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| 1) **Which option is most appropriate for a patient with newly diagnosed hyperthyroidism in the first trimester of pregnancy?**<br>A. Methimazole<br>B. Propylthiouracil (PTU)<br>C. Radioactive iodine<br>D. Surgical removal of the thyroid | B |
| 2) **A 29-year-old female has a TSH of 13.5 mIU/L (normal 0.5 to 4.7 mIU/L). Which agent is most appropriate to treat the TSH abnormality?**<br>A. Levothyroxine<br>B. Liothyronine<br>C. Liotrix<br>D. Propylthiouracil | **A** |
| 3) **A patient was recently placed on levothyroxine. Which of her medications may affect the levothyroxine dosage requirements?**<br>A. Bromocriptine<br>B. Calcium carbonate<br>C. Metoprolol<br>D. Vitamin D | B |
| 4) **A 65-year-old man with multinodular goiter is scheduled for a near-total thyroidectomy. Which of the following drugs will be administered for 10-14 d before surgery to reduce the vascularity of his thyroid gland?**<br>A.Levothyroxine<br>B. Liothyronine<br>C. Lugol's solution<br>D. Prednisone<br>E. Radioactive iodine | C |
| 5) **When initiating T4 therapy for an elderly patient with longstanding hypothyroidism, it is important to begin with small doses to avoid which of the following?**<br>A. A flare-up of exophthalmos<br>B. Acute renal failure<br>C. Hemolysis<br>D. overstimulation of the heart<br>E. Seizures | D |

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| **6) A 25-year-old woman presents with insomnia and fears she may have "something wrong with her heart." Lab tests confirm hyperthyroidism. Which of the following is a drug that produces a permanent reduction in thyroid activity?**<br>A. I131<br>B. Methimazole<br>C. Propylthiouracil<br>D. Thiocyanate<br>E. Thyroglobulin | A |
| **7) Though rare, a serious toxicity associated with the thioamides or PTU is which of the following?**<br>A. Agranulocytosis<br>B. Lupus erythematosus-like syndrome<br>C. Myopathy<br>D. Torsades de pointes arrhythmia<br>E. Thrombotic thrombocytic purpura (TP) | A |
| **8) Methimazole reduces serum concentration of T3 primarily by which of the following mechanisms?**<br>A. Accelerating the peripheral metabolism of T3<br>B. Inhibiting the proteolysis of thyroid- binding globulin<br>C. Inhibiting the secretion of TSH<br>D. Inhibiting the uptake of iodide by cells in the thyroid<br>E. Preventing the addition of iodine to tyrosine residues on Thyroglobulin | E |
| **9) A 56-year-old woman presented to the emergency department with tachycardia, shortness of breath, and chest pain. She had had shortness of breath and diarrhea for the last 2 d and was sweating and anxious. The diagnosis of thyroid storm was made. Which of the following is a drug that is a useful adjuvant in the treatment of thyroid storm?**<br>a) Propranolol.<br>b) Radioactive iodine.<br>c) Epinephrine.<br>d) Amiodarone<br>e) misoprostol | A |

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| 10) **A 30-year-old woman who was 1 month pregnant complained to her physician of swelling of the eyelids. Subsequent blood tests gave the following results: free thyroxine (T4) 3.3 ng/dL (normal 0.9-2.0 ng/dL), (TSH) < 0.01 mU/L (normal 0.5-5.0 mU/L). Treatment with which of the following drugs would be appropriate for this patient?**<br>a) Radioactive iodine<br>b) Potassium iodide<br>c) Methyldopa<br>d) Propylthiouracil<br>e) Esmolol | D |
| 11) **A 2-year-old boy was brought to the emergency department because of fever, irritability, and diarrhea. The mother reported that she found her levothyroxine bottle empty. Vital signs were heart rate 180 bpm, respirations 26/min. Laboratory test showed high T4 level. An appropriate emergency therapy was planned. Which of the following drugs should be administered to control hormone-related symptoms that could be rapidly lethal in this patient?**<br>A. Betamethasone<br>B. Propranolol<br>C. Levothyroxine<br>D. Propylthiouracil<br>E. Radioactive iodine | B |
| 12) **A 33-year-old woman was admitted to the hospital because of anorexia, malaise, jaundice, and right upper quadrant abdominal pain for the past 2 days. The woman was diagnosed with hyperthyroidism 1 month ago and started an appropriate therapy. lab results showed high alanine amino□transferase. Which of following drugs most likely caused the disorder?**<br>A. Methimazole<br>B. Radioactive iodine<br>C. Propylthiouracil<br>D. Propranolol<br>E. Potassium iodide | **C** |

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| **13) Which of the following is the treatment of choice for hypothyroidism?**<br>A. Iodide.<br>B. Levothyroxine.<br>C. Liothyronine.<br>D. Liotrix.<br>E. Propylthiouracil. | B |
| **14) A 33-year-old woman presents to her primary care physician with tachycardia, heat intolerance, tremor, and unintentional weight loss. A thyroid scan shows multiple regions of thyroid taking _up excess iodine. She is prescribed with a drug that will decrease synthesis of thyroid hormones and decrease the peripheral conversion of T4 to T3. Which drug is this?**<br>(A) Lanreotide<br>(B) Levothyroxine<br>(C) Methimazole<br>(D) Octreotide<br>(E) Propylthiouracil | E |
| **15) A 44-year-old woman with a long history of diarrhea, sweating, and weight loss is thought to have hyperthyroidism. This condition can be worsened with which of the following treatments?**<br>(A) Iodide<br>(B) Methimazole<br>(C) Propylthiouracil<br>(D) Surgical removal of the thyroid gland<br>(E) Triiodothyronine | E |
| **16) Which of the following statements is accurate regarding drug management of hyperthyroidism?**<br>A. The actions of thyroid peroxidase are inhibited by I131<br>B. Propylthiouracil inhibits the conversion of thyroxine to triiodothyronine<br>C. Methimazole is unable to cross the placental barrier<br>D. Iodide salts can be used for long-term management<br>E. The iodination of tyrosyl residues to form MIT and DIT are inhibited by beta blockers | B |

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| **17) Tri iodothyronine differs from thyroxine in that:**<br>A. It is more avidly bound to plasma proteins<br>B. It has a shorter plasma half life<br>C. It is less potent<br>D. It has a longer latency of action. | B |
| **18) Lugol's lodine is used in hyperthyroidism:**<br>A. As long term definitive monotherapy<br>B. Preoperatively for 10-15 days<br>C. Postoperatively for 10-15 days<br>D. As adjuvant to carbimazole for long term therapy | B |
| **19) A 60-year-old male presents with severe hyperthyroidism and multinodulargoiter. It was decided to treat him with 131I. The most appropriate course of treatment would be:**<br>a) Immediate 131I dosing with no other drug before or after<br>b) Propranolol for 1 week followed by 131 I.<br>c) Propranolol + methimazole till severe thyrotoxicosis is controlled-1 week gap 131I resume methimazole after 1 week for 2-3 months<br>d) Propranolol + Lugol's jodine for 2 weeks 131I —continue Lugol's iodine for 2-3 months | C |
| **20) 40 years old man presented to emergency with fever, restlessness &confusion. On examination severe tachycardia, BP 170/110 and ECG showed atrial fibrillation. Which of the followings is lifesaving drug should be giving immediately to him?**<br>a) Carbimazole<br>b) Radioactive iodine<br>c) Propranolol<br>d) Liothyronine<br>e) Insulin | C |
| **21) The most important drawback of radioactive iodine treatment Grave's disease is:**<br>A. Subsequent hypothyroidism in many patients<br>B. Marked side effect for 1-2 weeks after treatment<br>C. High cost<br>D. Permanent cure cannot be achieved | **A** |

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| 22) **A 27-year-old woman underwent near total thyroidectomy. She was started on levothyroxine. What hormone is produced in the peripheral tissues when levothyroxine is administered?**<br>A. Methimazole<br>B. T3<br>C. T4<br>D. TSH<br>E. FSH | B |
| 23) **Which of the following is a sign or symptom that would be expected to occur in the event of chronic overdose with exogenous T4?**<br>A. Bradycardia<br>B. Dry, puffy skin<br>C. Large tongue and drooping of the eyelids<br>D. Lethargy, sleepiness<br>E. Weight loss | E |
| 24) **Which of the following drugs inhibit 5'-deiodinase?**<br>a. Radioactive iodine<br>b. Lugol's iodine<br>c. Propylthiouracil<br>d. Methimazole | C |
| 25) **The most reliable guide to adjust thyroxine dose in hypothyroidism:**<br>A. Pulse rate<br>B. Body weight<br>C. Serum thyroxine level<br>D. Serum TSH level | D |
| 26) **The antithyroid drug with the most rapid onset of antithyroid action is:**<br>a. Sodium iodide<br>b. Propylthiouracil<br>c. I131<br>d. Methimazole | A |

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| **27) The following thyroid inhibitor does not produce goiter when given in over dose:**<br>A. Propyl thiouracil<br>B. Carbimazole<br>C. Radioactive iodine<br>D. Sodium thiocyanate | C |
| **28) Agents that can be used to treat thyrotoxicosis don't include:**<br>a) Methimazole<br>b) Potassium iodide<br>c) Propylthiouracil<br>d) Radioactive iodine<br>e) Thyroglobulin | E |
| **29) Which patient is most likely to be recommended for thyroidectomy as a treatment for Graves' disease?**<br>A) A patient with a small goiter and mild symptoms<br>B) A patient with moderate Graves' eye disease<br>C) A patient with a very large gland causing compressive symptoms<br>D) A patient allergic to propranolol<br>E) A patient with transient hypothyroidism | C |
| **30) Which of the following is a contraindication for radioactive iodine (I131) therapy in Graves' disease?**<br>A) Mild hypertension<br>B) Pregnancy or breastfeeding<br>C) Asymptomatic thyroid nodules<br>D) Age >60 years<br>E) History of allergic reactions to iodine | B |
| **31) What is the first-line therapy for hyperthyroidism due to Graves' disease in most cases?**<br>A) Radioactive iodine (I131)<br>B) Subtotal thyroidectomy<br>C) Antithyroid drugs (thioamides)<br>D) Propranolol alone<br>E) Corticosteroids | C |

