



KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH

Anatomy Paper 1 [ANA1]

Marks: 100

Duration: 180 mins.

MCQ 20 X 1 = 20

Answer all the questions.

Section Duration: 30 mins

1			The fibres of -----pass through the septo-marginal trabecula	
	1) SA node		2) AV node	
		3) Left bundle branch of His		4) Right bundle branch of His
				(1)
2			The upper most structure in hilum of left lung is _____	
	1) Pulmonary artery		2) Pulmonary vein	
		3) Bronchial artery		4) Bronchus
				(1)
3			The lower border of falx cerebri encloses -----sinus	
	1) Superior sagittal		2) Inferior sagittal	
		3) Straight		4) Occipital
				(1)
4			Which of the following extraocular muscles acts only along one axis?	
	1) Superior rectus		2) Superior oblique	
		3) Medial rectus		4) Inferior rectus
				(1)
5			All of the following are intracerebellar nuclei EXCEPT _____	
	1) Ambiguus		2) Dentate	
		3) Fastigial		4) Globose
				(1)
6			The quadrangular space of arm transmits _____	
	1) Axillary nerve		2) Axillary artery	
		3) Radial nerve		4) Circumflex scapular artery
				(1)
7			Abduction of shoulder joint is initiated by	
	1) Supraspinatus		2) Deltoid	
		3) Serratus anterior		4) Both 1 and 2.
				(1)
8			Muscles derived from first arch are all EXCEPT	
	1) Mylohyoid		2) Tensor tympani	
		3) Tensor veli palatini		4) Stylohyoid
				(1)
9			Stapes develops from _____	
	1) Reichert's cartilage		2) Meckel's cartilage	
		3) Arytenoid cartilage		4) Cricoid cartilage
				(1)
10			The three shunts in fetal circulation are all the following EXCEPT	
	1) Ductus venosus		2) Foramen ovale	
		3) Ductus arteriosus		4) Coronary sinus
				(1)
11			Cellular reticulum is seen in	
	1) Spleen		2) Thymus	
		3) Tonsil		4) Lymph node
				(1)
12			Sebaceous glands are example for ---- glands	
	1) Apocrine		2) Merocrine	
		3) Holocrine		4) Heterocrine
				(1)

13			The pigment present in cone cells of retina is ---	(1)
			1) Rhodopsin 2) Conopsin 3) Iodopsin 4) Scotopsin	
14			Veins are an example of	(1)
			1) Conducting vessels 2) Distributing vessels 3) Capacitance vessels 4) Resistance vessels	
15			A collection of nerve cell body outside the CNS is called	(1)
			1) Tract 2) Nerve 3) Ganglion 4) Nucleus	
16			A person who used to carry heavy loads on shoulder came to the hospital with prominence of medial border of scapula. The deformity was winging of scapula. Which nerve is injured in this case?	(1)
			1) Dorsal scapular nerve 2) Lateral pectoral nerve 3) Long thoracic nerve 4) Thoracodorsal nerve	
17			12-year-old boy while playing in the school, suddenly started bleeding from nose. When bleeding did not stop, the student was taken to the nearby dispensary. The doctor packed his nose to stop bleeding. Following arteries are involved in epistaxis EXCEPT	(1)
			1) Anterior ethmoid 2) Lesser palatine 3) Sphenopalatine 4) Superior labial	
18			A 60-year-old woman presents to the emergency department with sudden onset of weakness on the right side of her body and slurred speech. Imaging studies reveal a stroke affecting the internal capsule. Which of the following structures is directly affected in a stroke, leading to the patient's symptoms?	(1)
			1) Thalamus 2) Basal ganglia 3) Corticospinal tract 4) Cerebellar peduncles	
19			The vertebra involved in cervical rib is -----	(1)
			1) 1st thoracic 2) 2nd thoracic 3) 7th cervical 4) 6th cervical	
20			Inferior vena cava pierces the diaphragm at the level of	(1)
			1) 6th thoracic vertebra 2) 8th thoracic vertebra 3) 10th thoracic vertebra 4) 12th thoracic vertebra	

Long Essay 10 X 2 = 20

Answer all the questions.

21			Describe the shoulder joint under the following headings: a) Articular surfaces b) Ligaments c) Movements d) Applied anatomy. (2+ 2 + 4 + 2)	(10)
22			A 65 years old male patient came to emergency room with severe tightness of chest pain in left side of chest radiating along with left side of arm and forearm. E.C.G. was done immediately. He was diagnosed as ischemic heart disease. a. Describe the blood supply of heart (8 marks) b. What is coronary dominance? (2marks)	(10)

Short Essay Questions 9 X 5 = 45

Answer all the questions.

