

SAPTHAGIRI NPS UNIVERSITY

MBBS PHASE I (RS 1 Batch) University Examinations September/October– 2025

SUBJECT: PHYSIOLOGY PAPER 2 (QP CODE: 1029)

Your answer should be specific to the question asked

Draw neat labelled diagrams wherever necessary

Maximum Marks: 100

Date: 22/09/2025

Time: 3 hrs

I . Long Essay question

1X12=12 Marks

1. Name the hormones secreted from thyroid gland and explain the physiological actions of thyroxine hormone. Mention the clinical features of cretinism (1+8+3)

II. Short Notes

3 X 6=18 Marks

2. Define referred pain and mention one example. Explain the theories of referred pain (2+4)
3. Describe the origin, course, termination, and functions of corticospinal tract with the help of a diagram. (4+2)
4. Explain the physiological actions of insulin.

III. Short notes (Applied aspects)

4X5=20 Marks

5. Explain the cause and clinical features of Parkinson's disease.
6. Describe the secretion, drainage, functions of Aqueous humor and add a note on glaucoma.
7. Describe the pathogenesis of fever.
8. Describe the hematological and cardiovascular changes that occur during pregnancy

IV. Short notes (One Question from AETCOM)

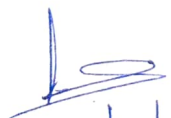
4X5=20 Marks

9. Describe spermatogenesis with factors regulating it.
10. Describe the role of empathy in doctor patient relationship.
11. List the properties of synapse. Explain any three.
12. Mention the stages of sleep. Compare and contrast REM and NREM sleep.

V. Reasoning Questions

5X3=15 Marks

13. Explain the importance of myelination in transmission of nerve impulse
14. Explain why amenorrhea is observed in postpartum lactation.
15. You put on a new shirt, initially the sensation of the fabric against your skin is felt. However, after few minutes, you no longer notice the sensation. Explain
16. Pendular knee jerk is seen in cerebellar lesion. State reason
17. Explain the mechanism of neuromuscular hyperexcitability in tetany


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VI.18) MCQ's

15X1=15 Marks

- 1) A 12-year-old child presents with accelerated growth, increased height and advanced bone age. the child parents are both of average height. Which of the following conditions should be considered for diagnosis?
 - a. Hypothyroidism
 - b. Cushing's syndrome
 - c. Gigantism
 - d. Dwarfism

- 2) A patient who is on prolonged steroid treatment visits OPD with complaints of headache. After ruling out medical cause, he was referred to ophthalmologist. His visual acuity was 6/6 but raised intraocular pressure. What is the normal intraocular pressure?
 - a. 20-30mmHg
 - b. 10-20mmHg
 - c. 30-40mmHg
 - d. 50-60mmHg

- 3) A patient has suffered trauma to the spinal cord. During a period of spinal shock what do you observe in the patient?
 - a. Hyperactive reflexes below the lesion
 - b. Flaccid weakness below the lesion
 - c. A spastic bladder
 - d. A clasp knife reflex.

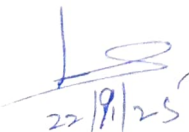
- 4) A 33-year-old female who is obese has a history of asthma was using corticosteroids in the past. She had been on hypertension medication for 5 years. She complained of an irregular menstrual cycle and widespread weakness. Her face is round and red and her neck has a hump. what is the diagnosis?
 - a. Acromegaly
 - b. Conn's disease
 - c. Cushing's syndrome
 - d. Addison's disease.

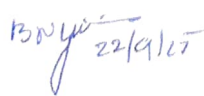
- 5) A person working outdoor in hot weather collapses and exhibits signs of confusion, rapid heart rate and high body temperature. What is this condition?
 - a. Hypothermia
 - b. Heat stroke
 - c. Frost bite
 - d. Chilblains.

