Date of issue : Centre :		
Sup. Sign. : Seat No. :		
ND-2006000101020002-O Seat No First Year M. B. B. S. Examination		
January - 2022		
Physiology : Paper - 2		
Time : Hours] [Total Marks : 20		
Instruction :		
નીચે દર્શાવેલ → નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of → signs on your answer book. Name of the Examination : First Year M. B. B. S. Name of the Subject : Physiology : Paper - 2 Subject Code No.:		
2 0 0 6 0 0 0 1 0 1 0 2 0 0 0 2 Student's Signature		
Section A MCQs 20 marks		
 Which taste sensation is the most sensitive (has the lowest stimulation threshold)? a. Acid b. Bitter c. Salty d. Sour 		
 Which of the following best describes the "blind spot" of the eye? Located 5 degrees lateral to the central point of vision The exit point of the optic nerve Contains only rods and thus has monochromatic vision Contains no blood vessels 		
3. After olfactory receptor cells bind odor molecules, a sequence of intracellular events occurs that culminates in the entrance of specific ions that depolarize the olfactory receptor cell. Which ions are involved? a. Calcium b. Chloride c. Hydrogen d. Sodium		
4. Which of the following middle ear ossicle is attached to the tympanic membrane? a. Columella b. Incus c. Malleus d. Modiolus		
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5. Olfactory receptor cells belong to which group of cells?

a. Bipolar neurons

b. Fibroblasts

c. Modified epithelial cells

- d. Multipolar neurons
- 6. Interneurons that utilize the neurotransmitter enkephalin to inhibit afferent pain signals are most likely to be found in which region of the central nervous system?

a. Dorsal horn of spinal cord

b. Postcentral gyrus

c. Precentral gyrus

d. Ventral horn of spinal cord

7. Which type of papillae is located in the posterior part of the tongue?

a. Circumvallate

b. Foliate

c. Fungiform

- d. Fungiform and circumvallate
- 8. The processing of short term memory to long term memory is done in :

a. Prefrontal cortex

b. Hippocampus

Neocortex

- d. Amygdala
- Which of the following thalamic nucli acts as a relay for transmission of Auditory information

a. Dorsomedial

b. Lateral geniculate

c. Medial geniculate

- d. Ventral posterolateral
- 10. A 17-year-old boy sustains serious head and neck trauma during a football game. Physical examination shows a positive Babinski sign. Which of the following is most likely to be damaged in this boy?

a. Anterior motor neurons

b. Cerebellum

c. Corticospinal tract

d.Premotor cortex

- 11. Within minutes after a normal delivery, flow through the foramen ovale decreases dramatically. What is the cause of this change?
 - a. Increased formation of prostaglandin E2 (PGE2) in the endocardium
 - b. Increased rate of flow through the pulmonary artery
 - c. Increased left atrial pressure
 - d. Increased right atrial pressure
 - 12. For male differentiation to occur during embryonic development, testosterone must be secreted from the testes. What stimulates the secretion of testosterone during embryonic development?
 - a. LH from the maternal pituitary gland
 - b. HCG
 - c. Inhibin from the corpus luteum
 - d. GnRH from the embryonic hypothalamus
- Why do infants of mothers who had adequate nutrition during pregnancy not require iron supplements or a diet rich in iron until about 3 months of age?
 - a. Growth of the infant does not require iron until after the third month
 - b. The fetal liver stores enough iron to meet the infant's needs until the third month
 - c. Synthesis of new red blood cells begins after 3 months
 - Muscle cells that develop before the third month do not contain myoglobin

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14. What accompanies sloughing of the endomet normal woman?	rium during the endometrial cycle in a
An increase in progesterone A decrease in both progesterone and estrog	b. The LH "surge" d. An increase in estradiol
Which of the following increases secretion of a. Senescence c. Somatostatin	f GH? b. Insulin-like growth factor-1 d. Hypoglycemia
Which hormone is largely unbound / least bo a. Cortisol b. T4 c. A.	
	relative humidity is 20 percent. Which
Most of the energy for strenuous exercise the but less than 1 to 2 minutes comes from what a. ATP c. Oxidation of carbohydrates	
 Parasympathetic neurons Originate in the brain stem and then run Release noradrenaline at their terminals Cause vasodilatation in the blood vessels Coordinate the so-called 'flight or fight' 	which in turn activates adrenergic receptors s of the external genitalia
The neurotransmitter released by axon term a. Acetylcholine b. Noradrenaline c.	inals of preganglionic sympathetic fibre is Epinephrine d. Dopamine