23			Explain development of Tongue and its congenital anomalies.	(5)
24			Describe the boundaries and contents of Sub occipital triangle.	(5)
25			Describe the cavity of Larynx in brief.	(5)
26			Explain the blood supply and lymphatic drainage of Breast.	(5)

27			Explain the microscopic structure of Pituitary gland.	(5)
28			Classify the muscle based on its shape with examples.	(5)
29			A 55 year old female complained of abnormal sensations and intermittent attacks of pain in lateral three and a half fingers. The pain increased in the night. There was weakness of thumb movements. She was diagnosed as a case of Carpal Tunnel syndrome. a) Which nerve is affected in Carpal Tunnel syndrome? (1 Mark) b) Name the branches and distribution of the nerve in hand. (4 Marks)	(5)
30			A 4-year-old boy is brought to the clinic by his mother, complaining of ear pain, irritability, and fever for two days. On examination, his right tympanic membrane was bulged and inflamed. He has a recent history of an upper respiratory infection. The diagnosis of Acute Otitis Media is made. a. What is otitis Media? (1 MARK) b. Describe the external features of Tympanic membrane with a neat labelled diagram (4 MARKS)	(5)
31			Neurological examination of a patient reveals left sided hemiplegia and facial droop. An MRI of the brain shows an acute infarct in the right internal capsule. a. What is Hemiplegia? (1 mark) b. Name the parts and blood supply of the Internal capsule (4marks).	(5)

Short Answer Questions 3 X 5 = 15

Answer all the questions.

32			List the derivatives of Neural Crest cells.	(3)
33			Name the branches of the Mandibular nerve.	(3)
34			Name the parts and functions of Archicerebellum.	(3)
35			Draw and label a diagram of microscopic structure of Suprarenal gland.	(3)
36			What are the expected qualities of a physician?	(3)

-----End-----



KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH

Anatomy Paper 2 [ANA2]

Marks: 100

Duration: 180 mins.

MCQ 20 X 1 = 20

Answer all the questions.

Section Duration: 30 mins

- 1) Which of the following structure forms the anterior relations of Caecum? (1)
- 1) Femoral nerve 2) Psoas major 3) Coils of small intestine 4) Fascia iliaca
-
- 2) The bilaminar peritoneal fold between stomach and diaphragm is (1)
- 1) Greater omentum 2) Lesser omentum 3) Gastro-phrenic ligament 4) Gastro-splenic ligament
-
- 3) The structure that continues from the canal of epididymis which is ligated in male sterilization for family planning is ----- (1)
- 1) Ductus deferens 2) Seminal vesicle 3) Ejaculatory duct 4) Prostatic urethra
-
- 4) In transverse section urethral slit is -----shaped in membranous part of male urethra (1)
- 1) Crescent 2) Stellate 3) Transverse 4) Sagittal
-
- 5) Nervi Erigentes represents the ____ of parasympathetic nervous system (1)
- 1) Sacral outflow 2) Thoracolumbar outflow 3) Lumbar outflow 4) Lumbosacral outflow
-
- 6) Ligamentum teres is a content of (1)
- 1) Falciform ligament 2) Coronary ligament 3) Right triangular ligament 4) Left triangular ligament
-
- 7) Saphenous opening is an oval opening in the _____, which is an important landmark used to test for sapheno-femoral incompetence in varicose veins patient. (1)
- 1) Superficial fatty layer 2) Deep membranous layer 3) Deep fascia of the thigh 4) Iliotibial tract
-
- 8) Which of the following acts as unlocking muscle of the knee joint? (1)
- 1) Popliteus 2) Flexor digitorum longus 3) Tibialis posterior 4) Flexor hallucis longus
-
- 9) All the following constitute guy ropes **EXCEPT** _____ (1)
- 1) Gracilis 2) Semitendinosus 3) Sartorius 4) Semimembranosus
-
- 10) The main pancreatic duct is formed by all of the following components **EXCEPT** (1)
- 1) Distal part of duct of dorsal bud 2) Oblique communication between ducts of both dorsal and ventral bud 3) Proximal part of duct of ventral bud 4) Proximal part of duct of dorsal bud
-
- 11) Mullerian inhibiting substance produced by Leydig cells inhibit development of (1)

1)	Mesonephric duct	2)	Paramesonephric duct	3)	Ductus deferens	4)	Ductus venosus
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12

Urethra opening on dorsal surface of penis is called

(1)

1)	Hypospadias	2)	Epispadias	3)	Phimosis	4)	Cryptorchidism
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13