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- 6) A 46-year-old male visited ophthalmologist with complaints of difficulty to read small prints clearly, eye strain and headache while reading. He has to hold the newspaper at a certain distance only then he can read it with difficulty. The refractive error is indicative of.
- Myopia
 - Hypermetropia
 - Astigmatism
 - Loss of accommodation.
- 7) A 25 year old female presents with symptoms of polyuria, polydipsia and hypernatraemia. Imaging studies reveal a tumor in the supraoptic nucleus of the hypothalamus. Which of the following is the most likely diagnosis?
- Diabetes Insipidus
 - Syndrome of inappropriate antidiuretic hormone secretion
 - Hyperthyroidism
 - Cushing's disease
- 8) During Diwali celebration a 10-year-old child playing in her society saw people burning crackers. She covers her ears with her hand in anticipation of the loud sound. Mention the protective reflex.
- Tympanic reflex
 - Impedance matching
 - Vestibulo spinal reflex
 - Vestibulo ocular reflex.
- 9) A patient present with a loss of pain and temperature in the left leg. The physician suspects that the patient has a nerve injury. which of the following nerve fibers is most likely to be affected?
- A α fibers
 - A β fibers
 - A δ fibers
 - B fibers
- 10) A 32 year old women presents with recurrent episodes of blurred vision, limb weakness and difficulty in maintaining balance. MRI of the brain shows multiple demyelinating plaques. Which type of neuroglia is most likely involved in this patient?
- Astrocytes
 - Oligodendrocytes
 - Microglia
 - Schwann cells.


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- 11) A patient with diabetes mellitus experiences an episode of hypoglycaemia . which of the following hormone is responsible for stimulating glycogenolysis in the liver to raise the blood glucose levels?
- Insulin
 - Glucagon
 - Somatostatin
 - Cortisol
- 12) A woman's progesterone levels remain elevated beyond the typical secretory phase. What does this indicate?
- Menstrual phase
 - Menopause
 - Ovulation
 - Pregnancy
- 13) A 28 year old woman visits the gynecology clinic requesting a long-term, reversible contraceptive method. She does not want to use hormones. Which contraceptive method is suitable in the case?
- Copper IUD
 - Combined oral contraceptives
 - Progesterone only pill
 - Vaginal contraceptive ring
- 14) A 30-year-old woman, is brought to the emergency room after a car accident resulting in a head injury. Upon assessment, the medical team notices that she has flexed arms with clenched fists and extended legs. Name the spasticity in this condition.
- Decerebrate rigidity
 - Decorticate spasticity
 - Flaccid paralysis
 - Hypereflexia
- 15) A 58 -year- old woman presented with complaints of recent memory loss, difficulty finding words. Which of the following neurotransmitter plays a key role in memory consolidation and synaptic plasticity?
- Dopamine
 - Serotonin
 - Glutamate
 - GABA

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SAPTHAGIRI NPS UNIVERSITY

MBBS PHASE I (RS1 Batch) University RESIT Examinations Nov/Dec- 2025

SUBJECT: PHYSIOLOGY PAPER 2 (QP CODE: 1029)

Your answer should be specific to the question asked

Draw neat labelled diagrams wherever necessary

Maximum Marks: 100

Date: 21/11/2025

Time: 3 hrs

I. Long Essay Question

1x12=12 Marks

- 1) Describe the pathway for pain. Explain the theories of referred pain with examples. (7+5)

II. Short Notes

3x6=18 Marks

- 2) Enumerate the functions of hypothalamus. Explain the role of hypothalamus in food intake (3+3)
3) Explain the actions of hormones regulating blood calcium level.
4) Describe the clinical features of Hemi-section of spinal cord (Brown Sequard syndrome).

III. Short Notes with Applied aspects

4x5=20 Marks

- 5) Explain the clinical features of cerebellar lesion. Mention the tests for cerebellar lesion.
6) Explain the cardiovascular changes in pregnancy.
7) Explain the physiological basis for Polyphagia, Polyuria and Polydipsia in Diabetes mellitus
8) Explain the pathogenesis of fever.

