

All State NHM/AIIMS/ESIC/PGI Pharmacist Exam Planner Chapterwise Solved Papers

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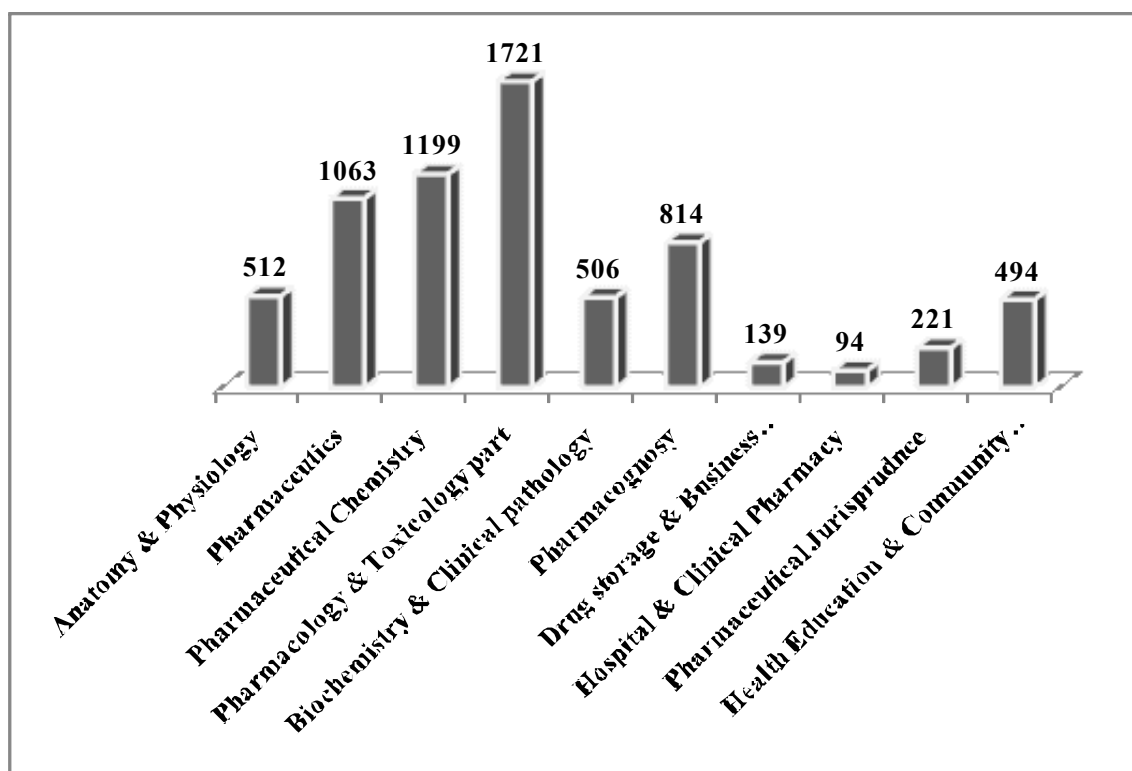
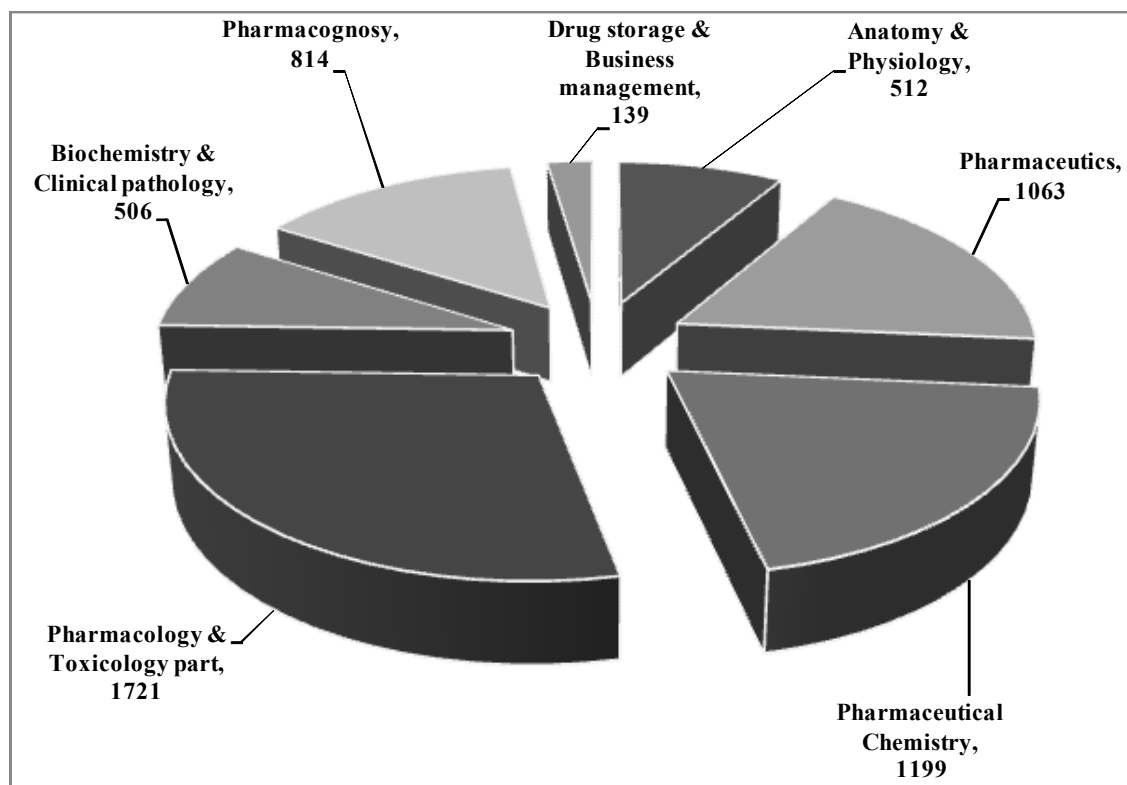
Pharmacist/JR Pharmacist Previous Year Exam Papers Analysis Chart

S.No.	Papers	Organized Year	Total Question
1.	Safdarjung Pharmacist Mains	21.11.2023	80
2.	AMC Pharmacist	05.11.2023	60
3.	UPSSSC Pharmacist	26.03.2023	35
4.	Lucknow Cantonment Board Pharmacist	05.02.2023	50
5.	MPSC Pharmacist	08.02.2023	100
6.	UP NHM Pharmacist	29.12.2022	80
7.	UP NHM Pharmacist	28.12.2022	80
8.	Kerala PSC Pharmacist Gr. II	27.10.2022	100
9.	HPSSC Pharmacist	22.08.2022	120
10.	MP NHM Pharmacist (Contractual)	04.08.2022	80
11.	AMC Pharmacist	15.05.2022	90
12.	GPSSB Jr. Pharmacist	08.05.2022	120
13.	HPSSC Pharmacist	14.05.2022	120
14.	GPAT	09.04.2022	125
15.	Kerala PSC Pharmacist Gr. III	22.12.2021	100
16.	VSSC Pharmacist - A	07.11.2021	80
17.	GMC Pharmacist	08.08.2021	60
18.	Gujarat JMC Jr. Pharmacist	19.06.2021	50
19.	Gujarat VMC Pharmacist	28.03.2021	50
20.	GPSC Associate Professor Pharmacist	11.02.2021	200
21.	GPAT	27.02.2021	125
22.	Kerala PSC Pharmacist Gr. II	04.01.2021	100
23.	GPSC Asst. Professor Pharmacist	23.01.2021	170
24.	HPSSC Pharmacist	12.12.2020	120