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| **32) Which patient population with Graves' disease should avoid RAI therapy?**<br>A. Those with mild eye disease<br>B. Those with moderate to severe eye disease<br>C. Patients over 50 years old<br>D. Patients allergic to thioamides<br>E. Patients with transient hyperthyroidism | B |
| **33) What is the route of administration for radioactive iodine (I-131)?**<br>A. Intravenous<br>B. Intramuscular<br>C. Subcutaneous<br>D. Oral<br>E. Inhalational | D |
| **34) Over what period does RAI typically restore euthyroidism after administration?**<br>A. 1–2 days<br>B. 1–2 weeks<br>C. 4–8 weeks<br>D. 3–6 months<br>E. 1 year | C |
| **35) Why should nonradioactive iodide (KI) be avoided before RAI administration?**<br>A. It causes severe nausea<br>B. It competes with I-131 for thyroid uptake<br>C. It increases radiation toxicity<br>D. It worsens Graves' ophthalmopathy<br>E. It induces hypothyroidism rapidly | B |
| **36) When is potassium iodide (KI) typically administered in patients receiving RAI therapy?**<br>A. Before RAI to enhance thyroid uptake<br>B. Concurrently with RAI to reduce side effects<br>C. After RAI to limit radioactive hormone release<br>D. Continuously throughout treatment<br>E. Only in cases of thyroid storm | C |

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| **37) How long before radioactive iodine (RAI) therapy should thioamide drugs be discontinued?**<br>A. 1 day<br>B. 3–7 days<br>C. 10–14 days<br>D. 1 month<br>E. Continued until RAI administration | B |
| **38) A 25-year-old woman has been treated with thyroxine for hypothyroidism. She has become pregnant. She complains now of being constantly fatigued. The proper course of action would be to**<br>a) do nothing, fatigue is normal during pregnancy.<br>b) increase the iodine in her diet.<br>c) measure her serum TSH, free T3 and free T4 levels during the first trimester and adjust her thyroxine dose based on the result.<br>d) double her dose of thyroxine.<br>e) decrease the dose of thyroxine as the need for thyroid replacement therapy decreases during pregnancy | **C** |
| **39) Two months after starting treatment for hyperthyroidism with methimazole, your patient returns to your clinic complaining of chronic cough and sore throat that will not go away You recognize that because your patient is being treated with a thioamide,What condition should you be looking for that could be confirmed by ordering a blood test?**<br>a) Anemia<br>b) angioedema<br>c) eosinophilia<br>d) leukopenia<br>e) thrombocythemia | D |
| **40) Effects of iodide salts given in large doses don't include:**<br>a) Decreased size of thyroid gland<br>b) Decreased vascularity of thyroid gland<br>c) Decreased iodination of tyrosine<br>d) Increased uptake of I131 | D |

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| 41) **A 23-year-old woman presents to her primary care physician with an enlarging neck mass and weight loss. The large mass is seen in the midline of the neck. She has lost 15 Ib over the past month, feels like her heart is racing, and is always hot. The patient is diagnosed with Graves' disease and started on propylthiouracil. Which of the following is a side effect of propylthiouracil?**<br>(A) Agranulocytosis<br>(B) Arrhythmias<br>(C) Diabetes<br>(D) Hypertension<br>(E) Tachycardia | **A** |

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| 1) **Insulin causes reduction in blood sugar level by the following mechanisms, EXCEPT**:<br>a) Increased glucose uptake in the peripheral tissue<br>b) Reduction of breakdown of glycogen<br>c) Diminished gluconeogenesis<br>d) Decreased glucose absorption from the gut | **D** |
| 2) **Insulin can not be administered by:**<br>a) Oral route<br>b) Intravenous route<br>c) Subcutaneous route<br>d) Intramuscular route. | **A** |
| 3) **Correct statements about crystalline (regular) insulin include all of the following, EXCEPT:**<br>a) It can serve as replacement therapy for juvenile□onset diabetes<br>b) It can be administered intravenously<br>c) It is a short-acting insulin<br>d) It can be administered orally | D |
| 4) **Diabetic coma is treated by the administration of:**<br>a) Lente insulin<br>b) Glucose<br>c) Crystalline insulin<br>d) Oral anti-diabetic drugs | B |
| 5) **The following is peakless insulin preparation:**<br>A. Regular insulin.<br>B. NPH insulin.<br>C. Zinc insulin.<br>D. Insulin galrgine.<br>E. Lispro insulin | D |

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| **6) Which of the following is an important effect of insulin?**<br>A. Increased conversion of amino acids into glucose<br>B. Increased gluconeogenesis<br>C. Increased glucose transport into cells<br>D. Inhibition of lipoprotein lipase<br>E. Stimulation of glycogenolysis | C |
| **7) Which of the following agents should be administered to achieve rapid control of the severe ketoacidosis in a diabetic boy?**<br>A. Regular insulin<br>B. Glyburide<br>C. Insulin glargine<br>D. NPH insulin<br>E. Tolbutamide | A |
| **8) Which of the following is the most likely complication of insulin therapy?**<br>A. Hypoglycemia<br>B. Increased bleeding tendency<br>C. Pancreatitis<br>D. Severe hypertension | A |
| **9) The following regimens is Most appropriate for tight control of diabetes mellitus:**<br>A. Morning injections of mixed insulin lispro and insulin aspart.<br>B. Evening injections of mixed regular insulin glargine.<br>C. Morning and evening injections of regular insulin, supplemented by small amounts of NPH insulin at mealtimes.<br>D. Evening injections of insulin glargine, supplemented by small amounts of insulin lispro at meal times. | D |
| **10) The following is a long acting insulin preparation:**<br>A. Regular insulin.<br>B. NPH insulin.<br>C. Insulin detemir<br>D. Lispro insulin | **C** |

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| **11) Which of the following is not Adverse effects of insulin**<br>a) Hypokalemia<br>b) Weight gain<br>c) Hyperglycemia<br>d) Allergy<br>e) Lipodystrophy | C |
| **12) Which of the following insulins would provide a patient diagnosed with type 1 diabetes mellitus a constant release of insulin over a 24-hour period?**<br>a) insulin aspart<br>b) insulin glargine<br>c) insulin lispro<br>d) NPH Insulin<br>e) regular insulin | B |
| **13) The preparation of insulin for start of treatment of diabetic ketoacidosis is:**<br>a) Lente insulin<br>b) N.P.H<br>c) Soluble insulin<br>d) Insulin glargine<br>e) Ultra short insulin | **C** |
| **14) A 13-year-old boy with type 1 diabetes is brought to the hospitalcomplaining of dizziness. Laboratory findings include severe hyperglycemia,ketoacidosis, and a blood pH of 7.15. Which of the following agents should be administered to achieve rapid control of the severe ketoacidosis in this diabetic boy?**<br>a) Crystalline insulin<br>b) Glyburide<br>c) Insulin glargine<br>d) NPH insulin<br>e) Tolbutamide | A |

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| **15) Which of the following statements is correct regarding insulin glargine?**<br>a) It is primarily used to control postprandial hyperglycemia.<br>b) It is a "peakless" insulin.<br>c) The prolonged duration of activity is due to slow dissociation from albumin.<br>d) It should not be used in a regimen with insulin lispro or glulisine<br>e) It may be administered intravenously in emergency cases | B |
| **16) A 45-year-old man with insulin-dependent diabetes mellitus on insulin injection decides that he wants to "drink" the insulin instead of taking the injection form. He is tired of the pain he gets during the injections. Which of the following is the most likely sequelae of this action?**<br>a) Diarrhea<br>b) Nausea<br>c) Persistent hyperglycemia<br>d) Transient ischemic attack<br>e) Uremia | C |
| **17) The primary route of administration of insulin is:**<br>a) Intradermal<br>b) Subcutaneous<br>c) Intramuscular<br>d) Intravenous | **B** |
| **18) There is no alternative to insulin therapy for:**<br>a) All type 1 diabetes mellitus patients<br>b) All type 2 diabetes mellitus patients<br>c) Type 2 diabetes patients not controlled by a sulfonylurea drug<br>d) Type 2 diabetes patients not controlled by a biguanide drug | A |
| **19) DW is a patient with type 2 diabetes who has a blood glucose of 400 mg/dL today at his office visit. The physician would like to give some insulin to bring the glucose down before he leaves the office. Which of the following would lower the glucose in the quickest manner in DW?**<br>a) Insulin aspart.<br>b) Insulin glargine.<br>c) NPH insulin.<br>d) Regular insulin | **A** |

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| **20) A 28-year-old man who is obese is found to have a hemoglobin A1c of 9.5%. He has been unable to adequately control his blood sugar with diet and exercise alone. His physician wishes to prescribe an insulin product to help control his blood sugar level. Which of the following is the longest acting to provide this patient a low, baseline insulin dose that will last throughout the day?**<br>a) Insulin aspart<br>b) Insulin glargine<br>c) Insulin lispro<br>d) Lente insulin<br>e) NPH insulin | B |
| **21) Insulin therapy is required for the following category/categories of type 2 diabetes mellitus patients:**<br>a) Patients with ketoacidosis<br>b) Patients undergoing surgery<br>c) Pregnant diabetic<br>d) All of the above | D |
| **22) Effects of insulin do not include:**<br>a) Decreased conversion of amino acids into glucose.<br>b) Decreased gluconeogenesis.<br>c) Increased glucose transport into cells.<br>d) Induction of lipoprotein lipase.<br>e) Stimulation of glycogenolysis. | E |
| **23) Which of the following actions most likely mediated the therapeutic effect of insulin in the patient's disease?**<br>A. Inhibition of the activity of dipeptidyl peptidase-4<br>B. Incorporation of glucose transporters in thecell membrane<br>C. Activation of enzymes of the gluconeogenesis pathway<br>D. Inhibition of the tyrosine kinase activity of the insulin receptor | B |

