.
5. Differentiate between cortical and juxtaglomerular nephron.
6. Elaborate on putamen circuit of basal ganglia
7. List out all the nucleus associated with limbic system

SECTION "C"  
[5 Q. × 5 = 25]

Answer **ANY FIVE** questions.

8. Give details on spermatogenesis.
9. Elaborate on thyroid hormone activation of target cells. What are the physiological characteristics of hypothyroidism? [3.5+1.5]
10. Elaborate on parasympathetic innervations of the visceral organs
11. Explain the detail about monosynaptic reflex and golgi tendon reflex.
12. Elaborate on different pathways that conduct the sensory signals to brain.
13. Write short notes on sleep.
14. Elaborate on gustatory pathway.

SECTION "D"  
[2 Q. × 7.5 = 15]

Answer **ANY TWO** questions.

15. Draw a well labeled diagram of human eye. Elaborate photochemistry of vision. List the names of the muscles responsible for the movement of eyeball. [3+3+1.5]
16. Write down the pathways of synthesis of steroid hormones. What are the functions of glucocorticoids and mineralocorticoids? [4.5+3]
17. Elaborate how kidneys help in acid-base balance.