25.	Kerala PSC Pharmacist Gr. II	04.11.2020	100
26.	NCL Pharmacist	08.11.2020	70
27.	GSSSB Sr. Pharmacist	07.01.2020	100
28.	GPAT	28.01.2020	125
29.	DSSSB Pharmacist	01.11.2019	100
30.	RRB Pharmacist Gr. III	21.07.2019	70
31.	RRB Pharmacist Gr. III	19.07.2019	80
32.	TNPSC Pharmacist (degree)	27.06.2019	200
33.	TNPSC Drugs inspector	27.06.2019	200
34.	TNPSC Drugs inspector	27.06.2019	200
35.	ESIC Delhi Pharmacist	26.02.2019 (Shift-I)	100
36.	ESIC Pharmacist	26.02.2019(Shift-II)	100
37.	GPAT	28.01.2019	125
38.	Gujarat BMC Pharmacist	30.12.2018	50
39.	CGHS Delhi Pharmacist	26.12.2018	50
40.	HPSSC Pharmacist	19.08.2018	120
41.	CGHS Hyderabad Pharmacist	27.06.2018	60
42.	Kerala PSC Pharmacist Gr. II	01.06.2018	80
43.	TNPSC Pharmacist (degree)	21.02.2018	200
44.	GSSSB Jr. Pharmacist	18.02.2018	100
45.	CGHS Pharmacist	08.01.2018	45
46.	AIIMS Delhi Pharmacist	2018	135
47.	GPAT	2018	125
48.	BSSC Pharmacist	2018	100
49.	VSSC Pharmacist - A	10.12.2017	80
50.	Kerala PSC Pharmacist Gr. II	12.07.2017	80
51.	Kerala PSC Pharmacist Gr. II	18.05.2017	80
52.	MP Vyapam Pharmacist	16.04.2017 (Shift-I)	75

53.	MP Vyapam Pharmacist	16.04.2017 (Shift-II)	75
54.	MP Vyapam Pharmacist	16.04.2017 (Shift-III)	50
55.	GPAT	2017	125
56.	Kerala PSC Pharmacist Gr. II	01.08.2016	80
57.	ESIC Pharmacist	22.05.2016	100
58.	ESIC Delhi Pharmacist	19.03.2016	100
59.	MPSC drug inspector	21.02.2016	90
60.	GPAT	2016	125
61.	Kerala PSC Pharmacist Gr. II	29.10.2015	80
62.	Kerala PSC Asst. Pharmacist	19.06.2015	60
63.	RRB Pharmacist Gr. III	23.06.2015	70
64.	DSSSB Pharmacist	26.04.2015	100
65.	Kerala PSC Pharmacist Gr. II	31.01.2015	80
66.	GPAT	2015	125
67.	Kerala PSC Pharmacist Gr. II	05.09.2014	80
68.	ESIC Gujarat Jr. Pharmacist	31.08.2014	80
69.	MPSC Pharmacist	15.04.2014	90
70.	CGHS Hyderabad Pharmacist	2013	100
71.	GPAT	2013	125
72.	UP NHM Pharmacist	2013	100
73.	RUSH Pharmacist	16.06.2012	80
74.	GPAT	2012	140
75.	GPAT	2010	100
76.	TNPSC Drugs inspector (Pharmacy)	26.07.2009	200
77.	MPSC drug inspector	05.09.2008	120
Total			7720

Trend Analysis of Previous Year Exams Papers Through Bar Graph and Pie Chart



Anatomy & Physiology

1. Select the correct name for cranial nerve -X

- (a) Olfactory (b) Optic
(c) Facial (d) Vagus

Lucknow Cantonment Board Pharmacist (05.02.2023)

Ans. (d) : There are 12 cranial nerves in our body, each having a particular function.

- Cranial nerve 3 is the oculomotor nerve which helps the movements of muscles of eyes.
- The vagus nerve verifiably referred to as the pneumogastric nerve. It is the longest cranial nerve. It is the 10th cranial nerve and interfaces with the lungs, heart, and stomach related lot.

2. Partial pressure of carbon dioxide in alveoli is...

- (a) 160 mm Hg (b) 105 mm Hg
(c) 40 mm Hg (d) 45 mm Hg

Lucknow Cantonment Board Pharmacist (05.02.2023)

Ans. (c) : Partial pressure is the amount of pressure that each gas in a mixture exerts. Gas will flow from one area with greater partial pressure to another with lower partial pressure. The partial pressure of carbon dioxide (CO₂) at alveoli (the site of diffusion) is 40 mmHg.

- The partial pressure of oxygen (O₂) at alveoli is 104 mmHg.

3. During the embryonic development midbrain is developed from?

- (a) Rhombencephalon (b) Mesencephalon
(c) Proencephalon (d) Telencephalon

Lucknow Cantonment Board Pharmacist (05.02.2023)

Ans. (b) : The middle vesicle is the "mesencephalon" which is the precursor of midbrain structures, the most anterior of these embryonic brain vesicles is called the "Prosencephalon" which is the embryonic precursor of the forebrain, and the most posterior is the "rhombencephalon" which will become the hindbrain.

4. Smallest bone of the body is

- (a) Malleus (b) Incus
(c) Stapes (d) Femur

Lucknow Cantonment Board Pharmacist (05.02.2023)

Ans. (c) : The human body consists of both long and short bones. Longest bone is the thigh bone but the smallest and the lightest bone in a human body is stapes or stirrup found in our middle ear.

- There are three bones in the middle ear-malleus, stapes and incus.

5. The formation of plaque inside the coronary artery due to deposition of the lipid content is known as

- (a) Thrombosis (b) Embolism
(c) Atherosclerosis (d) Myocardial infarction

UPSSSC Pharmacist (26.03.2023)

Ans. (c) : Atherosclerosis is thickening or hardening of the arteries caused by a buildup of plaque in the inner lining of an artery. Risk factors may include high cholesterol and triglyceride levels, high blood pressure, smoking, diabetes, obesity, physical activity and eating saturated fats.

6. Which of the following antigens are present on the RBC in the person having blood group O?

- (a) Antigen-A (b) Antigen-B
(c) Both (d) None

UPSSSC Pharmacist (26.03.2023)

Ans. (d) : A Blood group is a classification of blood based on the presence and absence of antibodies and inherited antigenic substances on the surface of red blood cells. These antigen may be proteins, carbohydrates, glycoproteins or glycolipids, depending on the blood group system. Blood group O has no antigens but both anti-A and anti-B antibodies in the plasma. Blood group AB has both A and B antigens, but no antibodies.