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| 24) **A 13-year-old boy with type 1 diabetes received his morning injection of a mixture of insulin lispro and glargine. A few hours later, he was found unconscious in his room. His heart rate was 120 bpm and body temperature 34.8°C, and tetanic contractions of skeletal muscles were present. Which of the following would be the immediate appropriate treatment for this patient?**<br>A. Regular insulin intravenous<br>B. Oral glucose<br>C. Glucagon intramuscular (IM)<br>D.Oral metformin<br>E. Exenatide IM | C |
| 25) **A 42-year-old woman recently diagnosed with SLE started a treatment with a high daily dose of prednisone. The woman had a history of type 1 diabetes currently controlled with two daily administrations of premixed insulin, Which of the following changes in the patient's antidiabetic regimen should be made at this time?**<br>A. Decrease the daily insulin dosage.<br>B. Increase the daily insulin dosage.<br>C. Add glyburide to the antidiabetic regimen.<br>D. Add exenatide to the antidiabetic regimen.<br>E. Add sitagliptin to the antidiabetic regimen. | B |
| 26) **A 12-year-old boy presents with polyuria, polydipsia, and weight loss. Lab results:**<br>- Fasting glucose: 210 mg/dL<br>- HbA1c: 9.2%<br>- Positive ketones in urine<br>**: What is the most appropriate initial treatment?**<br>a) Metformin + lifestyle changes<br>b) Subcutaneous insulin glargine + mealtime insulin lispro<br>c) Sulfonylureas + acarbose<br>d) D) Diet control alone | B |
| 27) **The boy's parents ask why oral antidiabetics are not used. Your response:**<br>a) He needs rapid glucose control.<br>b) Type 1 DM results from beta-cell destruction; insulin is mandatory.<br>c) Oral drugs are toxic in children.<br>d) D) He will develop resistance to pills. | **B** |

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| **28) He develops hypoglycemia at night. Which insulin adjustment is needed?**<br>- A) Reduce glargine dose<br>- B) Switch to premixed insulin<br>- C) Discontinue metformin<br>- D) Add a glitazone | A |
| **29) Which of the following is true in regard to insulin?**<br>a) It needs opening of K+ channels to be secreted from $\beta$ -cells<br>b) It needs closure of K+ channels to be secreted from $\beta$ -cells<br>c) It needs closure of Ca+2 channels to be secreted from $\beta$ -cells<br>d) The ADP is responsible for secretion of insulin | B |
| **30) The primary reason for a physician to prescribe human insulin is:**<br>a) It has a faster onset of action than other insulins<br>b) It has a shorter duration of action than other insulins.<br>c) It can be given to patients who have an allergy to animal insulins<br>d) It is more effective in preventing the complications of diabetes than animal insulins.<br>e) It is cheaper than other insulins because it is produced by recombinant technology. | C |

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| **1) Treatment of DK include the following except:**<br>A. Regular insulin.<br>B. Normal sodium.<br>C. KCL.<br>D. Sulphonylurea. | **D** |
| **2) Sulphonylureas act by:**<br>a) Reducing the absorption of carbohydrate from the gut<br>b) Increasing the uptake of glucose in peripheral tissues<br>c) Reducing the hepatic gluconeogenesis<br>d) Stimulating the beta islet cells of pancreas to produce insulin | D |
| **3) True or False: Sulphonylureas are effective in totally insulin deficient patients. This consideration is:**<br>* a) True<br>* b) False | B |
| **4) Thiazolidinediones act by:**<br>a) Diminishing insulin resistance by increasing glucose uptake and metabolism in muscle and adipose tissues<br>b) Reducing the absorption of carbohydrate from the gut<br>c) Stimulating the beta islet cells of pancreas to produce insulin<br>d) Stimulating the hepatic gluconeogenesis | A |
| **5) Alpha-glucosidase inhibitors act by:**<br>a) Diminishing insulin resistance by increasing glucose uptake and metabolism in muscle and adipose tissues<br>b) Competitive inhibiting of intestinal alpha-ghucosidases and modulating the postprandial digestion and absorption of starch and disaccharides<br>c) Reducing the absorption of carbohydrate from the gut<br>d) Stimulating the beta islet cells of pancreas to produce insulin | B |

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| **6)** **Which of the following drugs is most likely to cause hypoglycemia when used in the treatment of type 2 diabetes?**<br>A. Acarbose<br>B. Glibenclamide<br>C. Metformine<br>D. Rosiglitazone | **B** |
| **7)** **Which one of the following drugs promotes the release of endogenous insulin?**<br>A. Acarbose<br>B. Pioglitazone<br>C. Glimpride<br>D. Metformin | C |
| **8)** **The combination of metformin and ethanol increases the risk of which of the following?**<br>A. Serious hepatotoxicity<br>B. Excessive weight gain<br>C. Hypoglycemia<br>D. Lactic acidosis | **D** |
| **9)** **Which of the following drugs is taken during the first part of a meal for the purpose of delaying the absorption of dietary carbohydrates?**<br>A. Acarbose<br>B. Repaglinide<br>C. Glipizide<br>D. Pioglitazone | A |
| **10)** **The PPAR-$\gamma$ receptor that is activated by thiazolidinedionesincreases tissue sensitivity to insulin by which of the following mechanisms?**<br>A. Activating adenylyl cyclase and increasing the intracellular concentration of cAMP<br>B. Inactivating a cellular inhibitor of the GLUT2 glucose transporter<br>C. Inhibiting acid glucosidase, a key enzyme in glycogen breakdown pathways<br>D. Regulating transcription of genes involved in glucose utilization | D |

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| **11) A 55 years old obese lady discovered to have random blood glucose 260 mg/dl during screening at 100 million health and her fasting blood glucose later was 160 mg/dl. She was told that she has type 2 DM. What is the next step?**<br>A. Just follow up<br>B. Metformin should be started<br>C. She can be given a small dose sulphonyl urea<br>D. Pioglitazone is given to improve insulin resistance<br>E. Long acting insulin at bed time | B |
| **12) The release of insulin from pancreatic beta cells would most likely be stimulated by which of the following?**<br>(A) Clonidine<br>(B) Norepinephrine<br>(C) Diazoxide<br>(D) Glipizide | D |
| 13) **To supplement other oral type 2 diabetes medication, a patient is prescribed a drug to inhibit the intestinal absorption of carbohydrates. What would be an appropriate drug**?<br>(A) Metformin<br>(B) Acarbose<br>(C) Repaglinide<br>(D) Pioglitazone | B |
| **14) Sitagliptin acts by:**<br>a) Reducing the absorption of carbohydrate from the gut<br>b) Increasing the uptake of glucose in peripheral tissues<br>c) Reducing the hepatic gluconeogenesis<br>d) Inhibits dipeptidyl peptidase 4 (DPP-4) | D |
| **15) One the main advantages of Liraglutide over exenatide is that**<br>A. It is longer in duration.<br>B. It is a synthetic amylin analogue.<br>C. It increases glucagon secretion.<br>D. It is used instead of insulin in type 1 diabetes | A |

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| **16) Dapagliflusin acts by:**<br>a) Reducing the absorption of carbohydrate from the gut<br>b) Inhibits sodium-glucose cotransporter-2 (SGLT2)<br>c) Reducing the hepatic gluconeogenesis<br>d) Inhibits dipeptidyl peptidase 4 (DPP-4) | B |
| **17) What is the first step in the management of diabetic ketoacidosis?**<br>a. To provide fluids intravenously<br>b. To provide insulin<br>c. To provide bicarbonate<br>d. To initiate insulin and fluids simultaneously | **A** |
| **18) In a patient with type 2 diabetes, which drug mimics the action of incretins to augment glucose-dependent insulin secretion?**<br>(A) Acarbose<br>(B) Glucagon<br>(C) Exenatide<br>(D) Metformin | C |
| **19) The hormone that is secreted by the alpha cells of the pancreas that raises blood glucose when levels are low is:**<br>A. glucagon<br>B. epiniphrine<br>C. insulin<br>D. cortisol | A |
| **20) Insulin promotes all but which of the following:**<br>A. lipolysis<br>B. lipogenesis<br>C. protein synthesis<br>D. glucose entry into cells | **A** |

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| 21) **Which of the following tissues requires insulin for glucose entry into cells:**<br>A. muscle<br>B. liver<br>C. kidney tissue<br>D. nervous tissue | A |
| 22) **Which of the following oral agents is categorized as a secretagogue?**<br>a) Metformin<br>b) Glipizide<br>c) Sitagliptin<br>d) Miglitol<br>e) Acarbose | B |
| 23) **Which of the following oral antidiabetic agents increases the incretin's duration of action?**<br>a) Sitagliptin<br>b) Acarbose<br>c) Nateglinide<br>d) Tolbutamide | A |
| 24) **A 34-year-old male patient has a past medical history of Type 2 diabetes and hypertension. He has been experiencing profound swelling in his feet and lower legs for the past two weeks. Which diabetes medication is most likely responsible for his new edema?**<br>A. Metformin 850 mg tablet 1 po three times daily<br>B. Gliclazide tablet two po twice daily<br>C. Pioglitazone 45 mg tablet 1 po once daily<br>D. Insulin glargine inject 20 units subcutaneously every evening<br>E. Lisinopril 10 mg tablet 1 po once daily | C |
| 25) **A 55-year-old obese female who has had T2DM for 10 years. She is currently being treated with metformin, but her HbA1c is above goal. She has a history of heart failure and COPD. Her physician wants to adjust her medication that will not cause any weight gain. Which of the following would be most appropriate?**<br>A. Add Canagliflozin<br>B. Add Glimepiride<br>C. Add Pioglitazone<br>D. Add Acarbose<br>E. Increasing the metformin dose to maximum | **A** |