IV. Short Notes

4x5=20 Marks

- 9) Describe the visual pathway and its lesions with the help of a neat, labelled diagram.
10) Explain the stages of spermatogenesis and hormones regulating it.
11) Explain the mechanism of transmission at the neuromuscular junction.
12) Discuss the boundaries in doctor patient relationship.

V. Reasoning Questions

5x3=15 Marks

- 13) High levels of aldosterone cause diuresis and natriuresis. Explain
14) Explain why children with cretinism have short stature and mental retardation.
15) Explain the role of middle ear in impedance matching.
16) Explain the role of Intra uterine contraceptive devices (IUCD) in preventing pregnancy.
17) Explain why L- Dopa is used in the treatment of parkinsonism.

VI. MCQs

15x1=15 Marks

18)

1. A 35-year-old woman complains of weakness in the muscles of mastication, which becomes worse during activity and improved by rest. She is suffering from:
- Lambert Eaton syndrome
 - Multiple sclerosis
 - Myasthenia gravis
 - muscular dystrophy

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2. A 40-year-old person complain of tingling sensation in his finger. In the nerve conduction test evaluation which of the following nerve has the slowest conduction velocity?
- A α fibres
 - A β fibres
 - B fibres
 - C fibres
3. A 24-year-old male visited to OPD with complaints of increasing in foot size as he changed the shoe size twice in past 6 months. He also noticed his hands & jaw growing out of proportion, his random blood glucose was 160mg/dl. What is his condition?
- Type 2 Diabetes mellitus
 - Cushing's syndrome
 - Acromegaly
 - Gigantism
4. A patient who is on prolonged steroid treatment visits OPD with complaints of headache. After ruling out medical cause, he was referred to ophthalmologist. His visual acuity was 6/6 but raised intraocular pressure. What is the normal intraocular pressure?
- 20-30mmHg
 - 10-20mmHg
 - 30-40mmHg
 - 50-60mmHg
5. A 35-year-old male patient presented to the medicine OPD with severe vomiting and diarrhoea there is decrease in ECF osmolality. Decrease in ECF osmolality stimulates osmoreceptors in
- Anterior hypothalamus
 - Posterior hypothalamus
 - Lateral hypothalamus
 - Ventromedial hypothalamus
6. A 30 year old female presents with amenorrhea, galactorrhea and visual disturbances. She also reports of headache. MRI reveals pituitary adenoma compressing optic chiasma. Which hormone in excess is responsible for her symptoms.
- Growth hormone
 - Prolactin
 - Adrenocorticotrophic hormone
 - Thyroid stimulating hormone
7. A patient presents with diffuse goiter, exophthalmos and symptoms of hyperthyroidism. What is the most likely diagnosis?
- Hashimoto's thyroiditis
 - Thyroid storm
 - Graves' disease
 - Toxic multinodular goiter

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8. A woman's cervical mucus is thin stretchy; what phase of menstrual cycle is she likely in?
- Menstrual phase
 - Proliferative phase
 - Ovulatory phase
 - Secretory phase
9. A patient has suffered trauma to the spinal cord. During the period of spinal shock what do you expect to observe in the patient?
- Hyperactive reflexes below the lesion
 - Flaccid weakness below the lesion
 - A spastic bladder
 - A clasp knife reflex
10. After spinning around several times, Michael feels dizzy and unsteady on his feet. Which part of the vestibular system is primarily responsible for detecting rotational movements?
- Semicircular canal
 - Utricle
 - Sacculle
 - Cochlea
11. A 65-year-old woman was diagnosed with age related macular degeneration with Foveal -sparing scotoma. What is fovea?
- Has the lowest light threshold.
 - Contains only red and green cones.
 - The region of highest visual acuity
 - Contain only rods
12. A person exposed to extreme heat for an extended period, experiences symptom such as dizziness, nausea and cessation of sweating what condition is this indicative of?
- Hypothermia
 - Frostbite
 - Heat stroke
 - Chilblains
13. A 55-year-old presents to the optometrist with a complaint of gradually worsening near vision over the past few years. He reports difficulty reading fine print such as news paper or his smartphone, he frequently holds the reading material at arm's length to see it more clearly. What could be the refractive error?
- Myopia
 - Hypermetropia
 - Presbyopia
 - Astigmatism