7. The following organs are part of male reproductive system except;

- (a) Vas deferens (b) Urethra
(c) Ureter (d) Testis

UPSSSC Pharmacist (26.03.2023)

Ans. (c) : The ureters are tubular structures approximately 20–23 cm in adults that pass from the pelvis of each kidney into the bladder. From the renal pelvis they descend on top of the psoas major muscle to reach the brim of the pelvis.

8. Which of the following cranial nerve is known as facial nerve?

- (a) Cranial nerve V (b) Cranial nerve VI
(c) Cranial nerve VII (d) Cranial nerve VIII

UPSSSC Pharmacist (26.03.2023)

Ans. (c) : Facial nerve is the 7th cranial nerve and carries nerve fibers that control facial movement and expression.

The facial nerve also carries nerves that are involved in taste to the anterior 2/3 of the tongue and producing tears.

9. The life span of WBC is approximately

- (a) Less than 10 days
(b) Between 10 to 20 days
(c) Between 20 to 30 days
(d) Between 30 to 45 days

Lucknow Cantonment Board Pharmacist (05.02.2023)

Ans. (b): white blood cells, also called leukocytes or leucocytes, are the cells of the immune system that are involved in protecting the body against both infectious disease and foreign invaders.

- The life span of the WBC is between 10 to 20 days. It is mainly responsible for the protection of the body from diseases.
- The life span of the RBCs is 20–120 days.
- The life span of the blood platelets is 3–5 days.

Note: According to commission right answer is option (c).

10. Red cell count is carried out by _____

- (a) Electrogram
- (b) Sphygmomanometer
- (c) Haemoglobinometer
- (d) Haemocytometer

Lucknow Cantonment Board Pharmacist (05.02.2023)

Ans. (d) : Red cell refers to red blood cells also known as erythrocytes which carries oxygen to the body from the lungs. A healthy person has 5–5.5 million RBCs per mm³ of blood which have lifespan of 120 days.

- Haemocytometer is a device that is used for counting red blood cells, it contains different grids and has specific area and volume to count the number of RBCs in a particular volume of blood.
- Haemoglobinometer is a device used for measuring the hemoglobin concentration of the blood.
- A sphygmomanometer is an instrument used to determine blood pressure.

11. Urea formation occurs in

- (a) Heart
- (b) Liver
- (c) Spleen
- (d) Kidney

HPSSC Pharmacist (22.08.2022)

Ans. (b) : Urea is formed in are body during nitrogen metabolism the hepatic cells in the liver. Urea is an excretory product and it enters into the blood, after it's formation in the liver, when blood reaches the kidney, which filters it out from the blood and hence excretes urea out through the urine.

12. Bile is formed in

- (a) Gall bladder
- (b) Liver
- (c) Spleen
- (d) Blood

HPSSC Pharmacist (22.08.2022)

Ans. (b) : Bile is an aqueous liquid solution produced in the liver. It consists mainly bile salts, conjugated bilirubin with some electrolytes and water.

13. Mitochondria are sites of

- (a) Oxidative phosphorylation
- (b) Photolysis
- (c) Phosphorylation
- (d) Starch synthesis

HPSSC Pharmacist (22.08.2022)

Ans. (a) : Oxidative phosphorylation is the final step incellular respiration, it occurs in the mitochondria. It is the principal purpose of oxygen respiration and the principal use of breathed in oxygen is to generate energy in the body.

14. Which is not a true for Insulin?

- (a) It is a amphoteric protein
- (b) It is soluble in water
- (c) It is inactivated by digestive enzymes
- (d) It combines with zinc to lose activity

HPSSC Pharmacist (22.08.2022)

Ans. (d) : Insulin is a small protein consisting 51 amino acids in it's molecule. It works as a hormone and produced in the pancreas and added to the blood after meals when sugar levels are high it controls the sugar level in blood by allowing cells to absorb glucose. Insulin do not combine with zinc instead in the presence of zinc improves the peripheral insulin sensitivity.

15. Heart rate of 160-180 refers to

- (a) Atrial flutter
- (b) Atrial fibrillation
- (c) Adam syndrome
- (d) Ectopic activity

HPSSC Pharmacist (22.08.2022)

Ans. (d) : Inregular and fast rate of heartbeat (ranging 160-180) is termed as ectopic activity and it happens when our heart contracts (beats) too soon.

16. Sphincter of oddi is present at exit of

- (a) Oesophagus
- (b) Stomach
- (c) Urinary bladder
- (d) Gall bladder

HPSSC Pharmacist (22.08.2022)

Ans. (d) : The sphincter of oddi is the muscular valve surrounding the exit of the gall bladder i.e at the exit of bile duct and pancreatic duct into the duodenum.

17. Male sex hormone testosterone is secreted by

- (a) Spermatogenic
- (b) Sertoli cells
- (c) Leydig cells
- (d) Epididymis

HPSSC Pharmacist (22.08.2022)

Ans. (c) : Leydig cells are the source of androgenic hormone i.e testosterone in males. Leydig cells (LC) are present in the testicular interstitial tissue and their main function is to produce testosterone.

18. All of the following are the disadvantages of diabetes, EXCEPT:

- (a) Hypothyroid
- (b) Neuropathy
- (c) Kidney damage
- (d) Retinopathy

UP NHM Pharmacist (29.12.2022)

Ans. (a) : A condition in which the thyroid gland does not produce enough thyroid hormone.

Hypothyroidism deficiency of thyroid hormones can disrupt such things as heart rate body temperatures and all aspect of metabolism. Hypothyroidism is most prevalent in older in older woman.

19. A person with O blood group can receive blood from a person having ____ blood group.

- (a) A, AB
- (b) A
- (c) O
- (d) B

UP NHM Pharmacist (29.12.2022)

Ans. (c) : A blood type is a classification of blood based on the presence and absence of antibodies and in hirite antigenic substances on the & surface of red blood cells. These antigene may be proteins are body glycoproteins or glycolipids depending on the blood group system.

20. The chronic inflammation of a delayed hypersensitivity reaction is mediated by:
- Glucagon
 - Bradykinin
 - Lymphokines
 - Histamine

UP NHM Pharmacist (29.12.2022)

Ans. (d) : Histamine - a chemical found in some of the body's cells causes many of the symptoms of allergic reactions such as runny nose, sneezing, when a person is allergic to a particular substance such as a food or dust, the immune system mistakenly believes that this usually harmless substance is actually harmful to the body.

21. What happens when the level of bilirubin in the blood increases?
- Alzheimer's
 - Jaundice
 - Diabetes
 - Cancer

UP NHM Pharmacist (29.12.2022)

Ans. (b) : Jaundice is a condition in which the whites of the eyes and mucous membranes turn yellow because of a high level of bilirubin, a yellow-orange bile pigment. Jaundice has many causes including hepatitis, gall stones, and tumors. In adults, jaundice usually does not need to be treated.

