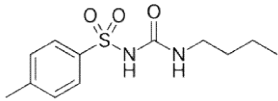


## Final Year B. Pharmacy (Sem-VIII)

### SAMPLE QUESTIONS

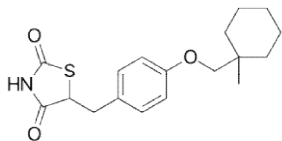
Subject: Medicinal Chemistry-IV (55651)

(Total MCQ's: 30)

- Tropisetron is..... antagonist.  
(1) **5-HT<sub>3</sub>** (2) H<sub>1</sub>  
(3) H<sub>2</sub> (4) All of these
- Which of the following proteins is the precursor for the thyroid hormones, and also a mark of thyroidal cancer?  
(1) Thyroalbumin (2) **Thyroglobulin**  
(3) Thyroid binding protein (4) All of the above
- Equation to represent Parabolic curved graph is  
(1)  $\text{Log}(1/C) = -k \log P + k_2$  (2)  $\text{Log}(1/C) = k \log P + k_2$   
(3)  **$\text{Log}(1/C) = -k_1 (\log P)^2 + k_2 \log P + k_3$**  (4)  $\text{Log}(1/C) = k_1 (\log P)^2 + k_2 \log P + k_3$
- Identify the Structure  
  
(1) Glimepiride (2) Chlorpropamide  
(3) **Tolbutamide** (4) Repaglinide
- An "orphan drug" is  
(1) A very cheap drug (2) A drug which has no therapeutic use  
(3) **A drug needed for treatment or prevention of a rare disease** (4) A drug which acts on Orphanian receptors
- Which of the following substances secreted by thyroid gland into the Serum?  
(1) Thyrotropin-releasing hormone (TRH) (2) Thyrotropin (thyroid-stimulating hormone)  
(3) Thyroglobulin (4) **Thyroxine (T4)**
- n-octanol is the organic solvent choice as it is  
(1) good model of lipid constituents (2) long alkyl chain  
(3) polar hydroxyl groups (4) **all of the above**

8. Which of the following property combination is peculiar to the majority of NSAIDs?
- (1) Antihistaminic, antipyretic, analgesic (2) Immunodepressive, anti-inflammatory, analgesic
- (3) **Antipyretic, analgesic, anti-inflammatory** (4) Anti-inflammatory, immunodepressive, antihistaminic

9. Identify the Structure

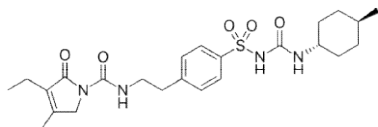


- (1) Ethoheptazine (2) Glimepiride
- (3) **Ciglitazone** (4) Rosiglitazone
10. Following equation is to designate  
 $\text{Log}(1/C) = -k_1(\text{log } P)^2 + k_2 \text{log } P + k_3$
- (1) Straight line graph (2) **Parabolic graph**
- (3) Same for both (4) None
11. Steroid hormones influence cellular activities by
- (1) **Binding to DNA and forming a gene-hormone complex** (2) using calcium ions as a second messenger
- (3) activating cyclic AMP located outside the cell (4) activating G proteins
12. Equation to represent straight line graph is
- (1)  **$\text{Log}(1/C) = -k \text{log } P + k_2$**  (2)  $\text{Log}(1/C) = k \text{log } P + k_2$
- (3)  $\text{Log}(1/C) = -k_1(\text{log } P)^2 + k_2 \text{log } P + k_3$  (4)  $\text{Log}(1/C) = k_1(\text{log } P)^2 + k_2 \text{log } P + k_3$
13. Following equation is to designate  
 $\text{Log}(1/C) = -k \text{log } P + k_2$
- (1) **Straight line graph** (2) Parabolic graph
- (3) Same for both (4) None
14. .... of the following is not a reason to use prodrugs.
- (1) To reduce pain (2) Alter absorption, distribution and metabolism
- (3) Avoid an unpleasant taste (4) **Increase toxicity**
15. As a well-rounded health care provider, you know that corticosteroid therapy is indicated in all of the following conditions except
- (1) **Osteoarthritis** (2) Rheumatoid arthritis
- (3) Systemic lupus erythematosus (4) Acute spinal cord injury
16. Identify Morphine antagonist
- (1) **N-allyl nor-morphine** (2) Levallorphan
- (3) Naloxone (4) both (1) & (2)

17. Hashimoto's thyroiditis is much more common in women leads to

- (1) **Hypothyroidism** (2) Hyperthyroidism  
(3) Graves' disease (4) Both 1 and 2

18. Identify the Structure



- (1) Probenecid (2) Oripavine  
(3) **Glimpiride** (4) Meperidine

19. The hydrophobicity constant for the substituent (X) is then obtained using equation

- (1)  $\pi_X = \log P_X - \log P_H$  (2)  $\pi_X = \log P_X \times \log P_H$   
(3)  $\pi_X = \log P_X + \log P_H$  (4)  $\pi_X = \log P_X / \log P_H$

20. What is an inactive compound transformed by chemical or metabolic means to an active product?

- (1) Acid drugs (2) **Prodrugs**  
(3) Polyfunctional drugs (4) Both 1 and 2

21. During the synthesis of steroid hormones, side chain cleavage reactions occur in two biotransformations. These are

- (1) mineralocorticoids and progestins --> androgens (2) Progestins --> corticosteroids and androgens --> estrogens  
(3) Cholesterol --> progestins and estrogens --> androgens (4) **Cholesterol --> progestins and progestins --> androgens**

22. Tramadol is

- (1) Antiflatulence agent (2) Antireflux agent  
(3) Beta blocker (4) **Opioid analgesic**

23. The hydroxylation reactions of steroid hormones in the endocrine glands require cytochrome P450, NADPH and

- (1) Tetrahydrobiopterin (2) Pyridoxal phosphate(vitamin B6)  
(3) S-adenosyl-methionine (4) **Molecular oxygen**

24. Substituents on an aromatic ring can be measured using

- (1) Resonance parameter (2) Dipole moment  
(3) **Hammett substituent constant ( $\sigma$ )** (4) Quantum chemical parameters

25. The ..... receptors are integral to morphine's effects on the ventral area of the brain.

- (1) delta-opioid (2) nicotina-opioid  
(3) **mu-opioid** (4) kappa-opioid

26. Codeine is a ..... for the mu opioid receptor
- (1) **Selective agonist** (2) Selective antagonist  
 (3) Partial agonist (4) Partial antagonist
27. Steric factors can be measured experimentally or calculated using
- (1) analog synthesis (2) only computer software  
 (3) only physical parameters (4) **physical parameters or computer software**
28. 9-ethoxy-3-methyl-2, 4, 4a, 7, 7a, 13-hexahydro-1H-4, 12-methanobenzofuro [3, 2-e] isoquinolin-7-ol is IUPAC name of
- (1) **Ethylmorphine** (2) Morphine  
 (3) Codeine (4) Oripavine
29. All of the following statements about oral contraceptives are true, EXCEPT
- (1) The “combination pill” contains both estrogen and progestin (2) Ethinyl estradiol and mestranol are commonly used in oral contraceptives  
 (3) The “minipill” contains progestin alone (4) **The “triphasic pill” contains estrogen, progestin, and luteinizing hormone (LH)**
30. Substitution of the hydroxyl group with a methoxy group in position 14, increases affinity to opioid receptors in
- (1) Morphine (2) Codeine  
 (3) Oripavine (4) **Ethyl morphine**

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