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14. A patient with skeletal muscle weakness undergoes a muscle biopsy revealing the absence of dystrophin protein. Which type of muscular dystrophy is most likely present?
- a) Becker muscular dystrophy
 - b) Limb- girdle muscular dystrophy
 - c) Duchenne muscular dystrophy
 - d) Myotonic dystrophy
15. A young couple visited infertility clinic. On investigation the husband was found to have oligospermia. What would be the sperm count to diagnose as oligospermia?
- a) 20 million/ml
 - b) 40 million/ml
 - c) 60 million/ml
 - d) 80 million/ml



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SAPTHAGIRI NPS UNIVERSITY

MBBS PHASE I University RESIT Examinations (2023 Repeater Batch) Nov/Dec- 2025

SUBJECT: PHYSIOLOGY PAPER 2 (QP CODE: 1004)

Your answer should be specific to the question asked

Draw neat, labelled diagrams wherever necessary

Maximum Marks: 100

Date: 21/11/2025

Time: 3 hrs.

I. Long Essay

2 X 10 = 20 Marks

1. List the hormones secreted from pituitary gland. Explain the synthesis, secretion & action of thyroid hormones (2+2+2+4)
2. Explain the origin, course, and termination of corticospinal tract with the help of a diagram. What is hemiplegia? (8+2).

II. Short Essay

8 X 5 = 40 Marks

3. A patient comes with a history of excessive drinking of water and passing of excess of colorless urine very frequently. The patient becomes markedly dehydrated when water is withheld, investigation revealed that the patient passed about 15 L of urine in 24 hrs. urine is colorless, specific gravity is 1002 – 1004 and there is no sugar, blood, or albumin. (2+1+2)
 - a) What is the cause for development of polyuria & polydipsia?
 - b) In what other conditions polyuria occurs?
 - c) How do you manage this patient?
4. Explain the transmission of impulse across neuromuscular junction with the help of a labelled diagram.
5. Describe the properties of nerve fibers.
6. Explain the uterine changes during menstrual cycle.
7. Compare REM sleep & NREM sleep.
8. Briefly describe the role of Hypothalamus in regulation of food and water intake.(3+2)
9. Explain the functions of middle ear.
10. Explain briefly the physiological changes seen during heat acclimatization.

III . Short Answers

10 X 3 = 30 Marks

11. List the functions of Sertoli cells.
12. Enumerate the hormones required for lactation & mention their functions.
13. Enumerate the clinical features seen in Cushing's syndrome.
14. Describe the functions of insulin.
15. What is referred pain. Mention the theories of referred pain.
16. What is macular sparing.
17. Draw neural pathway to depict stretch reflex.
18. Draw diagrams to show image formation from a distant object in hypermetropia & myopia. Mention their corrections.
19. Describe the functions of Basal ganglia.
20. Enumerate the sensory changes in Brown Sequard syndrome below the level of lesion.

IV. MCQ's

10 x 1 = 10 Marks

21.

- i. All or none response in a nerve is applicable to
 - a) Mixed nerve
 - b) Nerve bundle
 - c) Single nerve fiber
 - d) Synapse

(P.T.O)

- ii. Smooth muscle does not contain
 - a) Actin
 - b) Myosin
 - c) tropomyosin
 - d) Troponin
- iii. Not an effect of parathormone
 - a) Increase plasma calcium & decrease plasma phosphate levels
 - b) Increase both plasma calcium & plasma phosphate levels
 - c) Increase calcium & phosphate absorption from G IT
 - d) Increase calcium reabsorption from DCT
- iv. The level of hormone indicating placental insufficiency is
 - a) HCS
 - b) HCG
 - c) Oestrogen
 - d) Progesterone
- v. Cryptorchidism refers to
 - a) Male hypogonadism
 - b) Removal of testis before puberty
 - c) Undescended testes
 - d) Removal of testes after puberty

22.

