



PB-003-1016038 Seat No. _____

B. Sc. (Sem. VI) (CBCS) Examination

March / April - 2020

BC - 603 : Endocrinology, Cancer Biology And Bioinformatics

Faculty Code : 003

Subject Code : 1016038

Time : $2\frac{1}{2}$ Hours]

[Total Marks : **70**

1 Give the correct answer for the questions : **20**

- (1) Which are the two major coordinating systems of human body ?
- (2) Give the other name for anterior pituitary and posterior pituitary.
- (3) Name the disease caused during hyper function of thyroid.
- (4) Write the full form of TSH and source of its secretion.
- (5) Give the normal range of calcium in blood.
- (6) Name the two glucocorticoids.
- (7) List the two major functions of ovary.
- (8) Which cells synthesize testosterone?
- (9) Which tumor suppressor gene is located on the long arm of chromosome no. 13?
- (10) Name the body part affected in Xeroderma pigmentosa.
- (11) Define leukemia
- (12) Which dietary factors which are known to have protective functions against cancer.
- (13) When HGP has started and completed?
- (14) What is bioinformatics?
- (15) Give the name of different types of database?
- (16) Give the name of systems require for database management?

(17) What is full form of SCOP and CATH?

(18) Which are the primary and secondary databases for protein?

(19) What is local alignment? Which are alignment search tools?

(20) Give the difference between accession no. and PID.

2 (A) Answer any **three** of the following questions : **6**

- (1) Give the difference between dwarfism and acromegaly.
- (2) What is receptor for hormone ?
- (3) What do you understand by goiter ?
- (4) Enlist few methods to diagnose cancer.
- (5) What are the different methods required for DNA sequencing?
- (6) Write about need of database.

(B) Answer any **three** of the following questions : **9**

- (1) Write the general principle of peptide hormone synthesis.
- (2) List the anterior pituitary hormones with their main function.
- (3) Discuss functional anatomy of thyroid gland.
- (4) How DNA damage and repair system is responsible for the development of neoplasia?
- (5) Write the significance of data-base.
- (6) Give the note on TrEMBL.

(C) Answer any **two** of the following questions : **10**

- (1) With well labeled diagram discuss about posterior pituitary gland along with its disorders.
- (2) Discuss in brief about hypothalamus.
- (3) Write a note on physical carcinogenesis.
- (4) Give the different types of databases.
- (5) Give details about nucleotide sequence database maintained by NCBI.

3 (A) Answer any **three** of the following questions : 6

- (1) Write about the synthesis and transport of glucocorticoids.
- (2) Draw the structure to show different types of cells in Islets of Langerhans.
- (3) What are primary sex organs?
- (4) Define benign tumors.
- (5) Describe ethical issues of HGP.
- (6) What is accession and ID number?

(B) Answer any **three** of the following questions : 9

- (1) Write the functions of calcitriol .
- (2) Discuss in brief the two distinct parts of adrenal gland.
- (3) Discuss about types of diabetes.
- (4) Write in brief about viral carcinogenesis
- (5) What is PubMed indexing? Give the different citation status.
- (6) Give short note on FASTA.

(C) Answer any **two** of the following questions : 10

- (1) Write a detailed note on calcium regulating hormones.
- (2) Discuss the functions of mineralocorticoids.
- (3) Write a detailed note on various genes involved in pathogenesis of cancer.
- (4) Give short note on application of bioinformatics.
- (5) Write short note on BLAST.
