

Birla Institute of Technology and Science, Pilani, Rajasthan
Comp Examination: Sem 1:2023-2024

Course Title: PHA F 415

Course Title: Pathophysiology

Max. Marks: 40

Closed Book

Date: 09/12/23

Duration: 180 Min

Instructions: Answer all the questions. Be crisp and answer to the point.

Q-1: Explain the following: 4.5 M

i) Heliox and Bronchial thermoplasty ii) Hemophilia A & B blood disorders iii) Chediak-Higashi syndrome

Q-2: Breast cancer is a leading cause of morbidity and mortality. The clinical challenges are quite high in triple –ve breast cancer.

- a) What do you mean by triple-ve breast cancer? Write the pathophysiology and diagnosis criteria, also suggest the treatment approaches for breast cancer. 3.0 M
- b) Herceptin, used in triple-ve breast cancer and works by blocking the HER 2 receptor? 2.0 M
- c) Mutation in the BRCA gene may increase the risk of breast cancer? 2.0 M

Q-4: i) How are the chemical mediators involved in inflammation and pain? (2+1.5+1.0 M)
- ii) Draw a labeled diagram of the ascending and descending pain (inhibitory) pathway?
iii) How does the central pain inhibitory system work?

Q-5: Due to sharing quite similar signs, it becomes difficult to identify - Chikungunya and dengue fever. Please suggest, how they be diagnosed based on the symptoms. 1.5 M

Q-6: Comments on the following: 8.0 M

- a) Phenytoin inj does not mix with glucose 5% infusion solution while fos-phenytoin, generally mixed?
- b) Why, a 2-step TB skin test (TST) may be used in some patients, write the steps?
- c) Antidepressant agents can be used to treat neuropathic pain.
- d) Lepromin test is negative in lepromatous leprosy ?

Q-7: a) How will you differentiate b/w Grand mal and petit mal epilepsy based on the symptoms and pathophysiology? 3.0 M

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b).What are the clinical therapeutic approaches based on inhibitory–NT to manage epilepsy, explain with the help of a suitable example? 3.0 M

Q-8: Draw a representative ECG for an arrhythmogenic condition in a patient. How does Torsade point be managed clinically? 2.5 M

Q-9:What are the symptoms and pathological biomarkers for Alzheimer's Disease diagnosis? Suggest the molecular pathway/mechanism that can be targeted for its effective management, and explain with the help of a suitable example. 3.0 + 3.0 M