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| **26) Which of following anti-diabetic drugs can cause vitamin B12 deficiency?**<br>a) Glipizide<br>b) Acarbose<br>c) Metformin<br>d) Pioglitazone<br>e) Nateglinide | C |
| **27) A 78-year-old nursing home resident is admitted to the acute medical unit after being found collapsed in his room. A carer from the nursing home is present and reports that he has had regular 'hypos' recently. On admission he was drowsy, and the blood glucose was 45 mg/dl. Following intravenous dextrose the patient's condition significantly improved. Which drug is most likely responsible for this?**<br>A. Metformin 1g bd<br>B. Glipizide 160mg od<br>C. Pioglitazone 45mg od<br>D. Aspirin 75mg od<br>E. Simvastatin 40mg od | B |
| **28) Which of the following when used together have complementary actions that increase insulin secretion?**<br>a) Regular human insulin and insulin glargine<br>b) DPP-4 inhibitor sitagliptin and metformin<br>c) Amylin and glucagon<br>d) Glyburide and incretin mimetics<br>e) Acarbose and sitagliptin | D |
| **29) Oral antihyperglycemics that release insulin are:**<br>a) Biguanides.<br>b) Meglitinides.<br>c) Thiazolidinediones.<br>d) Exenatide.<br>e) a-glucosidase inhibitors. | B |

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| **30) The drug which tends to reverse to the insulin resistance by increasing cellular glucose transporters:**<br>a) Glibenclamide<br>b) pioglitazone<br>c) Acarbose<br>d) Prednisolone | B |
| **31) Metformin acts by:**<br>a) Releasing insulin from pancreas<br>b) Suppressing gluconeogenesis and glucose output from liver<br>c) Up regulating insulin receptors<br>d) Inhibiting degradation of insulin | B |
| **32) An oral agent help to control patient blood glucose by acting as starch blocker. which drug fits this description:**<br>a) Acarbose<br>b) Thiazoldindiones<br>c) Glipizide<br>d) Metformin<br>e) Tolbutamide | A |
| **33) One of the following doesn't promote the release of endogenous insulin:**<br>a) Chloropropamide<br>b) Glipizide<br>c) Pioglitazone<br>d) Repaglinide<br>e) Tolbutamide | C |
| **34) Drug used to control postprandial hyperglycemia is:**<br>a) Acarbose<br>b) Biguanide<br>c) Exenatide<br>d) Repaglinide<br>e) Sulfonylurea | D |

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| **35) Alpha-glucosidase inhibitor (Acarbose):**<br>a) Increase complex carbohydrate absorption from GIT.<br>b) Inhibits lactase enzyme.<br>c) Inhibits MAO-B selectively.<br>d) Causes lactic acidosis.<br>e) Causes flatulence as a common adverse effect. | E |
| **36) Which of the following antidiabetic drugs acts by decreasing the amount ofglucose produced by the liver?**<br>a) Sulfonylureas.<br>b) Meglitinides.<br>c) Biguanides<br>d) Gliptins.<br>e) Exenatide. | C |
| **37) Lactic acidosis is associated with which of the following drugs:**<br>a) Acarbose<br>b) Glipizide<br>c) Metformin<br>d) Rosiglitazone<br>e) Lovastatin | C |
| **38) Which of the following is the mechanism by which sulfonylurea lowers blood glucose level?**<br>a) Decrease insulin resistance by lowering body weight<br>b) Enhance renal excretion of glucose<br>c) Increase insulin synthesis<br>d) Release insulin from pancreas | D |
| **39) The main reason metformin should not be used in patients with renal failure is that?**<br>a) It increases the risk of lactic acidosis<br>b) It increases the risk of ketoacidosis<br>c) It causes development of CHF<br>d) It causes hepatic necrosis | **A** |

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| **40) A 54-year-old obese patient with type 2 diabetes has a history of alcoholism. In his patient, metformin should either be avoided or used with extreme caution because the combination of metformin and ethanol increases the risk of which of the following?**<br>a) A disulfiram-like reaction<br>b) Excessive weight gain<br>c) Hypoglycemia<br>d) Lactic acidosis<br>e) Serious hepatotoxicity | D |
| 41) **A 27-year-old man was recently diagnosed with Type-2 diabetes mellitus and placed on a medication. As he was drinking with his friends, he became violently ill. What medication is he most likely taking?**<br>a) Acarbose<br>b) Glyburide<br>c) Metformin<br>d) Pioglitazone<br>e) Tolbutamide | C |
| **42) Which of the following statements is characteristic of metformin?**<br>a) Metformin is inappropriate for initial management of type 2 diabetes.<br>b) Metformin decreases hepatic glucose production.<br>c) Metformin undergoes significant metabolism via the cytochrome P450 system.<br>d) Metformin should not be combined with sulfonylureas or insulin.<br>e) Weight gain is a common adverse effect. | B |
| **43) A 57-year-old man was recently diagnosed with Type-2 diabetes mellitus and placed on a medication. He began having myalgias and feeling sick and later developed respiratory distress, so he went to the hospital. His pH was 7.2, and he had elevated blood lactate levels. Which drug is likely causing his problem?**<br>a) Acarbose<br>b) Glyburide<br>c) Metformin<br>d) Pioglitazone<br>e) Tolbutamide | C |

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| **44) A 44-year-old man with Type-2 diabetes presents to the ambulatory care clinic for follow-up. He was diagnosed with diabetes 6 months ago and was started on oral medication then. His blood sugar has been under good control with a hemoglobin A1c of 6.7%. He has not had any hypoglycemic episodes. His only complaint is that despite daily exercise and eating healthier, he has gained 12 lb in the last 6 months. What medication is most likely to cause his weight gain?**<br>A. Acarbose<br>B. Exenatide<br>C. Glyburide<br>D. Metformin<br>E. Pioglitazone | A |
| **45) What is benefit of SGLT2 inhibitor in HF treatment compared to diuretics?**<br>A) Blood pressure reduction<br>B) Improved glycemic control<br>C) Reduction in heart rate<br>D) Prevention of cardiac remodeling<br>E) Increase in sodium retention | B |
| **46) Which of the following diabetes medications is most appropriately paired with an adverse effect associated with its use?**<br>A. Canagliflozin → urinary tract infections.<br>B. Nateglinide → heart failure.<br>C. Glipizide → weight loss.<br>D. Liraglutide → lactic acidosis. | A |
| **47) Which beneficial effect is achieved by SGLT2 inhibitors in HF and DM patients?**<br>A) Increased preload<br>B) Increased sodium reabsorption<br>C) Osmotic diuresis<br>D) Increased heart rate<br>E) Vasoconstriction | C |

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| **48) A 64-year-old woman with a history of type 2 diabetes is diagnosed with heart failure. Which of the following medications would be a poor choice for controlling her diabetes?**<br>a) Exenatide.<br>b) Glyburide.<br>c) Nateglinide.<br>d) Pioglitazone.<br>e) Sitagliptin. | D |
| **49) Which of the following is not a sulfonylurea but acts by analogous mechanism to bring about quick and brief insulin release that is useful for normalizing meal time glycemic excursions in type 2 diabetes mellitus:**<br>a) Glimepiride<br>b) Miglitol<br>c) Repaglinide<br>d) Rosiglitazone | C |
| **50) Which of the following is the most appropriate initial oral agent for management of type 2 DM in patients with no other comorbid conditions?**<br>a) Glipizide.<br>b) Insulin.<br>c) Metformin.<br>d) Pioglitazone | C |
| **51) A 63-year-old female presents to clinic for a diabetes follow-up. She has been taking metformin for 3 years now, but her blood sugars have not been well controlled over the past year. Her average morning fasting blood sugar is 165 mg/dL, and her 2-h postprandial is 205 mg/dL. Glimepiride is added to her regimen. What is the mechanism of action of glimepiride?**<br>A. Decreased glucagon release<br>B. Increased insulin release<br>C. Increased insulin sensitivity in peripheral tissues<br>D. Inhibits hepatic gluconeogenesis<br>E. Inhibits intestinal brush border enzymes | B |

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| **52) The correct statement about nateglinide:**<br>a) It is long-acting oral hypoglycemic drug<br>b) Taken just before a meal, it limits postprandial hyperglycemia in type 2 diabetes mellitus<br>c) It lowers blood glucose in both type 1 and type 2 diabetes mellitus<br>d) It acts by opening k channels in myocytes and adipocytes | B |
| **53) What is a recognized adverse effect of SGLT2 inhibitors in diabetic patients?**<br>A) Hypocalcemia<br>B) Genital fungal infections<br>C) Hypernatremia<br>D) Bradycardia<br>E) Renal stones | B |
| **54) Which of the following classes of oral diabetes drugs is paired most appropriately with its primary mechanism of action?**<br>a) DPP-4 inhibitor → inhibits breakdown of complex carbohydrates.<br>b) Glinide → increases insulin sensitivity.<br>c) Sulfonylurea → increases insulin secretion.<br>d) Thiazolidinedione → decreases hepatic gluconeogenesis. | C |

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| **1) Vitamin D is used in treatment of which of the following conditions?**<br>a) Gout<br>b) Osteoporosis<br>c) Post operative pain.<br>d) Hypercalcemia<br>e) Rheumatic fever | **B** |
| **2) The following is recombinant PTH used in treatment of osteoporosis?**<br>a) Estrogen<br>b) Bisphosphonates<br>c) Raloxifene<br>d) Prednisolone<br>e) Teriparatide | E |
| **3) One of the following is a side effect of chronic glucocorticoids administration?**<br>a.Decreased blood glucose levels<br>b.Fluid depletion<br>c.Hyperkaliemia<br>d.Osteoporosis.<br>e. Depressed blood pressure | D |
| **4) Osteonecrosis of the jaw may be an adverse effect of:**<br>A. Estrogens<br>B. Fluorides<br>C. Parathormone<br>D. Bisphosphonates<br>E. Calcitonin | **D** |
| **5) Bone resorption is accelerated by:**<br>A. Estrogens<br>B. Fluorides<br>C. Parathormone<br>D. Bisphosphonates<br>E. Calcitonin | **C** |