Jaundice two types -

- Physiological jaundice
- Pathophysiological jaundice

22. _____ excreted by the respiratory system.
- Carbon dioxide
 - Urea
 - Faeces
 - Protein

UP NHM Pharmacist (29.12.2022)

Ans. (a) : Carbon dioxide is a naturally occurring chemical compound that plays an integral role in the earth's ecosystem. It is essential for photosynthesis, which all plants need to survive. Carbon dioxide also helps regulate the temperature of the atmosphere and the plant as well. They are often referred to as greenhouse gases because they allow sunlight to enter but do not allow it to leave, thus heating the lower atmosphere. But carbon dioxide is exhaled by the respiring system.

23. Right-sided cardiac failure is called:
- Congestive cardiac failure
 - Left ventricular failure
 - Chronic cardiac failure
 - Acute cardiac failure

UP NHM Pharmacist (29.12.2022)

Ans. (a) : Congestive heart failure is a long-term condition that happens when your heart can't pump blood well enough to give your body a normal supply of blood and fluids collect in your lungs and legs over time. Medications and other treatments.

24. Bronchial obstruction is a common symptom of:
- Liver failure
 - Asthma
 - Lung cancer
 - Cancer

UP NHM Pharmacist (29.12.2022)

Ans. (b) : Recurrent episodes of acute shortness of breath, typically occurring at night or the early morning hours, are the cardinal manifestation of bronchial asthma. Further symptoms include cough, wheezing, and feeling of tightness in the chest.

25. It is found only in muscles and this binds oxygen molecules
- Myoglobin
 - Sarcolemma
 - Mitochondrion
 - Myofibril

UP NHM Pharmacist (29.12.2022)

Ans. (a) : Myoglobin is a protein located primarily in the striated muscles of vertebrates. Myoglobin is the gene encoding myoglobin in humans. It encodes a single polypeptide chain with one oxygen binding site. Myoglobin contains a heme prosthetic group that can reversibly bind to oxygen.

26. In the presence of inflammation, _____ is/are raised.
- Fibrinogen
 - Platelets
 - Ceruloplasmin
 - Ferritin

UP NHM Pharmacist (29.12.2022)

Ans. (b) : Platelets are pieces of very large cells in the bone marrow called megakaryocytes. They help form blood clots to slow or stop bleeding and to help wounds heal or having platelets that don't work as they should can cause problems.

27. An example of haemostatic suture is:
- Sterile polyester suture
 - Sterile linen suture
 - Oxidised cellulose
 - Sterile catgut

UP NHM Pharmacist (29.12.2022)

Ans. (c) : The Atlantic cod is a benthopelagic fish of the family Gadidae, widely consumed by humans. It is also commercially known as cod or codling. Dry cod may be prepared as unsalted salt stack fish and as cured slot cod or clipfish.

28. Which ion is essential for muscle contraction?
- Na
 - K
 - Ca
 - Cl

HPSSC Pharmacist (14.05.2022)

Ans. (c) : The essential muscle contraction is caused by calcium ions. These calcium ions bind to the protein complex troponin in order to remove the masking of active site on actin. This results in the exposure of the active-binding sites on the actin for myosin.

29. White matter is external and grey matter is internal in
- Cerebrum
 - Cerebellum
 - Medulla oblongata
 - Both (b) and (c)

HPSSC Pharmacist (14.05.2022)

Ans. (c) : The medulla oblongata consists of both cells and fibres, which are similarly to those in the spinal cord, the cells or grey matter being on the inside and the fibres of white matter on the outside. It lies at the base of the skull just in front of the foramen magnum and links the pons and spinal cord.

30. Light rays entering the eye is controlled by
- Pupil
 - Iris
 - Cornea
 - Lens

HPSSC Pharmacist (14.05.2022)

Ans. (a): Light rays entering the eye is controlled by pupil, lets into our eyes as the muscles of our iris change its shape. The lens in our eye focuses light then goes to the back of our eye and hits our retina.

31. Antiaging hormone is

- (a) Thyroxine (b) Melatonin
(c) Estrogen (d) Testosterone

HPSSC Pharmacist (14.05.2022)

Ans. (b) : Antiaging hormone is melatonin. Melatonin is a hormone produced in the glandula pinealis that follows a circadian light dependent rhythm of secretion

32. Oogenesis is an example of

- (a) Mitosis (b) Meiosis
(c) Specialisation of cell (d) DNA replication

HPSSC Pharmacist (14.05.2022)

Ans. (b) : Oogenesis is an example of meiosis. Meiosis produces sex cells or gametes, Oogenesis is a process which creates female gametes called ovum. Meiosis is a type of cell division in sexually reproducing organisms that reduces the number of cloromosomes in gametes.

33. Nuclear envelope reappears at

- (a) Metaphase (b) Anaphase
(c) Cytokinesis (d) Telophase

HPSSC Pharmacist (14.05.2022)

Ans. (d) : Nuclear envelope reappears at telophase. Telophase- During this phase, chromosomes disappears (become chromatin), nuclear membrane reforms, nucleoli reappears,. Telophase is the fifth and final phase of mitosis, the process that separates the duplicated genetic material carried in the nucleus of a parent cell into two identical daughter cells.

34. Cytochromes are

- (a) O₂ acceptors (b) H₂ acceptors
(c) Electron acceptors (d) H₂O acceptors

HPSSC Pharmacist (14.05.2022)

Ans. (c) : The role of cytochrome c is to carry electrons from one complex of integral membrane proteins of the inner mitochondrial membrane to another, cytochromes are electron acceptors.

35. The most common respiratory substrate is

- (a) Glucose (b) Sucrose
(c) Maltose (d) Glycogen

HPSSC Pharmacist (14.05.2022)

Ans. (a) : Glucose is the most common respiratory substrate. One molecules of glucose produces 38 molecules of ATP. So its an instant energy source. It is also abundant and easily stored in the body in the form of glycogen. It is also stored in plants in the form of starch and glycoconjugates.

36. Sebaceous glands are

- (a) Apocrine (b) Mesocrine
(c) Holocrine (d) None of these

HPSSC Pharmacist (14.05.2022)

Ans. (c): Sebaceous glands are holocrins glands. sebaceous glands produce sebum via holocrine secretion, a largely uncharacterized mode of programmed cell death that contributes to the homeostasis and barrier function of the skin.

37. A digestive enzyme functional only in infants is

- (a) Lactose (b) Gastric lipase
(c) Intestinal lipase (d) Chymotrypsin

HPSSC Pharmacist (14.05.2022)

Ans. (b) : A digestive enzyme functional only in infants in gastric lipase. Intragastric lipolysis is probably of major importance in the newborn and especially in the premature infants. Gastric lipase is essential for infant fat digestion.

38. Residual air mostly occurs in

- (a) Alveoli (b) Bronchus
(c) Nostrils (d) Trachea

HPSSC Pharmacist (14.05.2022)

Ans. (a): Residual air mostly occurs in alveoli. The residual volume (RV) is the alveoli of the lungs, after respiratory. The lungs are never left completely empty, there is always some air left in the lungs after a maximum exhalation.

39. Agranulocytes are

- (a) Eosinophils (b) Neutrophils
(c) Basophils (d) None of these

HPSSC Pharmacist (14.05.2022)

Ans. (d) : Agranulocytes are white blood cells that have no distinct granules in their cytoplasm. Agranulocytes originates from the lymph nodes.