- i. Not a property at the synapse
 - a) All or none law
 - b) Law of forward conduction
 - c) Fatigue
 - d) More susceptible to hypoxia than nerve fibres
- ii. Weber Fechner law deals with
 - a) Frequency discrimination
 - b) Intensity discrimination
 - c) Two point discrimination
 - d) Receptive field organization
- iii. Brain area that facilitates stretch reflex
 - a) Motor cortex
 - b) Basal ganglia
 - c) Cerebellum
 - d) Vestibular apparatus
- iv. All are unique features of olfaction **EXCEPT**
 - a) Smell pathways have no relay in thalamus
 - b) Receptors are tele receptors as well as chemoreceptors
 - c) Receptors neurons are in direct contact with external environment
 - d) Receptors do not show fatigue
- v. Highest refractive index is that of
 - a) Cornea
 - b) Aqueous humour
 - c) Lens
 - d) Vitreous humour

SAPTHAGIRI NPS UNIVERSITY

MBBS PHASE I University Examinations (2023 Repeater Batch) Sep/ Oct– 2025

SUBJECT: PHYSIOLOGY PAPER 2 (QP CODE: 1004)

Your answer should be specific to the question asked

Draw neat labelled diagrams wherever necessary

Maximum Marks: 100

Date: 22/09/2025

Time: 3 hrs.

I. Long Essays:

2 X 10=20 Marks

1. Trace and describe the pain pathway with a neat labelled diagram. Add a note on referred pain. (7+3)
2. List the hormones secreted by Anterior Pituitary. Describe the functions of Growth hormone. (3+7)

II. Short Essays:

8 X 5=40 Marks

3. Explain the cause, clinical features and management of Grave's disease.
4. A 72-year-old man was brought to the Neurology OPD with complaints of tremors in his hands and generalised slowing of movements. On examination he had an unexpressive face, rigidity of muscles and he walked slowly without swinging of arms. There was no sensory loss. (1+2+2)
 - a. What is the most probable diagnosis?
 - b. Name the site of lesion and neurotransmitter deficient in this condition.
 - c. Mention the treatment with the physiological basis for the choice of treatment.
5. Discuss the functions of Cerebellum.
6. Describe the changes in the eyes during accommodation reflex.
7. Explain the endometrial changes during menstrual cycle.
8. Describe the physiological responses of the body on exposure to cold environment.
9. Explain the molecular basis of skeletal muscle contraction.
10. Discuss the functions of Insulin in regulating blood glucose level.

III. Short Answers

10 X 3=30 Marks

11. List the functions of CSF.
12. Enumerate the functions of Testosterone.
13. Tabulate the differences between REM and NREM sleep.
14. What is aphasia? Mention its types.
15. List the contraceptive methods in females.
16. Enumerate the importance of doctor – patient relationship.
17. Draw and label strength duration curve.
18. What is Myasthenia Gravis? Mention its treatment.
19. What is impedance matching in hearing?
20. Mention the tests for colour vision.

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V. MCQs

10 X 1 = 10 Marks

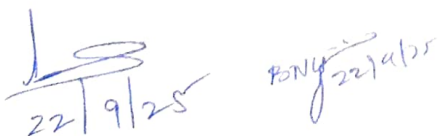
21.

- i) Inability to identify an object by its shape with eyes closed is known as
- Agnosia
 - Astereognosis
 - Aphasia
 - Ataxia
- ii) The limbic system includes all of the following EXCEPT
- Anterior nucleus of thalamus
 - Cerebellum
 - Hippocampus
 - Portions of basal ganglia
- iii) A person riding a giant wheel complains of nausea. This type of acceleration is detected by
- Utricle
 - Saccule
 - Cochlea
 - Semi-circular canals
- iv) The rapidly adapting receptor among the following is
- Muscle spindle
 - Golgi tendon organ
 - Pacinian corpuscle
 - Nociceptors
- v) Which of the following is a type of neuroglia:
- Oligodendrocytes
 - Ependymocytes
 - Purkinje cells
 - Stellate cells

22.