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| **6) Indication for risidronate administration is:**<br>A. Failure of vitamin D formation in skin<br>B. Hypoparathyroidism<br>C. Elevated skeletal turnover<br>D. Hypophosphatemia<br>E. metastatic bone dse<br>E | E |
| **7) The active metabolites of vitamin D act through a nuclear receptor to produce which of the following effects?**<br>A. Decrease the absorption of calcium from bone<br>B. Increase PTH formation<br>C. Increase renal production of erythropoietin<br>D. Increase the absorption of calcium from the GIT<br>E. Lower the serum phosphate concentration | **D** |
| **8) One of the following is the drug of choice for management of glucocorticoid□induced osteoporosis:**<br>a) Alendronate<br>d) Ketoconazole<br>b) Calcitonin<br>c) Estrogen<br>e) Vitamin D | A |
| **9) The following is true of raloxifene except:**<br>A. It acts as an estrogen agonist in bone<br>B. It exerts estrogen antagonistic action on endometrium<br>C. It increases risk of developing breast cancer<br>d. It can induce/aggravate menopausal hot flushes | C |
| **10) The patient began therapy with a nasal spray containing a protein that inhibits bone resorption. The drug contained in the nasal spray was which of the following?**<br>A. Calcitonin<br>B. Calcitriol<br>C. Cinacalcet<br>D. Cortisol<br>E. Teriparatide | A |

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| 11) **Which of the following vitamin D preparations would be the most appropriate in a patient with Poor renal function?**<br>a- Calcifediol<br>b- Calcitriol<br>c- Cholecalciferol<br>d- Ergocalciferol | B |
| 12) **Which of the following is a unique property of SERMS?**<br>(A) Act as agonists in some tissues and antagonists in other tissues<br>(B) Activate a unique plasma membrane-bound receptor<br>(C) Have both estrogenic and progestational agonist activity<br>(D) Inhibit the aromatase enzyme required for estrogen synthesis<br>(E) Produce estrogenic effects without binding to estrogen receptor | A |
| 13) **A 66-year-old woman with osteoporosis is prescribed alendronate. What is the mechanism of action of alendronate sodium?**<br>a- Inhibition of osteoclastic activity in bone<br>b- Increases reabsorption of Ca2 and Mg2<br>c- Increases production of calcitriol and dihydrotachysterol<br>d- Decreases reabsorption of phosphate, bicarbonate, amino acids, sulfate, sodium, and chloride | A |
| 14) **Which of the following conditions is an indication for the use of raloxifene?**<br>a- Chronic renal failure<br>b- Hypoparathyroidism<br>c- Intestinal Osteodystrophy<br>d- Postmenopausal Osteoporosis | D |
| 15) **A drug that decreases serum calcium level, used in osteoporosis & hypercalcemia:**<br>A. Calcitonin.<br>B. Estrogen.<br>C. Parathyroid hormone.<br>D. Prednisone. | A |

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| **16) Calcitonin is a hormone that:**<br>a) Increases calcium levels in the blood<br>b) Decreases calcium levels in the blood<br>c) Blocks the entry of calcium into cells<br>d) Promotes the release of calcium from the bon | B |
| **17) Vitamin D supplements are often prescribed to:**<br>a) Increase calcium absorption from the intestines<br>b) Inhibit the release of calcium from the bone<br>c) Block the entry of calcium into cells<br>d) Decrease calcium levels in the body | **A** |
| **18) rPTH used in osteoporosis is:**<br>a. Teriparatide<br>b. Denosumab<br>c. Calcitriol<br>d. Calciportiola | A |
| **19) Which of the following is a serious adverse effect seen with bisphosphonates?**<br>(a) Acute renal failure<br>(b) Ventricular fibrillation<br>(c) Peptic ulcer<br>(d) Anterior uveitis | A |
| **20) Denosumab, a monoclonal antibody against rank ligand is used for the treatment of:**<br>(a) Rheumatoid arthritis<br>(b) Osteoporosis<br>(c) Osteoarthritis<br>(d) Systemic lupus erthematosis | B |

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| **21) Indication for 1,25-dihydroxyvitamin D3 (calcitriol) administration is:**<br>A. Vitamin D resistance<br>B. Elevated skeletal turnover<br>C. Hypercalcemia of malignancy<br>D. Hypophosphatemia<br>E. Primary hyperparathyroidism | **D** |
| **22) Correct statements about fluoride include all of the following, EXCEPT:**<br>A. Fluoride is effective for the prophylaxis of dental caries<br>B. Fluoride is accumulated by bone and teeth, where it may stabilize the hydroxyapatite crystal<br>C. Subjects living in areas with naturally fluoridated water (1-2 ppm) had more dental caries and fewer vertebral compression fractures than subjects living in non fluoridated water areas<br>D. Chronic exposure to very high level of fluoride results in thickening of the cortex of long bones and bony exostoses. | C |
| **23) Which one of the following is most likely to be useful in the therapy of hypercalcemia?**<br>A. Calcitonin<br>B. Glucocorticoids<br>C. 1-25 dihydroxy vitamin D3<br>D. Parenteral infusion of phosphate<br>E. Thiazide diuretics | **B** |
| **24) A 34-year-old woman with ulcerative colitis has required long- term treatment with pharmacologic doses of a glucocorticoid agonist. Which of the following is a toxic effect associated with long-term glucocorticoid treatment?**<br>A. A lupus-like syndrome<br>B. Adrenal gland neoplasm<br>C. Hepatotoxicity<br>D. Osteoporosis<br>E. Precocious puberty in children | **D** |
| **25) All of the following drugs could be used for treatment of senile osteoporosis EXCEPT:**<br>a. Vitamin D.<br>b. Calcitonin.<br>c. Bisphosphonates.<br>d. Estrogen.<br>e. Corticosteroids. | E |

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| **26) The patient's condition was not sufficiently controlled with alendronate, so she began therapy with a nasal spray containing a protein that inhibits bone resorption. The drug contained in the nasal spray was which of the following?**<br>(A) Calcitonin<br>(B) Calcitriol<br>(C) Cinacalcet<br>(D) Cortisol<br>(E) Teriparatide | A |
| **27) Bisphosphonates are classified as:**<br>a) Antibiotics<br>b) Antacids<br>c) Anticoagulants<br>d) Antiresorptive agents | **D** |
| **28) Denosumab is used as a treatment option for secondary prevention of fractures in patients with:**<br>a) Rheumatoid arthritis<br>b) Hypertension<br>c) Multiple sclerosis<br>d) Breast cancer | **D** |
| **29) Teriparatide is classified as a:**<br>a) Bisphosphonate<br>b) Selective estrogen receptor modulator<br>c) Monoclonal antibody<br>d) Parathyroid hormone analog | D |
| **30) What is the first-line treatment for symptomatic hypercalcemia?**<br>A) Oral bisphosphonates<br>B) Intravenous fluids (normal saline)<br>C) Calcitonin<br>D) Corticosteroids | B |

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| **31) Denosumab is classified as a:**<br>a) Bisphosphonate<br>b) Selective estrogen receptor modulator<br>c) Monoclonal antibody<br>d) Calcium channel blocker | C |
| **32) What is the mechanism of action of denosumab in the treatment of hypercalcemia?**<br>A) Inhibits parathyroid hormone secretion<br>B) Blocks RANKL, reducing osteoclast activity<br>C) Increases renal calcium reabsorption<br>D) Enhances intestinal calcium absorption | B |
| **33) What is the mechanism of action of cinacalcet?**<br>A. It inhibits calcium absorption in the intestines.<br>B. It acts as a calcimimetic, increasing the sensitivity of calcium-sensing receptors in the parathyroid gland.<br>C. It blocks the action of parathyroid hormone.<br>D. It stimulates calcitonin release. | B |
| **34) Raloxifene is classified as a:**<br>a) Bisphosphonate<br>b) Selective Estrogen Receptor Modulator (SERM)<br>c) Monoclonal antibody<br>d) Calcium-sensing receptor agonist<br>e) Anabolic steroid | B |
| **35) Which treatment is first-line for moderate hypercalcemia of malignancy?**<br>a) Intravenous normal saline and bisphosphonates<br>b) Oral glucocorticoids<br>c) Thiazide diuretics<br>d) Estrogen replacement<br>e) Fluoride supplements | A |

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| **36) Which drug acts as a calcium-sensing receptor agonist to reduce PTH secretion?**<br>a) Denosumab<br>b) Cinacalcet<br>c) Sodium fluoride<br>d) Furosemide<br>e) Thiazides | **B** |
| **37) What is the primary mechanism of bisphosphonates in treating osteoporosis?**<br>a) Stimulate osteoblast activity<br>b) Inhibit osteoclast apoptosis<br>c) Bind to hydroxyapatite and induce osteoclast apoptosis<br>d) Increase intestinal calcium absorption<br>e) Block RANKL signaling | C |

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| 1) **A 65-year-old woman with postmenopausal atrophy and hot flashes is prescribed with estrogen therapy by her primary care physician. She has a family history of endometrial cancer and is concerned about her risk for this condition. Which of the following statements is true?**<br>(A) Breast cancer is unlikely<br>(B) Postmenopausal bleeding is unlikely<br>(C) The risk can be offset by adding a proestrogen product<br>(D) Thromboembolic events are unlikely | C |
| 2) **A 35-year-old woman is experiencing infertility due to anovulation. Which agent is most appropriate for this patient?**<br>A. Clomiphene<br>B. Ospemifene<br>C. Raloxifene<br>D.Mifepristone<br>E. Letrozole | **A** |
| 3) **A 70-year-old woman is being treated with raloxifene for osteoporosis. Which is a concern with this therapy?**<br>A. Breast cancer<br>B. Endometrial cancer<br>C. Venous thrombosis<br>D. Hypercholesterolemia | C |
| 4) **A progestin is included in regimens for HRT to prevent which of the following adverse effects?**<br>(A) breast cancer<br>(B) endometrial cancer<br>(C) myocardial infarction<br>(D) stroke<br>(E) elevated cholesterol levels | B |
| 5) **Raloxifene is classified as a:**<br>a) Bisphosphonate<br>b) Selective Estrogen Receptor Modulator (SERM)<br>c) Monoclonal antibody<br>d) Calcium-sensing receptor agonist<br>e) Anabolic steroid | B |