- Agranulocytes are known as mononuclear leukocytes.
- Granulocytes (neutrophils, eosinophils and basophils).
- Agranulocytes (lymphocytes and monocytes).

40. The elimination of insoluble calcium phosphate takes place by

- (a) Liver (b) Kidney
(c) Large intestine (d) Skin

HPSSC Pharmacist (14.05.2022)

Ans. (c) : The calcium ions binds to the phosphates and are present in the dietary food. Sometimes, calcium phosphate are consumed as an antacid. The calcium phosphate is a salt which is insoluble in water. The calcium ions are absorbed by the cells of the intestine as per requirement. The excess of calcium and phosphate ions are excreted by the large intestine in the form of paeeces.

41. Longest cells in human body are

- (a) Nerve cells (b) Bone cells
(c) Leg muscle cells (d) Heart muscle cells

HPSSC Pharmacist (14.05.2022)

Ans. (a) : Longest cells in Human body are Nerve cells are also called Neurons that are found in the Nervous system they can be up to 3 feet long.

- Nerve cells are only present in animals. Nerve cells is an excitable and specialized cell of the Nervous tissue which helps in proper functioning of the brain and coordination of other parts of the body.

- Neurons are divided into 3 Types : Sensory neurons (stimuli response) Motor response (receive singnals) and interneurons (connects one neuron to Another Neuron).

42. The term cytoplasm was coined by
 (a) Sachs (b) Strasburger
 (c) Hanstein (d) Flemming

HPSSC Pharmacist (14.05.2022)

Ans. (b) : Term cytoplasm refers to the living substance or protoplast found within a cell, including the Nucleus, Eduard strans burger created the word cytoplasm.

→ The cytoplasm is the gel- like fluid inside the cell. It is the medium for chemical reaction. It provides a plate form upon which other organelles can operate within the cell.

43. Muscle relation is completed in which phase of general anesthesia?

- (a) Phase-I (b) Phase-II
 (c) Phase-III (d) Phase-IV

HPSSC Pharmacist (14.05.2022)

Ans. (c) : Stage of general anesthesia:- Before they had machines to track our vital signs during general anesthesia, doctor come up with a monitoring system to keep patients safe. They divided the system into four stage -

- Stage 1. Induction
- Stage 2. Excitement or delirium
- Stage 3. surgical Anesthesia
- Stage 4. Over dose.

State : 3. **Surgical anesthesia:-** At this stage surgery can takes place our eyes stop moving muscle completely relax, and we may stop breathing without the help of machines. The anesthesiologist will keep we at this stage until the procedures is over.

44. An adult has _____ number teeth's of incisors in total.

- (a) 2 (b) 4
 (c) 6 (d) 8

HPSSC Pharmacist (14.05.2022)

Ans. (d) : An Adult has 8 number teeth's of incisor in total. Human teeth function to mechanically break down items of food by cutting & crushing the food material.

- Human have four types of Teeth -
 - Incisors
 - Canines
 - Premolars
 - Molars

• Human dental formula = $\frac{2123}{2123}$

45. Which one of the following is not a function of Liver?

- (a) Storage site for vitamins
 (b) Site for metabolism of proteins
 (c) Secretion of glucagon
 (d) Detoxification of various drugs.

HPSSC Pharmacist (14.05.2022)

Ans. (c) : Secretion of glucagon is not a function of Liver.

Function of Liver →

- Bile production and excretion
- Excretion of bilirubin, cholesterol hormone and drugs.
- Metabolism of fats, protein and carbohydrates.
- Enzyme Activation
- Storage of glycogen, vitamins and minerals
- Synthesis of plasma proteins, such as albumin and clotting factor.

46. Calcitonin is secreted by

- (a) Pituitary gland (b) Thyroid
 (c) Pancreas (d) Adrenal

HPSSC Pharmacist (14.05.2022)

Ans. (b) : Calcitonin is secreted by thyroid. Calcitonin is a 32 amino acid hormone secreted by the C- cells of thyroid gland.

Pituitary gland :- Its function including growth, metabolism, reproduction, lactation, water and sodium (salt) balance, labour and child birth.

Pancrease :- Pancrease creates natural juices called pancreatic enzyme to beak down food. These Juice travel through our pancrease.

Adrenal gland :- Adrenal gland produce hormone that help regulate our metabolism, immune system, blood pressure response stress and other essential function.

47. Progestational phase of menstrual cycle is antagonized by

- (a) Progesterone (b) Oestrogen
 (c) Luteinizing hormone (d) Prolactin

HPSSC Pharmacist (14.05.2022)

Ans. (b) : Progestational phase of menstrual cycle is antagonised by Oestrogen. The menstrual cycle is governed by an interaction between reproductive hormone (L.H,F.S.H, oestradiol and progesterone) that result in growth of a follicle, ovulation [release of egg from the ovary into the fallopian tubes].

48. Ganglion refers to

- (a) Collection of cell bodies of neurons in Central Nervous System.
 (b) Collection of numerous axons in Peripheral Nervous System.
 (c) Collection of cell bodies of neurons in Peripheral Nervous System.
 (d) Collection of axons in Central Nervous System.

HPSSC Pharmacist (14.05.2022)

Ans. (c) : Ganglion refers to collection of cell bodies of neurons in peripheral Nervous system. A ganglion is a cluster of nerve cells found in the P.N.S. The cells that are specific to a ganglion are called ganglion cells. However the term is some time used to describe retinal ganglion cells. The main component of the ganglion a cell body called the somata and associate dendritic structure.

49. The middle protective covering layer of brain is
 (a) Pia mater (b) Dura mater
 (c) Arachnoid mater (d) Pons

HPSSC Pharmacist (14.05.2022)

Ans. (c) : The middle protective covering layer of brain is Arachnoid mater. There present three meninges layers that constitute the outer layer, the dura mater, a thin middle layer called the Arachnoid and the inner most layer called the pia mater.

* Dura mater give a protective shield for the brain and the spinal cord helps prevent the C.N.S. from gossling by fastening it to the skull.

* Arachnoid mater is defined as a middle meninges layer that connect the dura mater & pia, mater.

* The pia mater is composed of a rich supply of blood vessels to provide the Nervous tissue with nutrient. Pia mater usually cover the spinal cord and is made up of two layers.

50. The germinal epithelium of ovary is

- (a) Stratified columnar epithelium
 (b) Simple cuboidal epithelium
 (c) Simple columnar epithelium
 (d) Stratified cuboidal epithelium
 (e) Not attempted

GPSSB Jr. Pharmacist (08.05.2022)

Ans. (b) : The ovarian surface epithelium, also called the germinal epithelium of waldeyer, or coelomic epithelium is a layer of simple squamous to cuboidal epithelial cell covering the ovary.

51. Which of the following pairs of chemotherapeutic agents is most commonly used as maintenance in the treatment of Acute Lymphoblastic Leukemia (ALL)?

- (a) Dauroribicin, Gemcitabine
 (b) Fludarabine Cyclophosphamide
 (c) Mereaptopurine, Methotrexate
 (d) Vincristine, Imatinib

GPSSB Jr. Pharmacist (08.05.2022)

Ans. (c) : Mereaptopurine Methotrexate pairs of chemotherapeutic agents is most commonly used as maintenance in the treatment of Acute Lymphoblastic Leukemia (ALL).