- i) The hormone with the greatest effect on Na^+ excretion among the following is
- Progesterone
 - Cortisol
 - Somatostatin
 - Aldosterone
- ii) The enzyme present in the acrosome which helps sperm to penetrate ovum is
- Amylase
 - Aromatase
 - Hyaluronidase
 - Maltase

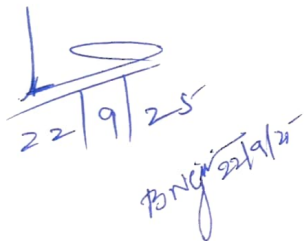
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- iii) Estrogen is **NOT** secreted by
- Granulosa cells of the ovarian follicles
 - Uterus
 - Corpus luteum
 - Placenta

- iv) The following are correctly paired **EXCEPT**
- B cells: insulin
 - D cells: somatostatin
 - A cells: glucagon
 - F cells: gastrin

- v) A 48-year-old man has been practicing yoga for almost 25 years. Among the following, **NOT** a likely benefit of yoga is
- Decrease in Systemic blood pressure
 - Increase in sympathetic discharge
 - Decreases insulin resistance
 - Decrease stress

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SAPTHAGIRI NPS UNIVERSITY
MBBS PHASE I University Examinations July /August 2024

Physiology Paper II (QP CODE: 1004)

Your answer should be specific to the question asked
Draw neat labelled diagrams wherever necessary

Maximum Marks: 100

Date: 08/08/2024

Time: 3 hrs

I. Long Essay

(2x10 = 20) Marks

1. Describe the origin, course, termination and functions of Pyramidal tract with the help of diagram. Enumerate the differences between upper motor neuron and lower motor neuron lesion. (6+4)
2. List the hormones secreted from different layers of adrenal cortex. Describe the functions of glucocorticoids. (3+7)

II. Short Essay

(8x5 = 40) Marks

3. A 50-year-old house wife complains of progressive weight gain in the past 1 year, fatigue, slight memory loss, low speech, dry skin & cold intolerance. On examination bradycardia is seen, deep tendon reflex time is delayed, thyroid gland is slightly enlarged, firm & nodular.
 - a) What are the lab investigations you would like to advise to this patient (2)
 - b) What are the other physical findings you can see in this patient that point towards your diagnosis (2)
 - c) What are the treatment options for this patient (1)
4. Define action potential & explain the ionic basis of nerve action potential with the help of a labelled diagram.
5. Describe the molecular basis of skeletal muscle contraction.
6. Describe the functions of testosterone.
7. Explain the formation, circulation & drainage of Cerebrospinal fluid.
8. Define aphasia. Name the different types of aphasia. Explain the cause for each type of aphasia.
9. What is accommodation reflex. Mention the changes taking place in the eye during accommodation with the help of a flow chart.
10. Describe the physiological thermoregulatory mechanisms in brief when exposed to heat.

III. Short Answers

(10x 3 = 30) Marks

11. List the functions of aldosterone.
12. Describe the mechanism of action of intrauterine contraceptive devices.
13. Enumerate the abnormalities of growth hormone secretion
14. Explain physiological basis of Polyphagia and Polyuria seen in Diabetes mellitus
15. What is referred pain. Give an example
16. Explain the functions of middle ear.
17. What is Renshaw cell inhibition
18. List the different taste sensations. Draw a labelled diagram of taste pathway
19. Define Menarche, Menopause and Amenorrhoea.
20. List clinical features of cerebellar lesion.

P.T.O. 