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| **6) The following is true of raloxifene except:**<br>A. It acts as an estrogen agonist in bone<br>B. It exerts estrogen antagonistic action on endometrium<br>C. It increases risk of developing breast cancer<br>d. It can induce/aggravate menopausal hot flushes | C |
| **7) Which of the following is a unique property of SERMS?**<br>(A) Act as agonists in some tissues and antagonists in other tissues<br>(B) Activate a unique plasma membrane-bound receptor<br>(C) Have both estrogenic and progestational agonist activity<br>(D) Inhibit the aromatase enzyme required for estrogen synthesis<br>(E) Produce estrogenic effects without binding to estrogen receptor | A |
| **8) Which of the following conditions is an indication for the use of raloxifene?**<br>a- Chronic renal failure<br>b- Hypoparathyroidism<br>c- Intestinal Osteodystrophy<br>d- Postmenopausal Osteoporosis | **D** |
| **9) The most important indication of mifepristone is:**<br>a) Endometriosis<br>b) Cushing syndrome<br>c) First term abortion<br>d) Second term abortion<br>e) Contraception | C |
| **10) Which of the following is the mechanism of action of Mifepristone in medical abortion?**<br>a) Antagonize progesterone receptor in uterus<br>b) Antagonize estrogen receptor in uterus<br>c) Antagonize progesterone and estrogen receptor in uterus<br>d) Antagonize oxytocin receptor in uterus<br>e) Antagonize androgen receptor in uterus | A |

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| 11) **A 54-year-old woman presents to the primary care clinic with hot flashes and irregular menstrual cycles. These symptoms started about 3 months ago and have worsened recently. She has always had regular menstrual cycles until 3 months ago. She would like to start hormone replacement therapy but estrogen only. What is a common side effect of unopposed estrogen replacement therapy**?<br>A) Depression<br>B) Increased risk of endometrial cancer<br>C) Osteoporosis<br>D) Rash<br>E) Vaginal atrophy | B |
| 12) **50 year old woman with positive mammogram undergo lumpectomy and small carcinoma is removed. Biochemical analysis of cancer reveal presence of estrogen and progesterone receptor. After this procedure, she will probably receive one of the following drugs:**<br>a) Danazol<br>b) Flutamide<br>c) Leuprolide<br>d) Mifepristone<br>e) Tamoxifine | E |
| 13) **Finasteride has efficacy in prevention of male pattern baldness by virtue of its ability to do which of the following:**<br>a) Competitive antagonism of androgen receptor<br>b) Decrease the release of gonadotropin<br>c) Increase the serum conc of SHBG<br>d) Inhibit synthesis of testosterone<br>e) Reduce production of dihydrotestosterone | E |
| 14) **Raloxifine is preferred than HRT for treatment of postmenpausal osteoporosis in the following conditions:**<br>a) Previous hysterectomy<br>b) Recurrent vaginitis<br>c) Rheumatoid arthritis<br>d) Strong family history of breast cancer<br>e) Troublesome hot flushes | D |

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| **15) Clomephene induce ovulation by :**<br>a) Diminished ER mediated negative feedback on pituitary<br>b) Increase action of ER in hypothalamus<br>c) Increase action of ER in ovary<br>d) Increase amount of ER | A |
| **16) The following is true of raloxifene except:**<br>a) It acts as an estrogen agonist in bone<br>b) It everts estrogen antagonistic action on endometrium<br>c) It increases risk of developing breast cancer<br>d) It can induce/aggravate menopausal hot flushes | C |
| **17) Which of the following drugs is an antiprogestin:**<br>a) Gemeprost<br>b) Vegestrol<br>c) Mifepristone<br>d) Tamoxifen | C |
| **18) Finasteride acts by:**<br>a) Blocking testosterone receptors in the prostate gland<br>b) Reducing testosterone secretion from testes<br>c) Reducing LH secretion from pituitary<br>d) Lowering circulating as well as prostatic dihydrotestosterone concentration | **D** |
| **19) Estrogen therapy in postmenopausal women has been implicated in increasing the risk of the following disorders except:**<br>a) Gall stones<br>b) Osteoporosis<br>c) Endometrial carcinoma<br>d) Breast cancer | B |

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| **20) The following is an orally active ovulation inducing agent:**<br>a) Menotropin<br>b) Mifepristone<br>c) Danazol<br>d) Clomiphene citrate | **D** |
| **21) The primary indication of tamoxiphen citrate is:**<br>a) Female infertility<br>b) Endometrial carcinoma<br>c) Carcinoma breast<br>d) Endometriosis | C |
| **22) Which of the following is a steroid 5 $\alpha$ -reductase inhibitor that has been found useful in benign prostatic hypertrophy and male pattern baldness:**<br>a) Flutamide<br>b) Finasteride<br>c) Prazosin<br>d) Minoxidil | **B** |
| **23) Estrogen receptors are:**<br>a) G-protein coupled receptors.<br>b) Nuclear receptors.<br>c) Channel receptors.<br>d) Receptors linked to tyrosine kinase. | B |
| **24) One of the following is not adverse effect of estrogen:**<br>a) Tenderness in the breasts.<br>b) Salt and water retention with edema<br>c) Hyperkalemia.<br>d) Increased risk of thromboembolism | C |
| **25) Clomiphene is:**<br>a) Selective Estrogen Receptor Modulators (SERM)<br>b) Pure estrogen receptor antagonists<br>c) Synthesis inhibitors<br>d) Selective blocker of estrogen receptors in the pituitary | D |

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| **26) Finasteride:**<br>a) is used in treatment of prostatic cancer.<br>b) is anti –progestin.<br>c) induces ovulation<br>d) is a 5a-reductase inhibitor. | D |
| **27) Concerning the mechanism of tamoxifen :**<br>a) competes with progesterone for binding to same receptor<br>b) competes with testosterone for binding to same receptor<br>c) competes with estrogen for binding to the estrogen receptor in breast tissue<br>d) all of the above | C |
| **28) the most frequent adverse effect of tamoxifen is :**<br>a) Hot flushes and nausea<br>b) Hyperacidity<br>c) Headache<br>d) None of the above | A |
| **29) Raloxifene is associated with an increased risk of:**<br>A. Endometrial cancer<br>B. Venous thrombosis<br>C. Hypercholesterolemia<br>D. Breast cancer<br>E. Ovarian enlargement | B |
| **30) Which of the following is a metabolic effect of estrogen?**<br>A. Decrease in blood triglycerides<br>B. Reduction in bone mass<br>C. Inhibition of platelet adhesiveness<br>D. Salt and water retention<br>E. Lowering blood glucose | **D** |
| **31) A 45 -year-old woman with advanced ER+ breast cancer reports severe hot flashes.Which drug is contraindicated due to its estrogen-agonist effect on the uterus?**<br>A. Letrozole<br>B. Tamoxifen<br>C. Exemestane<br>D. Raloxifene<br>E. Clomiphene | B |

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| 32) **A 60-year-old woman on estrogen-only HRT develops endometrial hyperplasia. Which agent should be added to her regimen to reduce this risk?**<br>A. Tamoxifen<br>B. Progestin<br>C. Raloxifene<br>D. Letrozole<br>E. Mifepristone | B |
| 33) **A 55-year-old postmenopausal woman with estrogen receptor-positive breast cancer completes 2 years of tamoxifen therapy. Which drug is now indicated for continued treatment?**<br>A. Medroxyprogesterone<br>B. Exemestane<br>C. Clomiphene<br>D. Estradiol<br>E. Mifepristone | B |
| 34) **A 68-year-old postmenopausal woman with osteoporosis is prescribed a SERM to preserve bone density. She has a history of hypertension. Which adverse effect is most concerning with this therapy**?<br>A. Endometrial cancer<br>B. Venous thrombosis<br>C. Hypercholesterolemia<br>D. Ovarian enlargement<br>E. Hot flashes | B |
| 35) **55 year old female took tamoxifen for her breast cancer, she complains vaginal bleeding which is best explanation :**<br>a) Has estrogen agonist on breast and uterus leading to endometrial hyperplasia<br>b) Has estrogen antagonist in breast and uterus leading to endometrial loss<br>c) Has antagonist effect on breast and agonist effect on uterus<br>d) Has no effect on uterus | C |

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| **1)** **A 60-year-old man is found to have a prostate lump and an elevated prostate-specific antigen (PSA) blood test. Magnetic resonance imaging suggests several enlarged lymph nodes in the lower abdomen, and an x-ray reveals 2 radiolucent lesions in the bony pelvis. This patient is likely to be treated with which of the following drugs?**<br>(A) Anastrozole<br>(B) Desogestrel<br>(C) Flutamide<br>(D) Methyltestosterone<br>(E) Oxandrolone | C |
| **2)** **Finasteride has efficacy in prevention of male pattern baldness by virtue of its ability to do which of the following:**<br>a) Competitive antagonism of androgen receptor<br>b) Decrease the release of gonadotropin<br>c) Increase the serum conc of SHBG<br>d) Inhibit synthesis of testosterone<br>e) Reduce production of dihydrotestosterone | E |
| **3)** **Finasteride acts by:**<br>a) Blocking testosterone receptors in the prostate gland<br>b) Reducing testosterone secretion from testes<br>c) Reducing LH secretion from pituitary<br>d) Lowering circulating as well as prostatic dihydrotestosterone concentration | **D** |
| **4)** **Which of the following is a steroid 5 $\alpha$ -reductase inhibitor that has been found useful in benign prostatic hypertrophy and male pattern baldness:**<br>a) Flutamide<br>b) Finasteride<br>c) Prazosin<br>d) Minoxidil | B |

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| 5) **Regarding cyproterone All the following are true EXCEPT**:<br>a) It is partial agonist at androgen receptors.<br>b) It is used in treatment of prostatic cancer.<br>c) It is a 5a-reductase inhibitor.<br>d) It depresses ovulation. | C |
| **6) Finasteride:**<br>a) is used in treatment of prostatic cancer.<br>b) is anti –progestin.<br>c) induces ovulation<br>d) is a 5a-reductase inhibitor. | **D** |
| **7) Thalidomide-induced phocomelia that belongs to Pregnancy Category :**<br>A. A<br>B. D<br>C. X<br>D. C<br>E. B | C |
| **8) The most dangerous period of pregnancy for drug adverse effect:**<br>A. 0-14 day<br>B. 11-20 weeks<br>C. 3-10 weeks<br>D. 21-30 weeks<br>E. 31-40 weeks | C |
| **9) One of the following can facilitate placental drug transfer to the fetus:**<br>a) Large MW of drug<br>b) High lipid solubility of drug<br>c) lonization of drug<br>d) High plasma protein binding of drug<br>e) High Maternal blood pressure | B |

