TB252173W

Reg. No :.....

Name :.....

BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, MARCH 2025

2017, 2018, 2019, 2020, 2021, 2022 ADMISSIONS SUPPLEMENTARY

SEMESTER II - COMPLEMENTARY COURSE 1 (PHYSIOLOGY)

PY2CMT05 - Biological Basis of Behaviour

Time : 3 Hours **Maximum Marks : 80**

Part A

I. Answer any Ten questions. Each question carries 2 marks **(10x2=20)**

1. Specify phenotype and genotype with two examples for each?
2. Discuss gene mutation? What causes a gene to mutate?
3. List down any 6 essential features of genetic material?
4. What is sexual dimorphism in humans with regard to hypothalamus?
5. Write the neural basis of human sexual behaviour?
6. Explain the role of pituitary gland in puberty period of females and discuss the development of secondary sexual characteristics during puberty period?
7. State any four stress related diseases.
8. Discuss on the different physiological changes during stress.
9. Describe on the behavioural symptoms seen in a stressed person.
10. Explain the physiological changes happens in a person in NREM Stage 1 and 2?
11. Indicate the effects of over arousal with examples.
12. Define alpha waves.

Part B

II. Answer any Six questions. Each question carries 5 marks **(6x5=30)**

13. Describe the principles of Mendelian Inheritance?
14. Explain Sex chromosomal anomalies? Write a short note on Turner's syndrome?
15. Write a short note on the following terms a)Somatic and Gametic Mutations b) Edward's syndrome c)Gene
16. Write a short note on female sex hormones and explain its role and changes that takes place in females during puberty?
17. Explain the role of autonomic nervous system in stress.
18. Examine on how stress influences immune functioning.
19. Explain the different body parts or organs that can be affected by stress?
20. Discuss on the physiological changes during sleep.
21. Are dreams connected to REM sleep? If so, how? Explain circadian cycle?

Part C

III. Answer any Two questions. Each question carries 15 marks **(2x15=30)**

22. Explain Somatic, gametic,point and silent mutations with example?
23. Discuss fear conditioning? Explain the role of Amygdala during fear conditioning?
24. Explain the effects of stress in the emotionality of a person, taking into account the importance of endorphins.
25. Differentiate between arousal and wakefulness. Discuss on the biological functions of sleep.