52. Glomerular filtrate is equal to:

- (a) Serum + Plasma Proteins
 (b) Plasma
 (c) Blood – (RBCs – WBCs)
 (d) Blood – (Blood Cells + Plasma Proteins)
 (e) Not attempted

GPSSB Jr. Pharmacist (08.05.2022)

Ans. (d) : Glomerular filtrate is equal to blood (Blood cells + Plasma Proteins).

53. Chemoreceptor trigger zone is an area of the _____ and plays role in stimulating _____.

- (a) Medulla Oblongata, Respiration
 (b) Cerebrum, Emesis
 (c) Cerebrum, Respiration
 (d) Medulla Oblongata, Emesis
 (e) Not attempted

GPSSB Jr. Pharmacist (08.05.2022)

Ans. (d) : Chemoreceptor trigger zone is an area of the Medulla oblongata and plays role in stimulating emesis.

54. Which of the following is a sign or symptom of left sided heart failure?

- (a) Hepatomegaly
 (b) Peripheral edema
 (c) Bilateral rales
 (d) Jugular venous distension
 (e) Not attempted

GPSSB Jr. Pharmacist (08.05.2022)

Ans. (c) : Bilateral rales is a sign or symptom of left sided heart failure.

- Hepatomegaly is prominent in patients with chronic right-sided heart failure, but it may occur rapidly in acute heart failure.
- Peripheral edema (PE) is an accumulation of fluid in the interstitial space that occurs as the capillary filtration exceeds the limits of lymphatic drainage.

55. Tidal volume is equal to:

- (a) (Residual volume) + (Expiratory reserve volume)
 (b) (Total lung capacity) – (Vital capacity)
 (c) (Functional residual capacity) – (Expiratory reserve volume)
 (d) (Inspiratory capacity) – (Inspiratory reserve volume)
 (e) Not attempted

GPSSB Jr. Pharmacist (08.05.2022)

Ans. (d) : Tidal volume is equal to (Inspiratory capacity) – (Inspiratory reserve volume) inspiratory capacity is the total volume of air that can be inhaled after a normal expiration. includes tidal volume and inspiratory reserve volume $IC = TV + IRV$.

56. β -cells of Pancreatic islets secrete _____.

- (a) Insulin
 (b) Pancreatic polypeptide
 (c) Somatostatin
 (d) Glucagon
 (e) Not attempted

GPSSB Jr. Pharmacist (08.05.2022)

Ans. (a) : The Pancreatic beta cells are Endocrine cells that synthesize, store and release insulin the anti-hyperglycemic hormone that antagonizes glucagon, Growth hormone, glucocorticosteroids, epinephrine and other hyperglycemic hormones, to maintain circulating glucose concentrations within a narrow physiologic range. Pancreatic polypeptide (PP) is an endogenous peptide hormone secreted by the cells, also called PP cells of the islets of Langerhans of pancreas. Mostly postprandially.

57. Carp metacarpal joint of the thumb is an example of :

- (a) Ball and socket joint (b) Saddle joint
 (c) Hinge joint (d) Pivot joint
 (e) Not Attempted

GPSSB Jr. Pharmacist (08.05.2022)

Ans. (b): The carpometacarpal joint is a synovial saddle-shaped joint that serves as the articulation between the trapezium and the base of the first metacarpal the joint's primary function is to optimize the pinch function of the hand.

58. Nose, pharynx, windpipe, trachia and lungs are located in _____

- (a) Excretory system
- (b) Cardiovascular system
- (c) Renal system
- (d) Respiratory system

UP NHM Pharmacist (28.12.2022)

Ans. (d) : The respiratory system starts at the nose and mouth and continues through the airways and the lungs.

- The excretory system is a vital biological system that removes excess and waste, products from the body to maintain homeostasis.
- Cardiovascular system, which is made up of our heart and blood vessels is a crucial part of our body.

59. There are _____ isolated operable irregular bone in the vertebral column

- (a) 20
- (b) 15
- (c) 24
- (d) 10

UP NHM Pharmacist (28.12.2022)

Ans. (c) : There are 24 isolated operable irregular bone in the vertebral column. Vertebrae are the 33 individual bones that inter lock with each other to form the spinal column. The vertebrae are numbered and divided into regions-cervical. Thoracic, lumber, sacrum and coccyx. Only the top bones are moveable, the vertebrae of sacrum and coccyx are fused. The vertebrae in each region have unique features that help them perform their main functions.

60. Persons having blood group 'A' makes _____

- (a) Anti-O
- (b) Anti-B
- (c) Anti-A and Anti-B
- (d) Anti-A

UP NHM Pharmacist (28.12.2022)

Ans. (b) : Persons having blood group 'A' makes Anti-B.

- The Anti-A, Anti-B, and Anti-A,B, reagents are used in the red blood cell determination of the ABO blood group.

61. An organ that is not a component of the urinary system, is _____

- (a) Adrenal gland
- (b) Ureter
- (c) Urinary bladder
- (d) Urethra

UP NHM Pharmacist (28.12.2022)

Ans. (a) : An organ or structure that is not a component of the urinary system is the Adrenal gland.

The urinary system consists of ureters, kidneys, nephrons, urinary bladder, and urethra.

- The ureter is a small tube, or duct that connects the bladder and kidneys. urine passes through the ureter from the kidneys to the bladder, the urethra is the tubular path that connects the bladder to the body's exterior, allowing urine to exit the body.

Adrenal glands, also known as suprarenal glands, are small triangular-shaped glands located on top of both kidneys. Adrenal glands produced hormones that help regulate our metabolism, immune system, blood pressure, response to stress and other essential functions.

62. Which of the following enzymes is repressed by the insulin hormone?

- (a) Pyruvate kinase
- (b) Glycogen veductase
- (c) Hexokinase
- (d) Glycogen synthase

UP NHM Pharmacist (28.12.2022)

Ans. (a) : The Pyruvate kinase exerts glucokinase-independent effects on insulin secretion pathways in B-cells. An exciting finding is that, by stealing the ADP required for oxphos, Pyruvate Kinase toggles mitochondria between ATP generation and PFP biosynthesis.

63. In NREM Sleep, Which part of brain is not involved?

- (a) Dorsal raphe nucleus
- (b) Thalamus
- (c) Hypothalamus
- (d) Basal forebrain

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (a) : IN NREM Sleep Dorsal raphe nucleus in not involved.

- NREM sleep involves a reduce heart rate, lower blood
- The dorsal raphe nucleus is located on the midline of the brainstem and in one of raphe nucleus. It has rostral and caudal subdivisions. The dorsal raphe in the largest serotonergic nucleus and provides a substantial proportion of the serotonin inneruation to the forebrain.

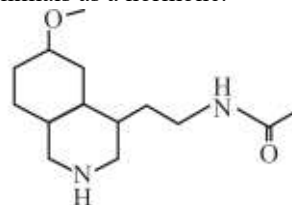
64. Melatonin is secreted by

- (a) Hypothalamus
- (b) Pineal gland
- (c) Adrenal cortex
- (d) Melanocytes

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (b) : Melatoninn is a hormone secreted by the enigmatic pineal gland in response to darkness, hence named as the hormone of darkness.