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| **10) A 25-year-old pregnant woman begins taking a new drug (Drug X). Drug X has been found to have teratogenic effects in animal models, but no adequate human studies have been done. Under which FDA pregnancy category would Drug X fall?**<br>a) Category A<br>b) Category B<br>c) Category C<br>d) Category D<br>e) Category X | C |
| **11) A 33-year-old pregnant woman begins taking a new drug Drug X for morning sickness. Drug X has not been found to have adverse maternal or fetal effects in animal models, but no human studies have been done. Under which FDA Pregnancy Category would Drug X fall?**<br>a) Category A<br>b) Category B<br>c) Category C<br>d) Category D<br>e) Category X | B |
| **12) The chances of fetal malformation with a teratogenic drug is maximum:**<br>a) During first trimester of pregnancy<br>b) During second trimester of pregnancy<br>c) During third trimester of pregnancy<br>d) When given just prior to the labor<br>e) When given just after the labor | A |
| **13) Pregnancy drug category D characterized by:**<br>a) Animal studies have shown a risk to the fetus but there are no adequate studies in humans<br>b) Drug proved to be safe in animal and human<br>c) There is evidence of fetal risk but benefits are thought to outweigh the risks<br>d) Studies in animals or humans demonstrate fetal abnormalities<br>e) Animal studies have not shown a risk to the fetus but there are no adequate studies in human | C |

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| **14) Thalidomide-induced phocomelia that belongs to**<br>a- Pregnancy Category A<br>b- Pregnancy Category D<br>c- Pregnancy Category X<br>d- Pregnancy Category C<br>e- Pregnancy Category B | C |
| **15) Flutamide treats prostate cancer by:**<br>A) Inhibiting testosterone synthesis<br>B) Blocking androgen receptors<br>C) Converting testosterone to estradiol<br>D) Enhancing DHT production<br>E) Stimulating 5 $\alpha$ -reductase | B |
| **16) Androgen therapy should be avoided in a patient with:**<br>A) Primary hypogonadism<br>B) Liver cirrhosis<br>C) Osteoporosis<br>D) Asthma<br>E) Breast cancer | **B** |
| **17) Virilizing effects in females are associated with:**<br>A) Estrogens<br>B) Progestins<br>C) Androgens<br>D) Aromatase inhibitors<br>E) SERMs | C |
| **18) Anabolic steroids are indicated for:**<br>A) Hypertension<br>B) Chronic wasting associated with HIV<br>C) Type 2 diabetes<br>D) Asthma exacerbation<br>E) Osteoporosis | B |

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| **19) Which of the following is a synthetic androgen?**<br>A) Androsterone<br>B) Testosterone<br>C) Testosterone propionate<br>D) Dihydrotestosterone<br>E) Estradiol | C |
| 20) **A contraindication for androgen therapy is**:<br>A) Hypertension<br>B) Benign prostatic hyperplasia<br>C) Diabetes mellitus<br>D) Asthma<br>E) Migraine | B |
| **21) A 12-year-old boy presents with premature closure of epiphyseal plates and accelerated bone maturation. His mother reveals he received injections for "growth enhancement." Which drug class is implicated?**<br>A) Aromatase inhibitors<br>B) Anabolic steroids<br>C) SERMs<br>D) Progestins<br>E) Antihistamines | **B** |
| **22) A 40-year-old male with metastatic prostate cancer is prescribed a drug that competitively blocks androgen receptors. Which agent is most appropriate?**<br>A) Finasteride<br>B) Cyproterone acetate<br>C) Flutamide<br>D) Testosterone propionate<br>E) Nandrolone | C |
| 23) **A 65-year-old male with benign prostatic hyperplasia (BPH) complains of urinary retention. Imaging confirms prostate enlargement. Which drug inhibits the conversion of testosterone to DHT, reducing prostate growth**?<br>A) Flutamide<br>B) Finasteride<br>C) Cyproterone acetate<br>D) Methyltestosterone<br>E) Oxandrolone | B |

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| 24) **Phenytoin use during pregnancy is associated with which teratogenic effect**?<br>A. Phocomelia<br>B. Hare lip<br>C. Neural tube defects<br>D. Cardiac malformations | B |
| **25) To minimize teratogenic risk, it is recommended to:**<br>A. Use drugs liberally in the first trimester<br>B. Choose drugs with proven safety<br>C. Prefer long-term drug courses<br>D. Ignore risk/benefit ratios | B |
| **26) During pregnancy, renal excretion of drugs is likely to:**<br>A. Decrease<br>B. Increase<br>C. Remain unchanged<br>D. Fluctuate unpredictably | B |
| **27) Increased plasma volume during pregnancy leads to:**<br>A. Higher concentrations of water-soluble drugs<br>B. Lower concentrations of water-soluble drugs<br>C. No effect on drug concentrations<br>D. Increased protein binding of drugs | B |
| **28) Pregnancy drug category A characterized by**<br>a- Animal studies have not shown a risk to the fetus but there are no adequate studies in human<br>b- Drug proved to be safe in animal and human<br>c- Animal studies have shown a risk to the fetus but there are no adequate studies in humans<br>d- There is evidence of fetal risk, but benefits outweigh the risks.<br>e- Studies in animals or humans demonstrate fetal abnormalities. | B |

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| **29) A 25-year-old male bodybuilder presents with jaundice, nausea, and abdominal pain. Lab tests reveal elevated liver enzymes (ALT/AST) and conjugated bilirubin. He admits to using injectable substances to "gain muscle mass faster." Which drug is most likely responsible for his symptoms?**<br>A) Finasteride<br>B) Testosterone propionate<br>C) Nandrolone<br>D) Spironolactone<br>E) Cyproterone acetate | **C** |

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| **1) What is the main mechanism of action of progestin-only pills?**<br>a. Thickening of cervical mucus<br>b. Stimulation of ovulation<br>C.Suppression of menstruation<br>d. Increase in estrogen levels<br>e. Inhibition of follicle-stimulating hormone | A |
| **2) 32-year-old woman presents to your office to discuss contraception. She wants to stop her progestin-only pill (mini pill) because her cycles are irregular on it. You recommend a combination pill to help regulate her cycle.You also mention that with estrogen added, the contraceptive efficacy is also higher. Which of the following is the primary contraceptive effect of the estrogenic component?**<br>A. Conversion of ethinyl estradiol to mestranol<br>B. Atrophy of the endometrium<br>C. Suppression of cervical mucus secretion<br>D. Suppression of luteinizing hormone (LH) secretion<br>E. Suppression of follicle-stimulating hormone (FSH) secretion | E |
| **3) A 36-year-old woman requests birth control. She has no medical conditions, and she smokes one pack of cigarettes per day. Which would be the most appropriate to recommend?**<br>A. Vaginal contraceptive ring<br>B. Transdermal contraceptive patch<br>C. Progestin-only "mini-pill"<br>D. Combination oral contraceptive pill | C |
| **4) A 25-year-old woman is using injectable medroxyprogesterone acetate as a method of contraception. Which adverse effect is a concern if she wishes to use this therapy long-term?**<br>A. Hyperkalemia<br>B. Male pattern baldness<br>C. Osteoporosis<br>D. Weight loss | C |

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| **5) Emergency contraceptive pills are most effective when taken within how many hours after unprotected intercourse?**<br>A) 24 hours<br>B) 48 hours<br>C) 72 hours<br>D) 96 hours<br>E) 120 hours | C |
| **6) The primary mechanism of action of combined hormonal contraceptives is:**<br>A) Thickening cervical mucus<br>B) Inducing endometrial atrophy<br>C) Inhibiting ovulation via suppression of LH and FSH<br>D) Blocking sperm transport through the fallopian tubes<br>E) Preventing implantation of the fertilized egg | C |
| **7) A 30-year-old breastfeeding mother desires contraception that does not affect lactation.Which option is most appropriate?**<br>A) Combined oral contraceptives<br>B) Progestin-only pills (POPs)<br>C) Transdermal patch<br>D) Vaginal ring<br>E) Emergency contraceptive pills | B |
| **8) Which is the most effective form of contraception with typical use?**<br>A. Combined oral contraceptives<br>B. Progestin-only "mini-pill"<br>C. Depot medroxyprogesterone acetate injection<br>D. Subdermal progestin implant | D |
| **9) The estrogen that is used in most combined hormonal contraceptives is:**<br>a- Clomiphene<br>b- Ethinyl estradiol<br>c- Estrone<br>d- Norgestrel | B |

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| **10) What is a notable side effect of taking post-coital pills?**<br>A) Severe acne<br>B) Nausea and vomiting<br>C) Weight loss<br>D) Increased risk of thromboembolism | B |
| **11) What is a common side effect of medroxyprogesterone acetate?**<br>A) Increased risk of thromboembolism<br>B) Weight gain<br>C) Severe headache<br>D) Skin rash | B |
| **12) What serious side effect can be associated with the use of hormonal contraceptives, especially in smokers over 35?**<br>A) Osteoporosis<br>B) Thromboembolic events<br>C) Acne<br>D) Gastrointestinal issues | B |
| **13) How long is the vaginal ring typically left in place during each cycle?**<br>A) 1 week<br>B) 2 weeks<br>C) 3 weeks<br>D) 4 weeks<br>E) Continuously | C |
| **14) How frequently is medroxyprogesterone acetate administered as an injectable contraceptive?**<br>A) Monthly<br>B) Every 3 months<br>C) Every 6 months<br>D) Annually<br>E) Every 5 years | **B** |

