Sample tests – module 19

1. Thyroid deficiency (hypothyroidism or myxedema) is treated by simple replacement therapy by using:

a) Liothyronine (T_3);
b) Propylthiouracil;
c) Methimazole;
d) Radioactive iodine (^{131}I).

2. Which answer is not right?

Glucocorticoids (mechanism of action):

a) Alter gene expression by binding to tissue-specific nuclear response elements;
b) High doses result in decreased synthesis of prostaglandins and leukotrienes via inhibition of phospolipase A_2 ;
c) Decrease mRNA of COX-2, decreased platelet activating factor (PAF), and reduce synthesis of interleukin 2 (IL-2);
d) Cellular consequences include increased leukocyte migration, increased phagocytosis and lymphocyte proliferation and activation.

3. Choose right answers:

a) Hypoglycemia from insulin overdosage may require parenteral beta-adrenoceptor blockers by intramuscular injection;
b) Patients with nephropathy are less susceptible to hypoglycemia;
c) Animal origin Insulin may cause systemic allergy which may result in severe rashes and possible anaphylaxis;
d) Diabetic ketoacidosis necessitated intravenous treatment with insulin Glargin.

4. Thiazolidinediones hypoglycemic drugs toxicity include the following, except:

a) Fluid retention;
b) Edema;
c) Weight gain;
d) Often hypoglycemia

5. Thiazolidinediones cannot be used:

a) In congestive heart failure and hepatic disease;
b) Hyperthyrodism;
c) Gastrointestinal ulcer;
d) Glaucoma

6. Biguanides include:

a) Metformin;
b) Acarbose;
c) Miglitol;
d) Glyburid

7. Choose right answers for biguanides:

a) Biguanides include Glyburid;
b) Always cause hypoglycemia;
c) They may cause lactic acidosis;
d) Gastrointestinal distress is not characteristic

8. Alpha-glucosidase inhibitors hypoglycemic agents are:
a) Miglitol;
b) Repaglinide;
c) Nateglinide;
d) Pioglitazone

9. Alpha-glycosidase inhibitors advers effects are:
a) Hypoglycemia;
b) Gastrointestinal stress;
c) Anemia;
d) Weight gain

10. Alpha-glycosidase inhibitors cannot use in:
a) Impaired renal and hepatic function;
b) Anemia;
c) Osteoporosis;
d) Obesity

Incretin-based drugs include:
a) Exenatide;
b) Pramlintide;
c) Pioglitazone;
d) Rosiglitazone

11. Incretin-based drugs mechanism of action:
a) Bind to GLP_1 (glucagon-like polypeptide) receptors;
b) Inhibit intestinal α-glycosidases;
c) Regulate gene expression by binding to PPAR-γ (peroxisome proliferator-activated receptor-gamm
;
d) Close K^+ channel in beta cells and increase insulin release.

12. Incretin-based drugs effects include the following, except:
a) Reduce post-meal glucose excursions;
b) Increase glucose-mediated insulin release;
c) Decrease appetite
d) Accelerate gastric emptying;

13. Exenatide toxicity include, except:
a) Nausea and vomiting;
b) Anorexia;

c) Weight gain;
d) Pancreatitis

14. Sitagliptin mechanism of action:
a) Binds to CLP-1 (Glucagon like polypeptide);
b) Inhibition of DPP-4 (dipeptidyl-peptidase-4) and blocks degradation of GLP-1;
c) Decreases circulating CLP-1 levels;
d) Binds to amylin receptors.

15. Sitagliptin effects are like:
a) Pioglitazone;
b) Acarbose;
c) Exenatide;
d) Repaglinide

16. Sitagliptin toxicity does not include:
a) Rinitis ;
b) Upper respiratory infections;
c) Rare allergic reactions;
d) Pancreatitis.

17. Amylin analog hypoglycemic agents include:
a) Sitagliptin;
b) Exenatide;
c) Pramlintide;
d) Nateglinide

18. Amylin analog mechanism of action:
a) Is like incretin-based drugs;
b) Binds to amylin receptors;
c) Blocks degradation of GLP-1;
d) Regulates gene expression by binding to PPAR-γ

19. Amylin analog effects are like:
a) Exenatide;
b) Rosiglitazone;
c) Miglitol;
d) Metformin

20. Amylin analog toxicity includes:
a) Hypoglycemia and headache;
b) Weight loss;
c) Upper respiratory infections;
d) Heart failure

21. Choose right answers (about Glucagon):

a) Glucagon is a peptide produced by pancreatic beta cells;

b) Activation of glucagon receptors results in an increase of cyclic AMP;

c) Glucagon decreases hepatic glycogenolysis and glyconeogenesis;

d) Glucagon leads to cardiac depression and relaxation of smooth muscle

22. Glucagon is used for:

a) Reversal of β-blocker overdosage;

b) Vasculature constriction;

c) Contraction of the bowel for x-ray visualisation;

d) Hypertonic crises