- The pineal gland, conarium or epiphysis cerebri, is a small endocrine gland in the brain of most vertebrates.
- Melatonin found in plants and animals. It is primarily known in animals as a hormone.



N-[2-(5-methoxy- 1 H-indol-3-yl)ethyle]acetamide

65. Ventricles of brain are lined by

- (a) Ependymocytes
- (b) Astrocytes
- (c) Oligodendrocytes
- (d) Podocytes

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (a) : Ependymocytes are one of the three types of ependymal cells which in turn are one of the four principles types of glial cells, and are found lining ventricular system of the brain and the central canal of the spinal cord.

- Astrocytes are specialized glial cells that outnumber neurons by over fivefold, they contiguously tile the entire CNS and exert many essential complex functions in the healthy CNS.
- Oligodendrocytes - These are the myelinating cells of CNS.
- Podocytes → podocytes are terminally differentiated cells of the kidney glomerulus that are essential for the integrity of the kidney filter.

66. Arch of aorta lies at what vertebral level?

- (a) T5 (b) T4
(c) T6 (d) T2

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (b) : The initial portion of the aorta ascending behind the sternum is referred to as the ascending aorta extends approximately to the level of the T₄ vertebral body. From this point, it is known as the aortic arch.

67. Which veins drain directly into inferior vena cava?

- (a) Superior mesenteric vein
(b) Inferior mesenteric vein
(c) Hepatic vein
(d) Splenic vein

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (c) : Hepatic Vein →

The hepatic vein carries the blood away from the inferior vena cava, which leads to the right atrium, one of the four chambers of the heart.

- They are usually three - RHV, MHV and LHV.
- Vena cava is the largest vein in the body.

68. The spleen is located under the ribcage and above the stomach in the _____ of the abdomen.

- (a) Left upper quadrant
(b) Left lower quadrant
(c) Right upper quadrant
(d) Right lower quadrant

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (b) : The spleen is part of our lymphatic system.

The spleen is a fist-sized organ found in the upper left side of our abdomen, next to our stomach and behind our left ribs. We can survive without it but it is an important part of our immune system.

69. Inulin clearance is a measure of

- (a) Glomerular filtration rate
(b) Tubular Secretion flow
(c) Tubular reabsorption rate
(d) Renal plasma flow

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (a) : Inulin clearance is a measure of Glomerular filtration rate. Glomerular filtration is the process that takes place in the kidney. It is a process that involves the filtration of blood and the removal of waste takes

place.
$$\text{GFR} = \frac{\text{Uinulin}(\text{Vu})}{\text{Pinulin}}$$

Where,

Uinulin = Concentration of inulin in the urine.

Pinulin = Concentration of inulin in plasma.

Vu = Urine flow rate.

70. An example of flat bone

- (a) Carpals (b) Kneecap
(c) Sternum (d) Skull bone

UP NHM Pharmacist (29.12.2022)

Ans. (c) : The sternum is a partially T-shaped vertical bone that forms the anterior portion of the chest wall centrally. The sternum of the sternum is divided anatomically into three segments.

The sternum connects the ribs via the costal cartilages forming the anterior rib cage.

71. Erythropoietin is produced by

- (a) Liver (b) Lungs
(c) Bone marrow (d) Kidney

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (d) : Erythropoietin (EPO) is a glycoprotein hormone, naturally produced by the peritubular cells of the kidney, that stimulates red blood cells production. Renal cortex peritubular cells produce most EPO in the human body. PO₂ directly regulates EPO production. The lower the PO₂, the greater the production of EPO.

72. Which among the following is a light receptor protein synthesized by vitamin A for night vision?

- (a) Globulin (b) Lipoprotein
(c) Chromoprotein (d) Rhodopsin

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (d) : Vitamin A is a precursor of rhodopsin, the photo pigment found in rods within retina of our eye that helps us to see at night. Without vitamin A, 'night blindness' occurs. Vitamin A is a fat-soluble vitamin and found in many supplements and foods.

Rhodopsin also known as visual purple, is a protein encoded by the RHO gene and a G-protein-coupled receptor.

73. How many laminae are present in the grey matter of spinal cord?

- (a) 8/8 (b) 9/9
(c) 7/7 (d) 10/10

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (d) : 10 (1-x) laminae are present in the grey matter of spinal cord.

Structure of brain & spinal cord are arranged in two layers namely grey matter & white matter. Grey matter is formed by neuron cell bodies (soma). Grey matter is present in outer surface of cerebrum & cerebellum.

- In brain stem grey matter is located in groups of neurons called nuclei, embedded with white matter tracts. (Ex → Basal ganglia)

- Grey matter is the outer parts of the brain & inner parts of the spinal cord but white matter is present in inner part of brain & outer part of spinal cord.

74. In Central nervous system, the nerves that arise from cerebrum and brain stem are called as _____

- (a) Spinal nerves (b) Cranial nerves
(c) Temporal nerves (d) Frontal nerves

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (b) : In central nervous system, the nerves that arise from cerebrum and brain stem are called as cranial nerves. The cranial nerves are a set of 12 paired nerves in the back of our brain cranial nerves send electrical signal to our brain. Face, neck and torso. Our cranial nerves help us taste smell, hear and feel sensations. These also help us to make facial expressions, blink our eyes and move our tongue.

75. Creatinine clearance is used as a measurement of _____

- (a) Renal excretion rate
(b) Glomerular Filtration Rate
(c) Active renal secretion
(d) Passive renal absorption

MP NHM Pharmacist-Contractual (04.08.2022)

Ans. (b): Creatinine clearance is used as a measurement of Glomerular Filtration Rate(GFR). The creatinine clearance test helps provide information about how well the kidneys are working. The test compares the creatinine level in urine with the creatinine level in blood. This test requires both a urine sample and blood sample.

76. In healthy adult, glomerular filtration rate is _____

- (a) 125 ml/min (b) 80 ml/min
(c) 180 ml/min (d) 50 ml/min

UP NHM Pharmacist (28.12.2022)

Ans. (a) : In a healthy person the GFR is about 125 ml/min, which makes 180 liters per day.

77. A large number of cells present in nervous system, is called _____

Or

Which of the following is a part of the nervous system?

- (a) Neuroglia (b) Nerve impulses
(c) Dendrites (d) Neurons

UP NHM Pharmacist (28.12.2022)

BSSC Pharmacist (2018)

Ans. (d) : The nervous system is made up of neurons, specialized cells that can receive and transmit chemical or electrical signals and glia cells that provide support functions for the neurons by playing an information processing role that is complementary to neurons.

78. Which of the following type of food poisoning is caused by staphylococcus aureus?

- (a) Autoimmune chronic gastritis
(b) Helicobacter associated
(c) Acute gastritis
(d) Peptic ulceration

UP NHM Pharmacist (28.12.2022)

Ans. (c): Acute gastritis Type of food poisoning is caused by staphylococcus aureus. Staph food poisoning is a gastrointestinal illness caused by eating foods contaminated with toxins produced by the bacterium staphylococcus aureus staph bacteria.