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| **15) Which drug reduces contraceptive efficacy by decreasing intestinal absorption of pills?**<br>A) Rifampin<br>B) Tetracycline<br>C) Paracetamol<br>D) Paraffin oil<br>E) Cephalosporin | **D** |
| **16) Combined hormonal contraceptives reduce the risk of which cancer?**<br>A) Breast cancer<br>B) Ovarian cancer<br>C) Cervical cancer<br>D) Lung cancer<br>E) Liver cancer | B |
| **17) The primary mechanism of the copper IUD is to:**<br>A) Inhibit ovulation<br>B) Thicken cervical mucus<br>C) Prevent fertilization<br>D) Induce endometrial atrophy<br>E) Block sperm transport | C |
| **18) How often should the transdermal patch be replaced during the active cycle?**<br>A) Daily<br>B) Weekly<br>C) Monthly<br>D) Every 3 months<br>E) Annually | B |
| **19) Emergency contraceptive pills are most effective when taken within how many hours after unprotected intercourse?**<br>A) 24 hours<br>B) 48 hours<br>C) 72 hours<br>D) 96 hours<br>E) 120 hours | C |

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| **20) What is a common adverse effect specific to progestin-only contraceptives?**<br>A) Hypertension<br>B) Irregular bleeding<br>C) Migraine headaches<br>D) Cholestatic hepatitis<br>E) Gallstones | B |
| **21) Which hormonal contraceptive is classified as a long-acting reversible contraceptive (LARC)?**<br>A) Combined oral contraceptive pills<br>B) Vaginal ring<br>C) Transdermal patch<br>D) Progestin implants<br>E) Progestin-only pills (POPs) | D |
| **22) A 25-year-old woman using a progestin implant for 6 months reports frequent irregular spotting. What is the most likely explanation?**<br>A) Implant failure<br>B) Normal side effect of progestin-only contraceptives<br>C) Pregnancy<br>D) Ovarian cyst rupture<br>E) Drug interaction with antibiotics | **B** |
| **23) Which regimen describes the "mini-pill" (progestin-only pills)?**<br>A) Taken daily with a 7-day placebo phase<br>B) Taken daily without interruption<br>C) Taken weekly<br>D) Taken only after unprotected intercourse<br>E) Taken monthly | B |
| **24) How long is the active pill phase in a standard combined oral contraceptive regimen?**<br>A) 7 days<br>B) 14 days<br>C) 21–24 days<br>D) 28 days<br>E) 30 days | C |

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| **25) Concurrent use of the following drug is likely to cause failure of oral contraception:**<br>a. Isoniazid<br>b. Rifampicin<br>c. Cimetidine<br>d. Propranolol | B |

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| **1) Which one of the following cases is indication for using methylergometrine?**<br>A) Cervical ripening.<br>B) Control antepartum hemorrhage.<br>C) Control postpartum hemorrhage.<br>D) Induction of labor.<br>E) Prolactin suppression. | C |
| **2) A pregnant patient at term presents for induction of labor. The best pharmacological approach would be administration of:**<br>A. PGE until the woman is in active labor.<br>B. PGE with concurrent intravenous infusion of oxytocin.<br>C. Oxytocin intramuscularly.<br>D. PGE until the cervix has ripened followed by oxytocin.<br>E. Ergonovine intramuscularly | D |
| **3) The following drugs used in the management of post-partum hemorrhage except:**<br>a) Oxytocin<br>b) Ergometrine<br>c) Mifeprostone<br>d) Carboprost | C |
| **4) Adverse effects of Magnesium Sulphate can be reversed by which one of the following?**<br>A. Calcium<br>B. Magnesium<br>C. Phosphorus<br>D. Potassium<br>E. Sodium | A |
| **5) The most important indication of mifepristone is:**<br>a) Endometriosis<br>b) Cushing syndrome<br>c) First term abortion<br>d) Second term abortion<br>e) Contraception | **C** |

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| **6) Oxytocin is primarily used in which one of the Following situations**<br>A) Control antipartum hemorrhage<br>B) Decreasing breast milk production<br>C) Increasing sperm count<br>D) Inducing labor contraction<br>E) Treating hypotension | D |
| **7) Which statement is true about atosiban:**<br>A. Is oxytocin receptor antagonist<br>B. Is Progesterone receptor antagonist<br>C. Is least effective in inhibition of premature uterine contraction<br>D. Is an anti-tocolytic drug | A |
| **8) Misoprostol can be used for:**<br>a) Prolong pregnancy<br>b) Cervical ripening<br>c) Increase breast milk production<br>d) Control antepartum hemorrhage<br>e) Prevention of abortion | B |
| **9) Which of the following is not tocolytic:**<br>a) Nifedepine<br>b) Ritodrine<br>c) Atosiban<br>d) Mg sulfate<br>e) Methyle ergometrine | **E** |
| **10) Mechanism of action of atosiban:**<br>a) Stimulate oxytocine receptor<br>b) Stimulate estrogen receptor<br>c) Stimulate progesterone receptor<br>d) Block oxytocine receptor<br>e) Block estrogen receptor | D |

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| **11) Beta agonist used for stopping premature labor?**<br>a) carvidolol<br>b) terbutaline<br>c) pindolol<br>d) nadolol | B |
| **12) Indomethacin can be used for:**<br>A) Cervical ripening<br>B) control antepartum haemorrhage<br>C) control post partum haemorrhage<br>D) induction of labor<br>E) dysmenorrhea | E |
| **13) What is the primary goal of using tocolytics, such as beta agonists, in preterm labor management?**<br>A) To eliminate the risk of premature birth<br>B) To allow time for corticosteroids to enhance fetal lung maturity<br>C) To induce labor quickly<br>D) To prevent maternal complications | B |
| **14) What is a potential fetal complication associated with the use of indomethacin in the third trimester?**<br>A) Fetal hypoglycemia<br>B) Premature closure of the ductus arteriosus<br>C) Neural tube defects<br>D) Heart murmurs | **B** |
| **15) Carboprost is contraindicated in women with a history of cesarean section due to the risk of:**<br>A. Hypotension<br>B. Uterine rupture<br>C. Tachycardia<br>D. Hyponatremia<br>E. Pulmonary edema | **B** |

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| **16) Which oxytocic drug is administered as a nasal spray to stimulate milk let-down?**<br>A. Ergometrine<br>B. Oxytocin<br>C. Dinoprostone<br>D. Mifepristone<br>E. Carboprost | B |
| **17) Which tocolytic is associated with the fetal adverse effect of premature closure of the ductus arteriosus?**<br>A. Magnesium Sulfate<br>B. Indomethacin<br>C. Atosiban<br>D. Nifedipine<br>E. Hydroxyprogesterone caproate | B |
| **18) Which drug is used to "ripen" the cervix by promoting prostaglandin synthesis?**<br>A. Oxytocin<br>B. Mifepristone<br>C. Misoprostol<br>D. Ergometrine<br>E. Carboprost | C |
| **19) Ergometrine is contraindicated before delivery of the placenta because it may cause:**<br>A. Hypotension<br>B. Uterine rupture<br>C. Retained placenta due to severe uterine spasm<br>D. Neonatal respiratory distress<br>E. remature closure of the ductus arteriosus | C |
| **20) Which drug is a competitive blocker of progesterone receptors, used in medical abortion?**<br>A. Oxytocin<br>B. Ergometrine<br>C. Mifepristone<br>D. Carboprost<br>E. Dinoprostone | C |

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| **21) The primary use of dinoprostone (PGE2) is:**<br>A. Treating postpartum hemorrhage<br>B. Inducing labor by ripening the cervix<br>C. Preventing preterm birth<br>D. Reducing menstrual cramps<br>E. Stimulating milk ejection | B |
| **22) Which tocolytic is contraindicated in patients with asthma due to its risk of bronchoconstriction?**<br>A. Nifedipine<br>B. Indomethacin<br>C. Terbutaline<br>D. Magnesium Sulfate<br>E. Atosiban | C |
| **23) Atosiban acts as a tocolytic by:**<br>A. Blocking calcium channels<br>B. Inhibiting prostaglandin synthesis<br>C. Antagonizing oxytocin receptors<br>D. Activating $\beta$ 2-adrenergic receptors<br>E. Depleting intracellular calcium stores | C |
| **24) Which drug combination is used for medical abortion in the first trimester?**<br>A. Oxytocin + Carboprost<br>B. Mifepristone + Misoprostol<br>C. Ergometrine + Dinoprostone<br>D. Nifedipine + Indomethacin<br>E. Atosiban + Terbutaline | B |
| **25) Magnesium sulfate reduces uterine contractions primarily by:**<br>A. Blocking $\beta$ -adrenergic receptors<br>B. Inhibiting calcium influx into myometrial cells<br>C. Increasing cAMP levels<br>D. Antagonizing oxytocin receptors<br>E. Suppressing prostaglandin synthesis | B |

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| **26) The primary indication for using tocolytics is:**<br>A. Treatment of postpartum hemorrhage<br>B. Management of preeclampsia<br>C. Suppression of preterm labor before 37 weeks<br>D. Induction of labor at term<br>E. Medical termination of pregnancy | C |
| 27) **Which tocolytic drug is a peptide analogue of oxytocin that acts as a receptor antagonist**?<br>A. Terbutaline<br>B. Indomethacin<br>C. Atosiban<br>D. Nifedipine<br>E. Ritodrine | C |
| **28) The most appropriate time to administer ergometrine during labor is:**<br>A. During the first stage of labor<br>B. At the beginning of the second stage<br>C. At the time of placenta delivery (third stage)<br>D. 24 hours postpartum<br>E. Prior to cervical ripening | C |
| **29) Which prostaglandin analogue is specifically mentioned for use in postpartum hemorrhage unresponsive to oxytocin and ergometrine?**<br>A. Misoprostol<br>B. Dinoprostone<br>C. Gemeprost<br>D. Carboprost<br>E. Alprostadil | **D** |
| **30) A 40-year-old woman with severe preeclampsia at 32 weeks gestation develops eclamptic seizures.Which drug is MOST CRITICAL for seizure management?**<br>A. Oxytocin<br>B. Magnesium sulfate<br>C. Nifedipine<br>D. Ergometrine<br>E. Misoprostol | B |