IV. MCQ's

(10x1 = 10) Marks

- 21 (i) Wallerian degeneration refers to
- Regenerative changes in a cut nerve fiber
 - Retrograde degeneration of axon up to cell body
 - Degenerative changes in distal part of cut nerve fiber
 - Degenerative changes in site of injury
- 21 (ii) Single unit smooth muscle refers to
- Presence of single smooth muscle fiber
 - Multiple fibers contracting as a unit
 - Each muscle fiber contracting independently of the other
 - Single stimulus of its nerve causes repeated firing
- 21 (iii) Active vitamin D₃ differs from parathormone in which of the following physiological effects
- Increased renal phosphate reabsorption
 - Increased renal calcium reabsorption
 - Increased intestinal calcium absorption
 - Increased intestinal phosphate absorption
- 21 (iv) Factors contributing to the initiation of parturition include
- Increased stretch of the uterus
 - Increased secretion of oxytocin
 - Increased pressure on the cervix
 - All of the above
- 21 (v) A person is said to be infertile if sperm count decreases beyond
- | | |
|------------------|------------------|
| a) 20 million/ml | c) 40 million/ml |
| b) 60 million/ml | d) 80 million/ml |
- 22 (i) Which of the following neurotransmitter is an inhibitory neurotransmitter at post synaptic level
- | | |
|-------------------|--------------|
| a) GABA | c) Dopamine |
| b) Norepinephrine | d) Serotonin |
- 22 (ii) Phenomenon of adaptation is complete and occurs fastest in
- | | |
|-------------------------|------------------------|
| a) Muscle spindle | c) Pacinian corpuscle |
| b) Meissner's corpuscle | d) Ruffini's end organ |
- 22 (iii) Which of the following is an autonomic reflex
- | | |
|-----------------------------|----------------------------|
| a) Stretch reflex | c) Crossed extensor reflex |
| b) Flexor withdrawal reflex | d) Mass reflex |
- 22 (iv) Olfactory receptors are
- Sensitive to physical stimuli
 - Slowly adaptive
 - Rapidly replaced
 - Bipolar neurons
- 22 (v) After removal of lens, dioptric power of eye is reduced by
- | | |
|---------------|----------------|
| a) 4 diopters | c) 16 diopters |
| b) 8 diopters | d) 32 diopters |

Physiology Paper II (QP CODE: 1004)

Your answer should be specific to the question asked
Draw neat labelled diagrams wherever necessary

Maximum Marks: 100

Date: 27/09/2024

Time: 3 hrs.

I Long Essay

2 X 10 = 20 Marks

1. List the ascending tracts in spinal cord and sensations carried by them. Describe the pathway of fine touch with the help of a neat labeled diagram. (4+6)
2. Name the hormones secreted by adrenal cortex. Briefly describe the functions of Cortisol. Add a note on Cushing syndrome (3+5+2).

II Short Essay

8x5 = 40 Marks

3. Define and classify Synapses. Explain two properties of a synapse.
4. Describe the errors of refraction and their correction.
5. A man aged 70 years was brought to hospital with history of difficulty in walking, stoops forward while walking, abnormal rhythmic movements in hands were observed at rest. He shows tendency to fall forwards and backwards.
 - a) What is your diagnosis?
 - b) Discuss the pathophysiology behind the condition.
 - c) What is the physiological basis of treatment?
6. Explain the physiological responses on exposure to cold environment.
7. Explain excitation contraction coupling in skeletal muscle.
8. Name three hormones involved in regulation of calcium metabolism. Briefly describe functions of parathormone.
9. Describe the different phases of action potential along with its ionic basis.
10. Describe the functions of hypothalamus.

III Short Answers

10x 3 = 30 Marks

11. List the methods of contraception in females.
12. List the functions of Sertoli cells.
13. Briefly write about functions of ADH.
14. Briefly write about tests for ovulation.
15. Write briefly about Spermatogenesis.
16. Name the types of memory. Give one example for each.
17. Write in brief about stretch reflex.
18. Name the components of vestibular apparatus.
19. What is colour blindness? Name the types.
20. What are the roles of an Indian medical graduate?