79. Cerebrosides are _____

- (a) Sulpholipids (b) Phospholipids
(c) Drived lipids (d) Glycolipids

UP NHM Pharmacist (28.12.2022)

Ans. (d) : Cerebrosides the simplest neutral glycolipids/ glycosphingolipids have a single sugar that is linked to ceramide.

80. Which one of the following statement is true for-cancer cells

- (a) Oncoproteins produced by cancer cells act a neighboring cells
(b) Cancer cells require stimulation by growth factors (c)
(c) Cancer cells are highly sensitive to growth inhibitory signals
(d) Cancer cells produce Oncoproteins in the absence of growth factors or external stimuli

AMC Pharmacist (15.05.2022)

Ans. (a) : Cancer cells:-

- Grow in the absence of signals telling them to grow.
- Ignore signals that normally tell cell to stop dividing or to die invade into nearby areas and spread to other areas of the body.
- Hide from the immune system, that normally eliminates damaged or abnormal cells.
- Trick the immune system into helping cancer cells stay a Live and grow.
- Mutations destroy telomerase intibitor.

81. Human Serum Albumin has a molecular weight of _____

- (a) 34,000 (b) 65,000
(c) 44,000 (d) 59,000

AMC Pharmacist (15.05.2022)

Ans. (b) : The human serum albumin is the most abundant protein in the human body. The molecular weight of human serum albumin is 65,000 Dalton.

82. Which of the following will result in very closest value to the Glomerular Filtration Rate (GFR)?

- (a) Insulin Clearance
(b) Albumin Clearance
(c) Measure of Blood Urea Nitrogen (BUN)
(d) Creatinine Clearance

AMC Pharmacist (15.05.2022)

Ans. (d): The creatinine clearance (crl) rate approximates the calculation of Glomerular filtration rate (GFR) since the glomerulus freely filters creatinine. However it is also secreted by the per tubular capillaries causing crcl to overestimate the GFR by approximately 10% to 20%

83. The term coronary artery disease is used to designate all of the following conditions, EXCEPT

- (a) Angina Pectoris
- (b) Sudden cardiac death
- (c) Congestive Heart Failure (CHF)
- (d) Myocardial Infarction

Kerala PSC Pharmacist Gr.III (22.12.2021)

Ans. (c) : Heart failure, also known as congestive heart failure is a condition that develops when your heart doesn't pump enough blood for our body's needs this can happen if our heart can fill up with enough blood. It can also happen when our heart is too weak to pump properly.

→ Angina pectoris is the medical term for chest pain or discomfort due to coronary heart disease.

→ sudden cardiac death (SCD) is by unexpected and cardiac in nature.

84. Which of the following isotope is used to study the functioning of thyroid gland?

- (a) Iodine 135
- (b) Iodine 133
- (c) Iodine 123
- (d) Iodine 127

GMC Pharmacist (08.08.2021)

Ans. (c) : Iodine-123 (or I-123) is a radio-isotope of iodine used for evaluation of the thyroid function and morphology. It is used in nuclear medicine for the diagnostic study of thyroid disease.

85. Which of the following releases renin?

- (a) Cells of Juxta-glomerular apparatus
- (b) Cells of Juxta-medullary apparatus
- (c) Gastric glands of infants
- (d) Crypts of Lieberkuhn

GMC Pharmacist (08.08.2021)

Ans. (a) : The juxta-glomerular cells are stimulated to secrete renin by three mechanism, all of which are activated in response to decreased extracellular fluid volume. Macula densa cells stimulate Juxtaglomerular cells to release renin when they detect a drop in sodium concentration in the tubular fluid.

86. Bile is produced by

- (a) Gallbladder
- (b) Liver
- (c) Pancreas
- (d) Intestine

VSSC Pharmacist-A (07.11.2021)

Ans. (b) : Bile is a physiological aqueous solution product and secreted by the liver. It consists mainly of bile salts phospholipids, cholesterol, conjugate bilirubin electrolytes and water bile travels through the liver in series of ducts. Eventually exiting through the common hepatic duct.

87. Largest organ is the body is

- (a) Liver
- (b) Skin
- (c) Bone
- (d) Lungs

VSSC Pharmacist-A (07.11.2021)

Ans. (b) : Largest organ is the body is skin. It can seem counterintuitive since many of our other organs are unseen. The skin, made up of three of the layers the Epidermis the Dermis and hypodermis is an external organ.

88. All the following causes hyperglycemia except

- (a) Streptozotocin
- (b) Diazoxide
- (c) Glucagon
- (d) Miglitol

VSSC Pharmacist-A (07.11.2021)

Ans. (d): Miglitol is an oral alpha-gluconsidase inhibitor used to improve glycemic control by delaying the digestion of carbohydrate. Miglitol inhibits the breakdown complexes carbohydrate in to glucose. Miglitol is used to treat high blood sugar levels that are caused by type 2 diabetes.

89. Endothelium dependent relaxing factor of blood.

- (a) Acetyl Choline
- (b) Nor adrenaline
- (c) Nitric oxide
- (d) None of the above

VSSC Pharmacist-A (07.11.2021)

Ans. (c) : Endothelium dependent relaxing factor of blood Nitric oxide.

Endothelium dependent relaxation occurs in resistance vessels as well as in larger arteries and is generally more pronounced in arteries platelet aggregation and adhesion to the blood vessel wall.

90. Thromboxane is mainly synthesized by

- (a) Lungs
- (b) Spleen
- (c) Platelets
- (d) Endothelium

VSSC Pharmacist-A (07.11.2021)

Ans. (c): Thromboxane is mainly synthesized by platelets. Thromboxanes, a substance produced by platelets, lead to occlusion of blood vessel by fueling blood clots inside the vascular system, this has been implicated in many cardiovascular conditions ranging from heart attack to stroke.

91. Identify the method of metabolism of salicylates in our body.

- (a) Hydroxylation
- (b) Reduction
- (c) Conjugation with glucuronic acid
- (d) Oxidation

Kerala PSC Pharmacist Gr.II (04.01.2021)

Ans. (c) : metabolism of salicylates occurs through glucuronidation and by conjugation to salicyluric acid. Liver metabolizes salicylates by first order elimination, and the inactive metabolites are then excreted in the urine.

92. Which is used in cheese manufacturing as a substitute of rennin?

- (a) Papain
- (b) Collagenase
- (c) Pepsin
- (d) Urokinase

Kerala PSC Pharmacist Gr.II (04.01.2021)

Ans. (c) : Pepsin is used in cheese manufacturing as substitute of rennin. The key & characteristics step in the manufacture of rennet coagulated cheeses is the coagulation of milk through the limited proteolytic action certain proteinases, called rennets. Several proteinases can coagulate milk but only a few are suitable for cheese production. This led to a search for rennet substitute, four of which are commercially successful: bovine, pepsin and proteinases from the fungi *R. meihai*, *R. pusillus* and *C. parasitica*. All successful rennet substitutes are aspartyl (acid) proteinases.