The central structure seen in prostatic follicles is --

(1)

1)	Hassal's corpuscles	2)	Corpora amylacea	3)	Pacianian Corpuscles	4)	Birbek bodies
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14

The artery found between arcuate artery and afferent arteriole in the kidney is---

(1)

1)	Interlobar artery	2)	Efferent arteriole	3)	Glomerular capillary	4)	Interlobular artery
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15

Centroacinar cells are seen in _____

(1)

1)	Pancreas	2)	Liver	3)	Parotid gland	4)	Pituitary gland
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16

The oocyte surrounded by single layer of flat follicular cells is called _____ follicle

(1)

1)	Primordial	2)	Primary	3)	Secondary	4)	Graafian
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17

DNA duplication occurs in

(1)

1)	Meiosis only	2)	Meiosis II and mitosis	3)	Mitosis only	4)	Meiosis I and mitosis
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18

A child was born to a mother of advanced maternal age and was a diagnosed Down's syndrome, is an example of which type of chromosomal aberrations

(1)

1)	Monosomy	2)	Trisomy	3)	Triploidy	4)	Polyploidy
----	----------	----	---------	----	-----------	----	------------

19

A patient after a fall from a bike has anterior displacement of femur on flexion of knee. Which ligament is severed?

(1)

1)	Posterior cruciate ligament	2)	Anterior cruciate ligament	3)	Ligamentum patellae	4)	Oblique popliteal ligament
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20

A woman came to the OPD with pain abdomen and she had acute abdomen due to ruptured ectopic pregnancy. In which of the following areas of the peritoneal cavity the ultrasound shows blood collection?

(1)

1)	Rectouterine pouch	2)	Rectovesical pouch	3)	Hepatorenal pouch	4)	Subdiaphragmatic recess
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Long Essay 10 X 2 = 20

Answer all the questions.

21

Describe the knee joint under the following headings:

a) Articular surfaces b) Ligaments c) Movements d) Applied anatomy. (2 + 2+ 4 + 2)

(10)

22

A patient had history of Malaria and due to which his spleen was enlarged. He was playing football and accidentally got kicked while playing and fainted due to internal bleeding . He had massive internal bleeding and haemoperitoneum due to splenic rupture. Describe the gross anatomy of spleen under the following headings -

- Location (2 marks),
- External features (3 marks),
- Ligaments of spleen(3 marks),
- What are the precautions to be taken while doing splenectomy? (2 marks)

(10)

Short Essay Questions 9 X 5 = 45

Answer all the questions.

23			Discuss in brief about rotation of midgut . Write a note on its congenital anomalies.	(5)
24			Describe relations of right kidney with diagram.	(5)
25			Describe the boundaries and contents of deep perineal pouch.	(5)
26			Describe the supports of uterus.	(5)
27			Describe the boundaries and contents of Adductor canal.	(5)
28			Explain the microscopic structure of Liver.	(5)
29			Explain the microscopic structure of Adrenal gland.	(5)
30			<p>A few days after the removal of the plaster cast for the fracture of the upper end of the right fibula. The patient complained of loss of sensation on the lateral aspects of the lower part of the leg and the dorsum of the foot. On examination the doctor found a loss of sensation on the anterolateral aspects of the lower leg and whole of dorsum of the foot except medial margin of the foot up to the head of the first metatarsal bone. The patient was also unable to dorsiflex and evert his right foot.</p> <p>a) Name the nerve injured in this patient (1 mark)</p> <p>b) Name the deformity in which the patient cannot dorsiflex the foot (1 mark)</p> <p>c) Name the chief evertors of the foot (2 marks)</p> <p>d) Name the nerve which innervates the skin of the interdigital cleft between the first and second toes (1 mark)</p>	(5)
31			<p>A 15 year old girl was diagnosed with Turner's syndrome. After detailed history taking, physical examination and investigations done by the physician in the hospital.</p> <p>a) Write the genotype in this case? (1 mark) .</p> <p>b) Enumerate the clinical features of Turner's syndrome. (3 marks).</p> <p>c) Comment about Barr body in a case of Turner's syndrome (1 mark)</p>	(5)

Short Answer Questions 3 X 5 = 15

Answer all the questions.

32			Name the ligaments of hip joint.	(3)
33			Draw a neat diagram to show the relations for anterior surface of left kidney.	(3)
34			Mention the formation and fate of Allantois.	(3)
35			Draw diagram of microscopic structure of Duodenum.	(3)
36			What is the role of a cadaver as a teacher in learning Anatomy?	(3)

-----End-----